U.S. Department of Energy
[redacted]
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

MAR 0 6 2007

07-ESQ-025

Mr. C. M. Albert, Project Manager
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Dear Mr. Albert:

CONTRACT NO. DE-AC27-01RV14136 – ASSESSMENT REPORT A-07-ESQ-RPPWTP-002 – ASSESSMENT OF PROCUREMENT QUALITY ASSURANCE (QA), JANUARY 22 THROUGH 31, 2007

This letter forwards the results of the U.S. Department of Energy, Office of River Protection (ORP) assessment of the Bechtel National, Inc. (BNI) procurement QA program conducted from January 22 through 31, 2007 (attached).

The Assessment Team (Team) concluded BNI had effective processes for verifying the quality of procurements of safety items but lacked processes to assure quality requirements were applied to non-safety items using the graded approach required by 10 CFR 830. We are particularly concerned that QA requirements may not have received adequate consideration when purchasing items with defense-in-depth functions. Also, persons preparing purchase orders used instructions to perform this activity that contained errors and were not approved by either the Environmental and Nuclear Safety or the Quality Assurance organizations. As a result, BNI did not achieve its objective of notifying suppliers that their work was regulated under 10 CFR 830. In a related problem BNI did not determine which procurements were regulated under 10 CFR 830, so they could not effectively assure suppliers met regulatory requirements.

While the Team did not find any procurements with obvious, significant deficiencies, the Findings represent error precursors and latent organizational weaknesses that have created vulnerabilities for BNI and ORP in meeting our safety and regulatory obligations. Within 30 days of receipt of this letter BNI should respond to the assessment Findings and Observation A-07-ESQ-RPPWTP-002-O01. For the Findings, the response should include:

- The causes of the Findings;
- The corrective steps that have been taken to control or remove any adverse impact to identified noncompliance situations (remedial actions) and the results achieved;
- The corrective steps that will be taken to prevent further Findings; and
- The date when all corrective actions are completed, verified, and compliance to applicable requirements is achieved.

The assessment Observations do not identify deficiencies, but represent experience-based Observations of the assessment team that BNI should consider as a source of information in improving its program. BNI is required to respond only to Observation A-07-ESQ-RPPWTP-002-O01.

If you have any questions, please contact me, or your staff may call William J. Taylor, Director, Office of Environmental Safety and Quality, (509) 376-7851.

Sincerely,

John R. Eschenberg, Project Manager
Waste Treatment and Immobilization Plant Project

ESQ:SAV

Attachment

cc w/attach:
T. N. Boggess, BNI
D. E. Gergely, BNI
D. J. Jantosik, BNI
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BNI Correspondence

Attachment
07-ESQ-025
A-07-ESQ-RPPWTP-002

U.S. DEPARTMENT OF ENERGY
Office of River Protection
Environmental Safety and Quality

ASSESSMENT:	Bechtel National, Inc. Procurement Quality Assurance
REPORT:	A-07-ESQ-RPPWTP-002
FACILITY:	Waste Treatment and Immobilization Plant Construction
LOCATION:	Richland, Washington
DATES:	January 22 through 31, 2007
ASSESSORS:	Samuel A. Vega, Lead Assessor David H. Brown, Assessor
APPROVED BY:	P. P. Carier, Team Lead Verification and Confirmation Official

Executive Summary

The U.S. Department of Energy, Office of River Protection conducted an assessment of Bechtel National, Inc. (BNI) procurement quality from January 22 through 31, 2007. The purpose of the assessment was to determine effective compliance with the BNI procurement quality requirements of 24590-WTP-QAM-01-001, "Quality Assurance Manual" (QAM). This included requirements for procurement document control, as well as control of purchased items and services. The Assessment Team (Team) did not review the commercial grade dedication process. This area will be reviewed in an upcoming scheduled assessment.

The Team concluded BNI had effective processes for establishing the quality of purchased safety class and safety significant items and services but lacked the required procedures for applying a graded approach to specifying quality assurance activities for non-safety items. Specifically, BNI did not have procedures for making consistent individual decisions regarding inspection and supplier evaluation based on graded quality requirements for items with a defense-in-depth nuclear safety role. BNI procedures lacked sufficient direction to assure that persons making the decisions regarding inspection and supplier evaluation would choose activities consistently and in alignment with the consequences of failure of the procured item.

The Team did not find any procurements with obvious, significant deficiencies. However, if inadequate procedures led to incorrectly specified quality assurance activities, defective items may not be evident until hot testing or facility operation.

The Team also found that BNI did not always inform suppliers that their work was regulated under the 10 CFR 830, Nuclear Safety Management Rule. This occurred because persons preparing purchase orders used uncontrolled instructions that contained errors.

The Team evaluated BNI's receiving inspection process and found that inspectors used appropriate procedures and properly documented criteria to perform receipt inspections for Q-level items.

The Team identified three Findings and four Observations. The Findings and one of the Observations require a response. These were:

A-07-ESQ-RPPWTP-002-F01: BNI did not establish a process for consistently selecting quality assurance activities using a graded approach during procurement of items with defense-in-depth functions as required by 10 CFR 830.7.

A-07-ESQ-RPPWTP-002-F02: BNI did not perform determinations of the applicability of 10 CFR 830 to suppliers or subcontractors for some purchases as necessary to comply with 10 CFR 830.121.(c).(4).

A-07-ESQ-RPPWTP-002-F03: Personnel preparing purchase orders used direction to perform an activity affecting quality that was not controlled in accordance with BNI's controlled procedure system as required by QAM Policy Q-05.1.

A-07-ESQ-RPPWTP-002-O01: BNI should inform suppliers of Additional Protection Class items that their work is regulated under 10 CFR 830.

The Team noted that the Supplier Quality Bulletins were used effectively to inform Supplier Quality organization personnel of specific management expectations regarding performance of certain tasks. The Team also made three Observations identifying potential improvements in the management of general technical specifications.

Responses to the Findings and Observation A-07-ESQ-RPPWTP-002-O01 are required.

Table of Contents

List of Acronyms

APC	Additional Protection Class
ASL	Approved Suppliers List
BNI	Bechtel National, Inc.
CM	Commercial Material
DOE	U.S. Department of Energy
ITS	Important-to-Safety
MAP	Material Acceptance Plan
OCRWM	Office of Civilian Radioactive Waste Management
OIW	Oregon Iron Works, Inc.
PO	Purchase Order
QA	Quality Assurance
QAM	Quality Assurance Manual
Rule	10 CFR 830, The Nuclear Safety Management Rule
SC-10	Special Condition 10
SSC	Structures, Systems, and Components
Team	ORP Assessment Team
WTP	Waste Treatment and Immobilization Plant

Bechtel National, Inc. (BNI)
Procurement Quality Assurance (QA)

1.0 Details

This assessment evaluated BNI procurement QA processes, including procurement document control and control of purchased items and services. While it addressed procurement of safety items and services, it focused primarily on procurement of non-safety items and services. The assessment did not address the BNI commercial grade dedication process, because this area will be reviewed in an upcoming assessment.

Overview of the BNI Classification System

Safety items are those items classified as either Safety Class Structures, Systems, and Components (SSC) or Safety Significant SSCs as defined in 10 CFR 830.3. Non-safety items and services are all those that fall outside the definition of safety items and services and include non-safety SSCs with a defense-in-depth function as described in Section 3.3.2.3.2 of DOE-STD-3009-94, "Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses." (SSCs that are major contributors to defense-in-depth are still classified as safety significant through the hazard analysis process.) BNI identified those non-safety SSCs having a defense-in-depth function as Additional Protection Class (APC).

These definitions were correctly reflected in BNI procedures such as 24590-WTP-3DP-G06B-00010, Revision 3, "Specifying Supplier Quality Assurance Program Requirements." SSCs with a defense-in-depth function, but which were not classified as safety SSCs, were included within the definition of "important-to-safety" (ITS) SSCs of DOE/RL-96-0006, Revision 3, "Top Level Radiological, Nuclear, and Process Safety Standards and Principles for the RPP Waste Treatment Plant Contractor." DOE/RL-96-0006 is the U.S. Department of Energy (DOE), Office of River Protection's document, which, among other things, defines and describes the Waste Treatment and Immobilization Plant (WTP) system of safety classification.

At the time of the assessment BNI procedures referred to non-safety SSCs with a defense-in-depth function as APC, although earlier procedures referred to them as Risk Reduction Class. While they were defined as non-safety SSCs using the definitions of DOE-STD-3009-94, they were still defined as ITS in DOE/RL-96-0006. In other words, items classified by BNI as APC were not safety items but were ITS.

With respect to safety classification, BNI generally applied their QA requirements for Commercial Material (CM) to non-safety procurements (including items classified as APC) and applied their "Q"-level requirements to safety SSCs. However, Q-level was also applied to items required for compliance with Office of Civilian Radioactive Waste Management (OCRWM) QA requirements and for compliance with air permitting regulations. Generally, suppliers of Q-level procurements were required to have a QA program conforming to the requirements of NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications," while suppliers of CM items and services were not. BNI required that Q-level items be purchased either from a supplier that had been qualified by BNI in accordance with BNI's QA program or be purchased as

commercial grade items and subsequently dedicated to safety service. (This assessment did not evaluate BNI's process for dedication of commercial grade items.) BNI applied procurement QA practices to the purchase of CM items and services that were typical in the nuclear industry for equipment not regulated as safety-related.

1.1 Procurement of Safety Items

The Team selected for evaluation Purchase Order (PO) 24590-QL-POA-ADDH-00009, "Shield Doors, Melter Cave/Crane Maintenance," which BNI identified as a Q-level procurement. This procurement was somewhat unusual in that, after beginning fabrication, the original shield door supplier, Unidynamics, Inc., was bankrupted, and BNI awarded a new PO to Oregon Iron Works, Inc. (OIW). This PO was awarded to OIW in anticipation that OIW would complete the fabrication of the shield doors. The procurement included transporting the incomplete shield doors from Texas to Oregon, storage of the shield doors in Oregon, and an evaluation of the shield doors to determine what it would cost for OIW to complete the shield door fabrication.

OIW previously performed Q-level work for BNI and had been placed on the BNI Approved Suppliers List (ASL) through an appropriate supplier evaluation process. OIW had been re-evaluated periodically in accordance with BNI procedures to maintain its status on the BNI ASL. The Team reviewed BNI's supplier evaluation documentation and found that the supplier evaluation and subsequent re-evaluations were performed using appropriate checklists. The results of the supplier evaluation and re-evaluations were appropriately documented in retrievable records.

Results of Safety Procurement Evaluation

The Team found no problems with BNI's evaluation of OIW or with the shield door procurement.

1.2 Procurement of Non-Safety Items

To evaluate procurement of non-safety items, the Team began with a sample of three purchases of APC items for evaluation. They also evaluated various features of several other purchases and one subcontract. The three purchases sampled for evaluation were:

- 24590-CM-POB-ED00-00001; 125VDC System.
- 24590-CM-POA-MPE0-00001; Steam Ejectors.
- 24590-CM-POA-ET00-00003; 13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations.

To evaluate these procurements, the Team reviewed POs and associated documentation, then interviewed Acquisition Services, Engineering, and QA personnel associated with the purchases. The Team also reviewed procedures governing the development and control of the purchases and interviewed responsible managers.

Results of Individual Procurement Evaluations

The Team identified no procurements with obvious, significant deficiencies. However, for both the 125VDC system and the liquid filled transformer procurements, technical datasheets provided to the supplier were marked as "non-ITS" when they were both actually ITS. The Team concluded these were not significant, because BNI personnel involved in the procurements said that neither the suppliers nor BNI used that information for any technical decisions.

Requirement Grading

The Team concluded BNI did not have a formally documented process for grading the application of quality requirements for ITS and non-ITS CM procurements. Through procedure reviews and interviews, the Team identified the following:

- There was no documented process for applying a graded approach to the selection of supplier evaluation activities.

- There was no documented process for selecting levels of source inspections. BNI procedures defined Levels 0, 1, 2, 3, and 4 as ranging from no inspection to placing a resident inspector in a supplier's facility. However, BNI had no procedure addressing how to select one of the inspection levels.

- There was no direction on how to consider the APC classification of an item when developing Material Acceptance Plans (MAP). Individuals developing MAPs did not consider the APC classification when making inspection decisions.

- The procedure 24590-WTP-3DP-G06B-00010, "Specifying Supplier QA Program Requirements," explained how to specify QA program requirements for Q-level procurements but not for CM procurements. It referred persons identifying requirements for CM procurements to the engineering specification for the purchased item. However, this procedure was the obvious place to look for direction for identifying QA requirements for specifications. As a result, there was no direction on how to identify QA requirements for CM procurements.

- There was no direction for making graded decisions on when to request QA manuals or evidence of a QA program from CM suppliers. Personnel interviewed said that some procurement engineers routinely requested QA manuals or evidence of a QA program from CM suppliers and others almost never did.

- There was no management direction for making graded decisions on when the QA organization should review CM QA manuals and programs. Personnel interviewed said that some QA engineers were willing to review QA programs for CM suppliers, while other QA engineers would only review QA programs for Q-level procurements.

- There were no acceptance criteria when Engineering accepted supplier QA manuals.

- There was no clear direction regarding when and how to increase procurement QA requirements due to facility mission risk. (BNI managers stated they had identified this issue previously and were already resolving it.)

  This is considered a Finding (A-07-ESQ-RPPWTP-002-F01) and is discussed further in Section 2.0 of this report.

Evaluation of Bulk Item Purchases for APC Applications

The Team attempted to evaluate CM bulk items used in systems classified as APC to determine how procurement QA requirements were graded, but for each item selected BNI had purchased the items as Q-level. This is a common practice in the nuclear industry, because it effectively prevents inadvertent commingling of Q-level and CM material.

Regulation of Suppliers Under the Nuclear Safety Management Rule (the Rule)

The Rule required BNI to ensure suppliers and subcontractors satisfied the Rule's QA criteria. This applied to suppliers of both Q-level and APC items, but not to many other purchases. BNI did not perform any analyses to identify the procurements to which the Rule applied and so did not normally notify suppliers of APC items that their work was regulated under the Rule.

BNI did not recognize the Rule applied to the work of the supplier fabricating the steam ejectors and did not notify the supplier that their work was regulated under the Rule. The PO marked Special Condition 10 (SC-10) as "Reserved" rather than including contract language concerning the supplier's liability. DOE G 414.1-2 "Quality Assurance Management System Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1C, Quality Assurance," encouraged contractors to inform suppliers when their work was regulated under the Rule, so that suppliers would understand their liability. The guide also stated that DOE contractors must perform an analysis to determine which purchases were subject to regulation. BNI did not perform specific analyses to determine whether procurements were or were not regulated under the Rule as necessary to assure the supplier implemented Rule requirements for their work. This is considered a Finding (A-07-ESQ-RPPWTP-002-F02) and is discussed further in Section 2.0 of this report.

BNI POs failed to notify suppliers that their work was regulated under the Rule because BNI provided personnel preparing POs with "preparer's notes" that contained errors and were not controlled in accordance with the BNI system for the control of procedures. The "preparer's notes" directed individuals preparing POs to include SC-10 only if the PO was for a Q-level purchase. This would incorrectly exclude purchases of items classified as APC and could also incorrectly include items classified as Q-level only because OCRWM or air permitting QA requirements were specified.

BNI used industry standard contract language in POs, but preparers were required to supplement the standard language with special conditions specific to the purchase. BNI management provided the "preparer's notes" to direct preparers on how to complete the PO contract language. As such, the "preparer's notes" constituted an instruction or a procedure for an activity affecting quality, but they were not controlled in accordance with BNI Quality Assurance Manual (QAM)

Policy Q-05.1, "Instructions, Procedures, and Drawings," requirements for control of instructions and procedures. This is considered a Finding (A-07-ESQ-RPPWTP-002-F03) and is discussed further in Section 2.0 of this report.

1.3 Receiving Inspection

The Team reviewed procedures, interviewed inspection personnel, and evaluated the receiving inspection process for some Q-level stainless steel pipe fittings received at the marshalling yard. The material was purchased from Puget Sound Pipe and Supply, Inc. under PO 24590-QL-MRA-PB00-00004, "Stainless Steel Piping and Bulks," and was inspected in accordance with the associated MAP.

The Team did not witness the actual acceptance inspection, but the assigned inspector walked through the inspection process for the items step-by-step, demonstrating how he would accomplish each step. The Team judged that the inspection was of appropriate detail and would be accomplished correctly.

The Team concluded BNI had an adequate receiving inspection process for Q-level purchases.

2.0 Findings and Observations

Finding A-07-ESQ-RPPWTP-002-F01: BNI did not establish a process for consistently selecting QA activities using a graded approach during procurement of items with defense-in-depth functions as required by 10 CFR 830.7.

Requirements:

a. 10 CFR 830.7 states, "Where appropriate, a contractor must use a graded approach to implement the requirements of this part, document the basis of the graded approach used, and submit that documentation to DOE."

b. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-02.1, Section 1.4.2, states, "The extent to which the requirements of this manual and its implementing documents are applied to an item or activity shall be based on the following: ... consequences of failure ... complexity of the design ... uniqueness of the item or degree of standardization ... [and] any other relevant factor."

c. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-02.1, Section 1.4.3, states, "The extent to which the requirements of this policy apply to an item shall be based on an evaluation of the [factors in Section 1.4.2]."

d. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-02.1, Section 1.4.5, states, "Application of the graded approach shall be accomplished in accordance with procedures concurred with by the QA organization. The procedures shall include the provision to ensure that the application of the graded approach is consistently applied."

e. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-05.1, Section 3.1.2, states, "Activities affecting quality shall be described to a level of detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results."

Discussion:

Contrary to these requirements, BNI procedures did not specify effective processes for grading decisions associated with identifying inspections or evaluating suppliers. Because the grading process for these activities was not specified in procedures, the grading process was not consistently applied. The following examples led the Team to their conclusion that the grading process was not adequately specified in BNI procedures:

- There was no documented process for selecting Level 0, 1, 2, 3, or 4 source inspections. BNI depended entirely on the experience of the individuals choosing the inspection level.

- There was no documented process for grading and selecting appropriate supplier evaluation activities based on the criteria of the BNI QAM. For example, the process for evaluating suppliers of commercial material specified in 24590-WTP-GPP-GPX-00402-1, "Evaluation of Proposals/Source Selection," did not require considering a commercial item's classification as APC in specifying evaluation methods or technical evaluation requirements.

- There was no direction on how to consider the APC classification of an item when developing MAPs. Individuals developing MAPs did not consider defense-in-depth safety functions when making these inspection decisions. For example, the material acceptance planning process specified in 24590-WTP-GPP-MGT-013, "Acceptance of Procured Material," listed "Material Type/Grade/Class" as a consideration in identifying attributes requiring independent verification, but it provided no direction regarding how to determine appropriate inspections for items with APC functions. BNI personnel interviewed by the Team said APC designation did not affect identification of inspection requirements.

- There was no management direction for making graded decisions on when to request QA manuals or evidence of a QA program from CM suppliers. Personnel interviewed said that some procurement engineers routinely requested QA manuals or evidence of a QA program from CM suppliers and others almost never did.

- There was no management direction for making graded decisions on when the QA organization should review CM QA manuals and programs. Personnel interviewed said that some QA engineers were willing to review CM QA programs, while other QA engineers would only review QA programs for Q-level procurements.

- There were no acceptance criteria for evaluating and accepting QA programs in those cases where Engineering reviewed the supplier's QA manual. Also, there was no evidence that Engineering personnel had been explicitly qualified to evaluate QA programs.

- The procedure 24590-WTP-3DP-G06B-00010, "Specifying Supplier Quality Assurance Program Requirements," contrary to its title, did not provide direction on specifying supplier QA program requirements for APC and other CM procurements. Regarding identification of quality requirements, Figure 1 of this procedure simply stated "As defined in procurement documents" or "as defined in specifications." However, persons preparing procurement documents and specifications would come logically to this procedure for direction on how to identify the quality requirements for procurement documents and specifications.

- BNI procedures were not clear regarding when and how to increase procurement QA requirements due to WTP mission risk. (BNI management stated they identified this issue previously and were resolving it. However, the Team considered this was a symptom of a larger problem regarding effective implementation of the grading requirement.)

Finding A-07-ESQ-RPPWTP-002-F02: BNI did not perform determinations of the applicability of 10 CFR 830 to suppliers or subcontractors for some purchases as necessary to comply with 10 CFR 830.121.(c).(4).

Requirements:

a. 10 CFR 830.121, Section (c) states, "The QAP must: . . . (4) Describe how the contractor responsible for the nuclear facility ensures that subcontractors and suppliers satisfy the criteria of §830.122."

Discussion:

Contrary to this requirement, BNI did not perform determinations of applicability of 10 CFR 830 for suppliers of commercial material as necessary to assure applicable suppliers satisfied the requirements of the Rule. The assessment team considers simply designating items as Q-level constituted the determination for safety items, but no BNI procedure specified performance of any other determination of the Rule applicability that would, for example, recognize the applicability of the Rule to procurements of APC items. Identifying applicable purchases was a prerequisite to assuring suppliers implemented Rule requirements.

DOE G 414.1-2, "Quality Assurance Management System Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1C, Quality Assurance," stated, "...The procurement process of DOE nuclear facility contractors must include a determination of the applicability of 10 CFR 830 to the supplier or subcontractor. [10 CFR 830.121 stated 'The QAP must: . . . c.(4) Describe how the contractor responsible for the nuclear facility ensures that subcontractors and suppliers satisfy the criteria of §830.122']." In other words, unless a contractor analyses a procurement to determine whether or not the Rule applies to the purchase, it cannot effectively comply with the requirement to assure suppliers and subcontractors comply with the Rule.

Finding A-07-ESQ-RPPWTP-002-F03: Personnel preparing purchase orders used direction to perform an activity affecting quality that was not controlled in accordance with BNI's controlled procedure system as required by QAM Policy Q-05.1.

Requirements:

a. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-05.1, Section 3.1.1, states, "Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, and drawings of the type appropriate to the circumstances ..."

b. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-05.1, Section 2.6, states, "Instructions, procedures, and drawings are controlled in accordance with Policy Q-06.1 – Document Control."

c. 24590-WTP-QAM-QA-01-001, Revision 7, "Quality Assurance Manual," QL-06.1, Section 3.1.3, states, "Documents defined in 3.1.1 above [instructions, procedures, and drawings], including changes thereto, shall be reviewed for adequacy and approved for issue by authorized personnel."

Discussion:

Personnel preparing POs for all types of purchases followed a set of "preparer's notes" provided by Acquisition Services management that were not approved by either the QA organization or the Environmental and Nuclear Safety organization. Preparing a PO is an activity affecting quality, but the "preparer's notes" were not controlled within the BNI system for control of instructions, procedures, and drawings. The "preparer's notes" contained probable errors regarding identification of nuclear safety requirements. The following led the Team to their conclusion:

- There was no evidence the "preparer's notes" were approved by either QA or Environmental and Nuclear Safety even though the "preparer's notes" directed individuals preparing POs in making decisions regarding QA and nuclear safety requirements.

- The "preparer's notes" stated that SC-10 should be specified only for procurements of Q-level material, but SC-10 would appropriately be applied to procurements of APC CM items. (The Team noted several cases where SC-10 was actually applied to APC items, contrary to the direction in the "preparer's notes.") SC-10 was the special condition informing suppliers their work was regulated under the Rule.

- 24590-CM-POA-ET00-00003, Revision 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations," was a procurement of equipment regulated under the Rule, but where regulatory liability was not identified to the supplier. While it was not an explicit requirement to notify suppliers that their work was regulated, a properly stated SC-10 stipulation would almost certainly have led to this notification. BNI management stated it was their intention to notify suppliers when their work was regulated under the Rule. However, BNI considered this a business decision.

Observation A-07-ESQ-RPPWTP-002-O01: BNI should inform suppliers of APC items regarding their liabilities under 10 CFR 830.

Discussion: BNI notified suppliers of Q-level material and all subcontractors that they were subject to the enforcement provisions of the Rule but did not always notify suppliers of items with APC functions. APC functions are within the "nuclear nexus" of Price-Anderson Amendments Act enforcement, and Section 4.7.1 of DOE G 414.1-2, "Quality Assurance Management System Guide for Use with 10 CFR 830 Subpart A, 'Quality Assurance Requirements,' and DOE O 414.1C, 'Quality Assurance,'" encouraged contractors to make this notification. This section stated, "If applicable, procurement documents and contracts for items and services provided to facilities covered by 10 CFR 830 should include a statement informing the supplier or subcontractor that it is subject to 10 CFR 830 and of the potential for enforcement actions under 10 CFR 820."

BNI management correctly explained that they were not required to notify vendors when the vendors' work was regulated under 10 CFR 830, but they considered it a good business practice to do so. However, BNI did not always make this notification for suppliers of items with APC functions.

Observation A-07-ESQ-RPPWTP-002-O02: BNI should update or cancel the Supplier QA specification.

Discussion:

24590-WTP-3PS-G000-00001, Revision 0, "General Specification for Supplier Quality Assurance Program Requirements," was issued in 2002 and had not been revised. The specification was sometimes included in POs and sometimes not, but there was no guidance on when and how to apply it. It contained at least one error in that it identified DOE O 414.1, "Quality Assurance," as a standard when it was not a standard. The specification also included outdated references.

The specification identified the entire range of possible QA requirements with little obvious utility for suppliers. On the other hand, BNI instruction 24590-WTP-3DP-G06B-00010, "Specifying Supplier Quality Assurance Program Requirements," provided instructions on how to develop QA requirements for technical specifications and appeared to supersede the QA specification.

The purpose of this Observation is to encourage BNI to either update and clarify the use of this specification or cancel it.

Observation A-07-ESQ-RPPWTP-002-O03: BNI should consider revising the Supplier QA specification to specify requiring suppliers of CM items to implement a QA standard.

Discussion:

BNI personnel sometimes include 24590-WTP-3PS-G000-00001, Revision 0, "General Specification for Supplier Quality Assurance Program Requirements," in PO requirements, but

the specification is unclear regarding when or how suppliers are to implement quality assurance consensus standards. DOE O 414.1C encourages contractors and their suppliers to implement DOE regulatory and order quality requirements through industry consensus standards. NQA-1 and ISO 9000 are the primary examples of industry quality standards. The BNI supplier quality specification did not address the use of implementing standards, although specification Section 5.0, "Codes and Standards (as imposed)," listed DOE O 414.1A as a standard when it was not a standard.

BNI should revise 24590-WTP-3PS-G000-00001 to clarify the use of implementing standards and avoid identifying DOE O 414.1A as a standard. Also, BNI applied DOE O 414.1C to its work, so this specification should be updated to reflect that version of the order.

Observation A-07-ESQ-RPPWTP-002-O04: BNI should revise the various engineering general specifications to address QA requirements consistently and to reflect the current revisions of references.

Discussion:

The Team noted specifications with varying approaches to identifying QA requirements. Some called out QA program requirements, while at least one (24590-WTP-3PS-AFPS-T0001, "Shop Applied Special Protective Coatings for Steel Items and Equipment") integrated specific quality requirements into the specification. The Team also noted specifications with outdated references.

The Team was concerned that a general practice of integrating QA requirements in a specification without requiring a QA program could lead to quality problems, although the Team does not necessarily consider the treatment of QA requirements in 24590-WTP-3PS-AFPS-T0001 to have been incorrect. For example, requiring an inspection without also requiring a QA program could result in suppliers using unqualified personnel to perform inspections.

The purpose of this Observation is to encourage BNI to review its engineering general specifications, update them, and provide a uniform approach to how requirements are specified.

3.0 Conclusion

The Team found that, with the exception of the conditions identified in the Findings, BNI conducted procurement activities in accordance with the requirements of the QAM. For safety items and services, BNI appropriately evaluated and qualified suppliers. BNI also specified technical requirements in POs and conducted activities to verify the requirements were satisfied. However, procedures did not provide direction on how to apply a graded approach to selecting individual inspection and supplier evaluation activities for non-safety items. Also, management provided personnel with uncontrolled written direction on how to prepare POs, and, as a result, failed to notify some suppliers that their work was regulated under the Rule.

Task# ORP-ESQ-2007-0026

E-STARS™ Report
Task Detail Report
03/08/2007 0900

TASK INFORMATION			
Task#	ORP-ESQ-2007-0026		
Subject	CONCUR:07-ESQ-025; ASSESSMENT REPORT A-07-ESQ-RPPWTP-002 - ASSESSMENT OF PROCUREMENT QUALITY ASSURANCE, JANUARY 22 - 31, 2007		
Parent Task#		**Status**	CLOSED
Reference	07-ESQ-025	**Due**	
Originator	Gano, Becky	**Priority**	High
Originator Phone	(509) 376-6004	**Category**	None
Origination Date	02/15/2007 1317	**Generic1**	
Remote Task#		**Generic2**	
Deliverable	None	**Generic3**	
Class	Long Term	**View Permissions**	Normal
Instructions	Correspondence is being routed for concurrence via hard copy instead of electronically. Once you receive the correspondence, please approve or disapprove electronically via E-STARS and route to next person on the routing/concurrence list. BCC: ESQ OFF FILE ESQ RDG FILE MGR RDG FILE J.J.SHORT, AMD R.C. BARR, ESQ P.P.CARIER, ESQ S.A.VEGA, ESQ RECORD NOTE:		

ROUTING LISTS		
1	Route List	Inactive
	• Vega, Samuel A - Review - Concur - 03/02/2007 0653 *Instructions:*	
	• Carier, Patrick P - Review - Concur - 03/01/2007 0859 *Instructions:*	
	• Barr, Robert C - Review - Concur with comments - 03/02/2007 0655 *Instructions:*	
	• Eschenberg, John R - Review - Cancelled - 03/08/2007 0900 *Instructions:*	
	• Schepens, Roy J - Approve - Cancelled - 03/08/2007 0900 *Instructions:*	

ATTACHMENTS

Attachments

1. 07-ESQ-025 att Procurement Assessment Report A-07-ESQ-RPPWTP-002.doc
2. 07-ESQ-025 BKGRND Assessment Plan (2).doc
3. 07-ESQ-025 BKGRND CRAD Proc 2.doc
4. 07-ESQ-025 BKGRND CRAD Proc 3.doc
5. 07-ESQ-025 BKGRND CRAD Proc 4.doc
6. 07-ESQ-025 BKGRND CRAD Proc 5.doc
7. 07-ESQ-025 BKGRND CRAD Proc 6.doc
8. 07-ESQ-025 BKGRND CRAD Proc 7.doc

Task# ORP-ESQ-2007-0026	
	9. 07-ESQ-025 BNI LTR Assessment Report A-07-ESQ-RPPWTP-002.doc
COLLABORATION	
COMMENTS	
Poster	Barr, Robert C (inactive) (Gano, Becky) - 03/02/2007 0603
	Concur
	Bill Taylor concurred for Rob Barr on 3/2/07.
Poster	Gano, Becky (Gano, Becky) - 03/08/2007 0903
	CLOSED
	Shirley Olinger concurred on 3/2/07.
TASK DUE DATE HISTORY	
No Due Date History	
SUB TASK HISTORY	
No Subtasks	

-- end of report --

Task# ORP-ESQ-2007-0026

E-STARS™ Report
Task Detail Report
02/15/2007 0123

TASK INFORMATION			
Task#	ORP-ESQ-2007-0026		
Subject	CONCUR:07-ESQ-025; ASSESSMENT REPORT A-07-ESQ-RPPWTP-002 - ASSESSMENT OF PROCUREMENT QUALITY ASSURANCE, JANUARY 22 - 31, 2007		
Parent Task#		**Status**	Open
Reference	07-ESQ-025	**Due**	
Originator	Gano, Becky	**Priority**	High
Originator Phone	(509) 376-6004	**Category**	None
Origination Date	02/15/2007 1317	**Generic1**	
Remote Task#		**Generic2**	
Deliverable	None	**Generic3**	
Class	Long Term	**View Permissions**	Normal
Instructions	Correspondence is being routed for concurrence via hard copy instead of electronically. Once you receive the correspondence, please approve or disapprove electronically via E-STARS and route to next person on the routing/concurrence list. BCC: ESQ OFF FILE ESQ RDG FILE MGR RDG FILE J.J.SHORT, AMD R.C. BARR, ESQ P.P.CARIER, ESQ S.A.VEGA, ESQ RECORD NOTE:		

ROUTING LISTS

1	Route List	Active
	• Vega, Samuel A - Review - Awaiting Response *Instructions:* SAV 2/27/07	
	• Carier, Patrick P - Review - Awaiting Response *Instructions:* PPC 2/27/07	
	• Barr, Robert C - Review - Awaiting Response *Instructions:* WQT 3/2/07	
Rec'vd 3/2/07	• Eschenberg, John R - Review - Awaiting Response *Instructions:* 3/2 04	
	• ~~Schepens, Roy J - Approve~~ - Awaiting Response *Instructions:* Olinger, Shirley - for	

ATTACHMENTS • Eschenberg, John - Approve -

Attachments	1. 07-ESQ-025 att Procurement Assessment Report A-07-ESQ-RPPWTP-002.doc 2. 07-ESQ-025 BKGRND Assessment Plan (2).doc 3. 07-ESQ-025 BKGRND CRAD Proc 2.doc 4. 07-ESQ-025 BKGRND CRAD Proc 3.doc 5. 07-ESQ-025 BKGRND CRAD Proc 4.doc 6. 07-ESQ-025 BKGRND CRAD Proc 5.doc 7. 07-ESQ-025 BKGRND CRAD Proc 6.doc 8. 07-ESQ-025 BKGRND CRAD Proc 7.doc

Task# ORP-ESQ-2007-0026	
	9. 07-ESQ-025 BNI LTR Assessment Report A-07-ESQ-RPPWTP-002.doc
COLLABORATION	
COMMENTS	
No Comments	
TASK DUE DATE HISTORY	
No Due Date History	
SUB TASK HISTORY	
No Subtasks	

-- end of report --

BACKGROUND

(PLEASE SCAN)

LETTER # 07-ESQ-025

Assessment Plan

A-07-ESQ-RPPWTP-02
Bechtel National, Inc. (BNI)
Procurement Assessment

Dates of Assessment: January 22 – 29, 2007

Inspection Team: Sam Vega, Assessment Team Leader
David H. Brown, Assessor

Planned Meetings: Entrance – 8:00 a.m., January 22, 2007
Exit – 2:00 p.m., January 29, 2007

BNI Management Debriefings – conducted as requested or as needed.

Purpose:

The purpose of the assessment is to assess the adequacy and effectiveness of BNI in implementing DOE quality assurance (QA) procurement requirements as prescribed in the BNI Quality Assurance Manual (24590-WTP-QAM-01-001), 10 CFR 830.122, and DOE O 414.1, *Quality Assurance*.

Scope:

The assessment will verify the adequate implementation of procedures which incorporate the BNI QA program procurement requirements, and will assess the effectiveness of procedure implementation in achieving intended results. Items classified as defense-in-depth will receive particular emphasis, but the assessment will also include the "Q" level procurement process (except high level waste-affecting procurements) and the non-Important to Safety commercial material procurement process. The assessment will accomplish this by reviewing a sample of QA program related processes; review process documentation, observe process activities, and interview personnel responsible for implementing the sampled processes.

Processes sampled and the criteria for review that will be applied during this assessment will include the following:

- Suspect/Counterfeit Items (S/CIs)
  - Does the procurement process provide for preventing introduction of S/CIs and provide a method to detect them before they are released for use?

- Procurement Documents
  - Do procurement documents clearly state or reference requirements and acceptance criteria for purchased items and services?
  - Do procurement documents include any specifications, standards, and other applicable documents referenced in the design documents?
  - Do procurement documents include critical parameters and requirements, such as document submittals, product related documentation, problem reporting, administrative documentation, personnel or materials qualifications, tests, inspections, performance expectations for services, and reviews
  - Do procurement documents demonstrate greater attention to quality for safety and defense-in-depth items by applying a graded approach?

- Supplier Qualification
  - Are all suppliers evaluated to verify their capability to meet performance and schedule requirements using a graded approach?
  - Do on-site evaluations of suppliers address personnel, technical and equipment capabilities, and processes?
  - Do supplier evaluations include, as appropriate:
    - ⇒ A review of the supplier's history of providing identical or similar items or services,
    - ⇒ A review of shared supplier quality information (e.g., DOE Consolidated Audit Program, DOE Laboratory Accreditation Program),
    - ⇒ An evaluation of certifications or registrations awarded by nationally accredited third parties, and
    - ⇒ An evaluation of documented qualitative and quantitative performance information provided by the supplier?
  - Are potential suppliers identified as early as possible in the design and procurement process in order to determine their capabilities?

- Supplier Performance Monitoring
  - Is the performance of qualified suppliers monitored periodically during the life of the contract to confirm their continuing capabilities?
  - Does supplier monitoring verify that acceptable items or services are produced and schedule requirements are being met?
  - Does monitoring include an appropriate combination of:
    - ⇒ Surveillance of work activities;
    - ⇒ Inspection of facilities and processes;
    - ⇒ Review of plans and progress reports;
    - ⇒ Surveillance of manufacturing processes and methods;
    - ⇒ Processing and use of change information;
    - ⇒ Review of internal assessments;
    - ⇒ Review and disposition of nonconformances; and
    - ⇒ Selection, qualification, and performance monitoring of subtier suppliers?

- Inspection
  - Does the inspection process provide for identifying inspections and tests to ensure conformance with purchase requirements?
  - Do design and procurement documents specify critical or important acceptance parameters for inspection?
  - Do Inspections include verification that specified documentation has been provided by the supplier and that items were not damaged during shipment?
  - Do inspections include an appropriate mix of the following methods:
    - ⇒ Inspections of materials or equipment at the supplier's plant,
    - ⇒ Receipt inspection of the shipped items,
    - ⇒ Review of objective evidence such as certifications and reports, and
    - ⇒ Verification or testing of items before or following shipment?

    Note: This assessment will not include a comprehensive evaluation of the BNI receipt inspection process.

- Supplier Documentation
  - Are supplier-generated documents accepted through the procurement system and controlled and processed by the end-user organization? (These documents may include certificates of conformance, drawings, analyses, test reports, maintenance data, nonconformance documentation, corrective actions, approved changes, waivers, and deviations.)

- Procurement of Safety Grade Items for Nuclear Facilities/Activities
  - Are items procured for safety applications in nuclear activities or structures, systems, and components either:
    - ⇒ Purchased from a supplier whose quality assurance program has been evaluated and found acceptable or
    - ⇒ Purchased as commercial-grade items for dedication to the safety service?
  - Are commercial-grade items intended for use in nuclear safety applications procured in accordance with documented processes using recognized consensus standards?
  - Are critical design characteristics identified by the design organization during item selection?
  - Are critical design characteristics and appropriateness of the item for use verified by:
    - ⇒ Testing the item,
    - ⇒ Inspecting the item, and/or
    - ⇒ Evaluating the supplier's ability to consistently supply the item at a level of quality that meets the safety and reliability requirements for the item?

Source/Reference Documents:

- 24590-WTP-QAM-01-001, *Quality Assurance Manual*, all revisions:
  1. Policy Q-04.1, "Procurement Document Control"
  2. Policy Q-07.1, "Control of Purchased Items and Services"
- DOE G 414.1-2A Quality Assurance Management System Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1C, *Quality Assurance*
  1. Section 4.7, "Procurement"
- 10 CFR 830.122, "Quality Assurance Criteria"
  1. Section (g), "Criterion 7 – Performance/Procurement"
- DOE O 414.1, *Quality Assurance* (versions as applicable to activities being evaluated)
  1. Attachment 2, Section 3.g, "Performance/Criterion 7 – Procurement"

Approved: _____ _____
Verification and Confirmation Official Date

Criteria Review and Approach Document

Functional Area:	Contractor:	Date:	CRITERIA MET
PROC.2 – Procurement Documents	Bechtel National, Inc.	February 9, 2007	YES: ____ NO: _X_

Performance Objective:

Procurement documents clearly identify requirements and acceptance criteria for purchased items and services

Requirements:

1. The QAP must address the following management, performance, and assessment criteria:
    - Prepare, review, approve, issue, use, and revise documents to prescribe processes, specify requirements, or establish design.

Criteria:

1. Procurement documents clearly state or reference requirements and acceptance criteria for purchased items and services.

2. Procurement documents include any specifications, standards, and other applicable documents referenced in the design documents.

3. Procurement documents include critical parameters and requirements, such as document submittals, product related documentation, problem reporting, administrative documentation, personnel or materials qualifications, tests, inspections, performance expectations for services, and reviews.

4. Procurement documents demonstrate greater attention to quality for safety and defense-in-depth items by applying a graded approach.

Approach:

Record Review:

1. Review procurement procedures to verify they specify the procurement documents necessary for purchases.

2. Review procurement procedures to verify they adequately define a graded approach to identifying critical parameters and requirements, such as document submittals, product related documentation, problem reporting, administrative

documentation, personnel or materials qualifications, tests, inspections, performance expectations for services, and reviews.

3. Select a sample of documents for completed procurements. Include at least one safety SSC and at least three commercial SSCs that are not APC or RRC (defense-in-depth). Also, include at least five SSCs that are APC or RRC. Verify that an appropriate, defined graded approach process was applied, producing appropriate quality requirements.

4. In the sample of procurement documents, verify that they identified critical parameters and requirements, such as document submittals, product related documentation, problem reporting, administrative documentation, personnel or materials qualifications, tests, inspections, performance expectations for services, and reviews.

Interviews:

1. The procurement quality manager

2. QA personnel who reviewed the procurement documents in the sample

3. The procurement manager

4. Procurement organization personnel who reviewed the procurement documents in the sample

5. Engineering organization personnel who reviewed the procurement documents in the sample

Field Observations:

None

Results:

Records Reviewed:

Engineering Specifications

- 24590-HLW-3PS-ADDH-T0001, Rev. 4, *Engineering Specification for System HMH Shield Doors, Containment Doors, and HLW Overpack*
- 24590-WTP-3PS-AFPS-T0001, Rev. 2 and Rev. 3, *Engineering Specification for Shop Applied Special Protective Coatings for Steel Items and Equipment*
- 24590-WTP-3PS-D000-T0001, Rev. 6, *Engineering Specification for Concrete Work*
- 24590-WTP-3PS-EKP0-T0001, Rev. 3, *Engineering Specification for Electrical Requirements for Packaged Equipment "QL"*

- 24590-WTP-3PS-G000-00001, Rev. 0, *General Specification for Supplier Quality Assurance Program Requirements*
- 24590-WTP-3PS-G000-T0003, Rev. 1, *Engineering Specification for Packaging, Handling, and Storage Requirements*
- 24590-WTP-3PS-07, Rev. 1, *Engineering Specification for Package Systems*
- 24590-WTP-3PS-SS00-T0001, Rev. 4, *Engineering Specification for Welding Structural Stainless Steel and Welding of Structural Carbon Steel to Structural Stainless Steel*
- 24590-WTP-3PS-SS90-T0001, Rev. 1, *Engineering Specification for Seismic Qualification of Seismic Category I/II Equipment and Tanks*

Supplier Deviation Requests

- 24590-WTP-SDDR-E-06-0011 (Eaton Corp.)
- 24590-WTP-SDDR-E-06-0012 (Eaton Corp.)
- 24590-WTP-SDDR-E-06-0016 (Eaton Corp.)

Purchase Orders / Material Requisitions

- 24590-QL-MRA-ADDH-00008, Rev 0, Handling, Storage, Maintenance & Property Control for HMH Shield Doors
- 24590-CM-POB-ED00-00001, Revisions 1 – 10, "125VDC System" (McLaren, Inc.)
- 24590-CM-POA-ET00-00003, Revisions 0 and 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations" (Turtle and Hughes, LLC)
- 24590-CM-POA-MPE0-00001, Rev. 8, "Steam Ejectors"
- 24590-CM-POA-PS02-00007, Revs. 0-13, Pipe Spool Fabrication (Services), J. H. Kelly, LLC
- 24590-CM-POB-PS02-00007, *Pipe Spool Fabrication*

Procedures / Guides / Directives

- 24590-WTP-GPP-GPX-00305, Rev. 4, Subcontract and Purchase Order Formation
- 24590-WTP-GPP-GPX-00300, Rev. 2, Purchase of Commercial Items and Services
- 24590-WTP-3DP-G06B-00010, Rev. 3, Specifying Supplier Quality Assurance Program Requirements
- 24590-WTP-G04B-G06B-00049, Engineering Specifications
- 24590-WTP-G04B-G06B-00905, Rev. 7, Determination of Quality Levels
- 24590-WTP-QAM-QA-01-0001, Policy Q-02.1, Revisions 3 – 7, BNI Quality Assurance Manual Policy: "Quality Assurance Program"
- 24590-WTP-GPG-ENG-039, Rev. 4, Quality Designation and Grading
- 24590-WTP-GPG-ENG-037, Rev. 7, Supplier Document Request and Review
- 24590-WTP-GPP-GPX-00205, Rev. 5, Requisitions
- 24590-WTP-3DP-G06B-00002, Rev. 5, Subcontracts
- 24590-WTP-GPP-GPX-00301, Rev. 02, Solicitations, Proposal Evaluation, Negotiations, and Award Documentation

- 24590-WTP-3DP-GO3B-00010, Rev. 4, Engineering Planning and Control
- 24590-WTP-3DP-GO4B-00001, Rev. 9, Design Criteria
- 24590-WTP-3DP-GO4B-00002, Rev. 2, *Engineering Standards and Guides*
- 24590-WTP-3DP-GO4B-00025, Rev. 3, Engineering Interface Control
- 24590-WTP-3DP-GO4B-00057, Rev. 4, Technical Services Contracts
- 24590-WTP-3DP-GO4T-00901, Rev. 10, Design Change Control
- 24590-WTP-3DP-GO4T-00907, Rev. 0, Design Change Package
- 24590-WTP-3DP-GO6B-00001, Rev. 12, Material Requisitions
- 24590-WTP-GPP-GAV-00100, Rev. 1, Contract Management
- 24590-WTP-GPP-GAV-00102, Rev. 2, Contract Changes and Pending Item Procedure
- 24590-WTP-GPP-GAV-00104, Rev. 1, Non-Standard Contracts for Quality-Affecting Work
- 24590-WTP-GPP-GAB-422, Rev. 3, Change Control Program
- 24590-WTP-GPP-GAB-423, Rev. 1, Work Authorization
- 24590-WTP-GPP-GAB-434, Rev. 2, Subcontracts Planning and Control
- 24590-WTP-3DP-G04B-00005, Rev. 2, Configuration Management
- 24590-WTP-3DP-G03B-00001, Rev. 6, Design Process
- 24590-WTP-GPP-AS-001, Rev. 5, *Purchasing Flow Process*

Miscellaneous

- Request for Proposal 24590-CM-MRA-MPE0-00001, "Steam Ejectors"

Personnel Interviewed:
Ang, T. O.
Bronner, A. S.
Brown, R. E.
Cook, R. E.
Goh, L. H.
Grusetski, J. A.
Holland, A. X.
Larson, A. L.
Leam, J.
Lynch, S.
Pisarcik, D. J.
Salasky, B. A.
Thompson, A. N.
Wolfer, D.
Wuennecke, D. J.

Discussion of Results:

The assessors began by reviewing the BNI procedures governing procurement document control. The assessors then reviewed the purchase orders and associated specifications for a sample of procurements. They were for:

- Shield doors (Q-level, safety equipment)
- 125VDC system (non-Q, APC)
- Liquid filled transformers (non-Q, APC)
- Steam ejectors (non-Q, APC)

After reviewing documents, the assessors interviewed personnel in Acquisition Services (buyers), Acquisition Engineering, and Supplier Quality. The intention was to interview personnel involved in development of the purchases, however few were available. In a number of cases, personnel had left the project, so the assessors interviewed individuals who had taken over the various roles. The individuals had useful information, but it was often not first hand knowledge.

The assessors did not attempt to verify the technical adequacy of the engineering technical specifications describing the design of the equipment ordered under these POs. However, they did evaluate the process for identifying quality requirements that would be specified in the specifications, and then be verified through the Material Acceptance Plan process.

Because the shield doors were classified as safety equipment, the specification identified them as Q-level for the purposes of grading quality requirements. All documentation associated with the shield door procurement appeared to be consistent with this classification. The assessors had no issues with this procurement.

The other procurements were classified as non-Q, and the BNI procedures reviewed by the assessors stated that this equipment was to be procured using commercial practices. However, because these were engineered items, BNI still specified quality assurance requirements for the procurements. For example, source inspection was specified for all three purchases.

The assessors looked for evidence that the graded approach specified in the BNI QA Manual (QAM) was applied when POs were developed. Procedures stated that engineers were to apply the grading criteria of the QAM while developing specifications. It appeared this occurred in each case.

The assessors noted that some general technical specifications included outdated references and may not be current in other ways. In particular, 24590-WTP-3PS-G000-00001, *General Specification for Supplier Quality Assurance Program Requirements*, contained outdated references and did not have any obvious value for suppliers. It described quality assurance requirements over the entire range of possibilities in a manner that could leave a supplier uncertain of what was being required. This specification also listed DOE O 414.1 as an implementation standard when it is not a standard. Instead, supplier quality programs should apply industry consensus standard to implement DOE O 414.1.

The assessors noted that the purchase order for the steam ejectors marked the special conditions for both the QA requirements and nuclear safety requirements as "Reserved."

These were SC-9 and SC-10. This appeared inappropriate because the steam ejectors were APC equipment and were subject to regulation under 10 CFR 830. The purpose of SC-10 was to notify suppliers that they had responsibilities under the rule, in keeping with the guidance of DOE O 414.1-2.

BNI management explained to the assessors that buyers used "preparer's notes" when they made the decision to include or exclude the QA and nuclear safety requirements in the contract. However, the "preparer's notes were not reviewed and approved by either the QA or Environmental and Nuclear Safety organizations. The "preparer's notes" governed an activity affecting quality, but were not controlled in accordance with the QAM.

Conclusions:

BNI procedures appropriately specified a process for developing specifications and purchase orders that employed a grading process consistent with the QAM. The purchase orders and engineering technical specifications reviewed by the assessors appeared to reflect grading. (As identified in other CRADs, the grading did not always result in the desired influence on inspection and supplier evaluation activities.)

Some general engineering technical specifications were outdated and should be reviewed for utility.

BNI did not notify suppliers of some APC equipment that their work was regulated under the Nuclear Safety Management rule. This occurred because persons preparing POs used "preparer's notes" supplied by management that were not approved by either QA or E&NS, and contained errors. Also, BNI did not analyze purchases to see which suppliers were regulated under the rule.

Because the "preparer's notes" used the fact that a purchase was or was not Q-level as the only criterion for determining when to specify SC-9 and SC-10, these conditions could be inappropriately omitted from purchases of APC equipment. On the other hand, when items are classified as Q-level because of OCRWM or air permitting QA requirements, it is possible that a supplier could be notified their work was regulated under the rule when it was not.

Issues:

- BNI should review its general engineering technical specifications and update them. BNI should also consider cancelling 24590-WTP-3PS-G000-00001.

- BNI personnel used an uncontrolled procedure to develop purchase orders. The procedure was not properly approved and contained errors.

- BNI did not analyze purchases to determine which were regulated under 10 CFR 830.

- BNI did not notify some suppliers that their work was regulated under 10 CFR 830.

Submitted by: 2/20/07 Reviewer / Date	Approved: 2/26/07 Review Team Lead / Date

Criteria Review and Approach Document

Functional Area: **PROC.3 – Supplier Qualification**	Contractor: Bechtel National, Inc.	Date: February 12, 2007	CRITERIA MET YES: X NO: ____

Performance Objective:

Prior to awarding contracts, suppliers are evaluated based on specified criteria.

Requirements:

1. Evaluate and select prospective suppliers on the basis of specified criteria.

Criteria:

1. All suppliers are evaluated to verify their capability to meet performance and schedule requirements using a graded approach.

2. On-site evaluations of suppliers address personnel, technical and equipment capabilities, and processes.

3. Supplier evaluations include, as appropriate:
   - A review of the supplier's history of providing identical or similar items or services,
   - A review of shared supplier quality information (e.g., DOE Consolidated Audit Program, DOE Laboratory Accreditation Program),
   - An evaluation of certifications or registrations awarded by nationally accredited third parties, and
   - An evaluation of documented qualitative and quantitative performance information provided by the supplier.

4. Potential suppliers are identified as early as possible in the design and procurement process in order to determine their capabilities?

Approach:

Record Review:

1. Review contractor procedures to verify an appropriate graded approach is specified for supplier evaluation. Verify the graded approach identifies appropriate requirements for vendors of APC/RRC SSCs.

2. Select a sample of completed procurements. Include at least one safety SSC and at least three commercial SSCs that are not APC or RRC (defense-in-depth).

Also, include at least five SSCs that are APC or RRC. Verify that all suppliers were evaluated.

3. In the sample of completed procurements, verify the evaluation relied on one or more of the following methods:
   - A review of the supplier's history of providing identical or similar items or services,
   - A review of shared supplier quality information (e.g., DOE Consolidated Audit Program, DOE Laboratory Accreditation Program),
   - An evaluation of certifications or registrations awarded by nationally accredited third parties, and / or
   - An evaluation of documented qualitative and quantitative performance information provided by the supplier.

4. In the sample of completed procurements, verify that appropriate on-site supplier evaluations were performed.

Interviews:

1. The procurement quality manager

2. QA personnel who participated in evaluating the suppliers

3. The procurement manager

4. Procurement organization personnel who participated in evaluating the suppliers

5. Engineering organization personnel who participated in identifying requirements and evaluating the suppliers

During interviews, determine whether potential suppliers have been identified as early as possible in the design and procurement process in order to determine their capabilities.

Field Observations:

None

Results:

Records Reviewed:

Procedures / Guides / Directives

- 24590-WTP-GPP-GPX-00305, Rev. 4, *Subcontract and Purchase Order Formation*
- 24590-WTP-GPP-GPX-00300, Rev. 2, *Purchase of Commercial Items and Services*

- 24590-WTP-3DP-G06B-00005, Rev. 4, *Bid Evaluation*
- 24590-WTP-3DP-G06B-00010, Rev. 3, *Specifying Supplier Quality Assurance Program Requirements*
- 24590-WTP-G04B-G06B-00049, *Engineering Specifications*
- 24590-WTP-G04B-G06B-00905, Rev. 7, *Determination of Quality Levels*
- 24590-WTP-QAM-QA-01-0001, Policy Q-02.1, Revisions 3 – 7, BNI Quality Assurance Manual Policy: "Quality Assurance Program"
- 24590-WTP-GPG-ENG-039, Rev. 4, *Quality Designation and Grading*
- 24590-WTP-GPP-GPX-00205, Rev. 5, *Requisitions*
- 24590-WTP-GPP-GPX- 00213, Rev. 3, *Prequalification of Bidders and Bid List Development*
- 24590-WTP-GPP-GPX-00302_1, *Bidders List Development*
- 24590-WTP-GPP-GPX-00402_1, *Evaluation of Proposals/Source Selection*
- 24590-WTP-GPP-GPX-00301, Rev. 02, *Solicitations, Proposal Evaluation, Negotiations, and Award Documentation*
- 24590-WTP-3DP-G06B-00011, Rev. 0, *Evaluation of Supplier Quality Assurance Program*
- 24590-WTP-GPP-GPX-00503, Rev. 5, *Award*
- 24590-WTP-GPP-GPX-00601, Rev. 5, *Subcontract and Purchase Order Management - General*
- 24590-WTP-3DP-GO4B-00001, Rev. 9, *Design Criteria*
- 24590-WTP-3DP-GO4B-00002, Rev. 2, *Engineering Standards and Guides*
- 24590-WTP-3DP-GO6B-00001, Rev. 12, *Material Requisitions*
- 24590-WTP-GPP-GAV-00100, Rev. 1, *Contract Management*
- 24590-WTP-3DP-G03B-00001, Rev. 6, *Design Process*
- 24590-WTP-GPP-AS-001, Rev. 5, *Purchasing Flow Process*
- 24590-WTP-GPP-PSQ-010, Rev. 3, *Supplier Quality Program Description*
- 24590-WTP-GPP-PSQ-0020, Rev. 5, *Supplier Qualification*
- 24590-WTP-GPP-PSQ-021, Rev. 2, *Supplier QA Program Review*
- 24590-WTP-GPP-PSQ-022, Rev. 3, *Supplier Pre-Award Survey*
- 24590-WTP-GPP-PSQ-023, Rev. 4, *Supplier Post-Award Audits*
- 24590-WTP-GPP-PSQ-024, Rev. 2, *Supplier Annual Evaluations*

Engineering Specifications

- 24590-HLW-3PS-ADDH-T0001, Rev. 4, *Engineering Specification for System HMH Shield Doors, Containment Doors, and HLW Overpack*
- 24590-WTP-3PS-G000-00001, Rev. 0, *General Specification for Supplier Quality Assurance Program Requirements*

Purchase Orders / Material Requisitions

- 24590-QL-MRA-ADDH-00008, Rev 0, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*
- 24590-CM-POB-ED00-00001, Revisions 1 – 10, "125VDC System" (McLaren, Inc.)

- 24590-CM-POA-ET00-00003, Revisions 0 and 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations" (Turtle and Hughes, LLC)
- 24590-CM-POA-MPE0-00001, Rev. 8, "Steam Ejectors"
- 24590-CM-POA-PS02-00007, Revs. 0-13, *Pipe Spool Fabrication (Services)*, J. H. Kelly, LLC
- 24590-CM-POB-PS02-00007, *Pipe Spool Fabrication*

Correspondence

- BNI letter CCN 142403, to Konrad Lasota, Oregon Iron Works, Inc. "P.O. 24590-QL-POA-ADDH-00009, Shield Doors Melter Cave/Crane Maintenance L/DS QL-1," dated August 29, 2006
- BNI letter CCN 024110, R. Steve Sallee to Rich Anderson, Oregon Iron Works, "Results of Supplier Quality Assurance Manual Review – Oregon Iron Works, Inc.," dated October 25, 2001
- ASME letter, Sandra K. Bridges to Jerry Takeuchi, Oregon Iron Works, "Renewal of ASME Certification of Authorization, "PP" #8814, "S" #15,702, and "U" #7985," dated June 22, 2001
- BNI letter W. R. Klinger to Jerry Takeuchi, Oregon Iron Works, "BNI Survey 24590-SSV-QA-01-006, Rev. 0"
- BNI letter CCN 049429, H. N. Crotts to Jerry Takeuchi, Oregon Iron Works, "Addition to Commodity MEEM for Oregon Iron Works, Inc. on the Bechtel National, Inc. Approves Supplier List"
- BNI letter CCN 114104, "Bechtel National, Inc. Supplier Survey of Oregon Iron Works, Inc.," dated March 15, 2005
- BNI letter CCN 123988, Sven Akerman to Jerry Takeuchi, Oregon Iron Works, Inc., "Quality Assurance Program Review for Oregon Iron Works," dated July 13, 2005
- BNI memorandum CCN 086590, Eric Birkland to Records Management, "Supporting Documentation for 24590-CM-ED00-00001, Revision 0," dated April 8, 2004
- BNI memorandum CCN 086590, Eric Birkland to Records Management, "Supporting Documentation – Tyco Valves & Control 24590-CM-POA-MPE0-00001, Revision 0," dated June 28, 2004
- BNI letter CCN: 118473, Sven Akerman to Vince Archibald, Oregon Iron Works, "Quality Assurance Program Review for Oregon Iron Works," May 5, 2005
- BNI letter CCN: 126797, Sven Akerman to Jerry Takeuchi, Oregon Iron Works, "Bechtel National, Inc. Audit of Oregon Iron Works' Clackamas, Oregon Facility, 24590-WTP-AR-QA-05-059, Rev. 0," dated September 7, 2005
- BNI letter CCN: 131844, Sven Akerman to Jerry Tekeuchi, Oregon Iron Works, "Bechtel National, Inc.'s Additional Quality Assurance Requirements for Qualifying Original Equipment Manufacturers of Measuring and Test Equipment," dated November 21, 2005
- BNI Supplier Qualification memorandum CCN: 130709, Rick Sutter to Brian Johnson, "Oregon Iron Works Quality Assurance Manual Revision 7, Dated December 27, 2005," dated January 31, 2006

- BNI letter CCN: 143155, "Bechtel National, Inc. Audit of Oregon Iron Works – 24590-WTP-AR-QA-06-039, Revision 0," dated August 18, 2006

Miscellaneous

- 24590-WTP-SUV-QA-05-016, Rev. 0, Supplier Survey Report
- Completed Supplier Quality Assurance Program Requirements Data Sheet, 125 VDC System (Non-ITS) [Note: While this data sheet was marked "non-ITS" the system was in fact ITS.]
- Bid Proposal Evaluation (portions of bid tabulation chart) for MR 24590-CM-MRA-ED00-00001, 125 VDC System
- Electrical Data Sheet: "125V DC System," 24590-BOF-EDD-DCE-00001, Rev.6, sheet 1
- Electrical Data Sheet: "13.8kV – 480V Liquid-Filled Transformer & Secondary Unit Substations" 24590-LAW-ETD-LVE-00009, Revisions 2 & 3
- Request for Proposal 24590-CM-MRA-MPE0-00001, "Steam Ejectors"
- Supplier QA Program Data Sheet, Tyco

Personnel Interviewed:

Akerman, S.
Ang, T. O.
Bronner, A. S.
Brown, R. E.
Canazaro, D. J.
Cook, R. E.
Goh, L. H.
Grusetski, J. A.
Holland, A. X.
Larson, A. L.
Leam, J.
Pisarcik, D. J.
Salasky, B. A.
Simpson, D. D.
Thompson, A. N.
Wolfer, D.
Wuennecke, D. J.

Discussion of Results:

The assessors reviewed the BNI procedures governing supplier evaluation, both for Q-level and non-Q purchases. They then evaluated application of these processes to one Q-level and three non-Q purchases. These were:

- Shield doors (transport and storage)
- 125VDC system
- Liquid filled transformers
- Steam ejectors

For Q-level purchases, BNI applied an extensively documented process of formal supplier evaluation and qualification described in 24590-WTP-3DP-G06B-00011, *Evaluation of Supplier Quality Assurance Program*, 24590-WTP-GPP-PSQ-0020, *Supplier Qualification*, 24590-WTP-GPP-PSQ-021, *Supplier QA Program Review*, 24590-WTP-GPP-PSQ-022, *Supplier Pre-Award Survey*, 24590-WTP-GPP-PSQ-023, *Supplier Post-Award Audits*, and 24590-WTP-GPP-PSQ-024, *Supplier Annual Evaluations*. These procedures required BNI to review supplier QA programs and visit supplier facilities to verify implementation. Annual reevaluations were required to maintain a supplier on the BNI Approved Suppliers List (ASL).

BNI provided documentation showing they had evaluated and qualified the supplier of the Q-level shield door work and placed them on the BNI ASL. The supplier was Oregon Iron Works, Inc. (OIW), although they had not been the original fabricators of the shield doors. The supplier that had fabricated the shield doors (Unidynamics, Inc.) was bankrupted, so BNI purchased the services of OIW to take possession of the shield doors from Unidyamics and transport them to Oregon. While OIW stored them in Oregon, they were to conduct an evaluation of the shield doors to determine what it would cost for OIW to complete the fabrication work. If BNI chose to have OIW complete this work, they would award a separate purchase order.

BNI evaluated non-Q suppliers as part of the bid evaluation process described in 24590-WTP-3DP-G06B-00005, *Bid Evaluation*, 24590-WTP-GPP-GPX-00402_1, *Evaluation of Proposals/Source Selection*, and other procedures. In developing requests for proposal and other solicitation documents, BNI specified submittals that would be used in the selection process. These submittals sometimes did and sometimes did not include evidence of the prospective supplier's quality assurance program. Depending on the nature of the submittal, different organizations reviewed the submittals for adequacy.

In interviews, BNI personnel stated that different individuals specified different requirements regarding requests for evidence of QA programs for non-Q suppliers. BNI management had relaxed its direction to request evidence of QA programs, but there was now no specific direction on this topic. As a result, some personnel would always request evidence of a QA program while others never would. Upon receiving a QA manual from a supplier, persons receiving the manual might or might not request a QA engineer to review it. If QA was not requested to review it, Engineering would review it. However, if QA was requested to review it, Acquisition Services personnel said that some QA engineers would refuse to conduct a review. They held the position that QA should only review QA programs for Q-level suppliers, but other QA engineers willingly reviewed QA manuals for non-Q suppliers. The assessors saw no procedural direction addressing QA organization review QA programs of non-Q suppliers.

If QA programs were not reviewed by QA, they were reviewed by Engineering. However, the assessors saw no criteria for Engineering review of QA programs. Also, the assessors saw no evidence that BNI provided any qualification process to enable Engineering to evaluate QA programs.

24590-WTP-QAM-QA-01-0001, Policy Q-02.1, *BNI Quality Assurance Manual*, "Quality Assurance Program," specified eleven criteria for grading quality requirements. These included consequences of failure of an item with respect to both safety and facility mission (risk). There were no procedures governing selection of supplier evaluation methods that implemented these in a grading process.

The assessors had no issues with the supplier evaluations for the three APC procurements. However, procedures did not clearly define how to select graded quality requirements, so that it was purely a matter of judgment to determine and specify requirements. Therefore there were no criteria against which to measure the appropriateness of the supplier evaluation decisions.

Conclusions:

BNI had an effective process for evaluating suppliers of Q-level items. Qualified suppliers were placed on the ASL, and were maintained through a process of periodic re-evaluations. The assessors had no issues with the qualification of Q-level suppliers.

For non-Q suppliers, BNI lacked coherent procedures to specify consistent supplier evaluations using a graded approach. Procedures specifying supplier evaluation activities did not address the eleven criteria of the BNI QAM, Policy Q-02.1. As a result, persons specifying supplier submittals had inadequate guidance regarding when to specify submittal of QA program documents. When suppliers received QA program documents, there was no direction regarding who should review the documents. If Engineering reviewed them, there were no review criteria, and there was no evidence that engineers were qualified to perform the reviews.

Issues:

BNI procedures did not provide a process for graded supplier evaluation for non-Q purchases.

Submitted by:	Approved:
Reviewer / Date	Review Team Lead / Date 2/26/03

Criteria Review and Approach Document

Functional Area: **PROC.4 – Supplier Performance Monitoring**	Contractor: Bechtel National, Inc.	Date: February 12, 2007	CRITERIA MET YES: __X__ NO: ____

Performance Objective:

The performance of suppliers is monitored to confirm their continuing capabilities.

Requirements:

1. Establish and implement processes to ensure that approved suppliers continue to provide acceptable items and services.

Criteria:

1. The performance of qualified suppliers is monitored periodically during the life of the contract to confirm their continuing capabilities.

2. Supplier monitoring verifies that acceptable items or services are produced and schedule requirements are being met.

3. Supplier monitoring includes an appropriate combination of:
   - Surveillance of work activities;
   - Inspection of facilities and processes;
   - Review of plans and progress reports;
   - Surveillance of manufacturing processes and methods;
   - Processing and use of change information;
   - Review of internal assessments;
   - Review and disposition of nonconformances; and
   - Selection, qualification, and performance monitoring of subtier suppliers?

Approach:

Record Review:

1. Review contractor procedures to verify an appropriate graded approach is specified for supplier monitoring. Verify the graded approach identifies appropriate requirements for vendors of APC/RRC SSCs.

2. Select a sample of completed procurements. Include at least one safety SSC and at least three commercial SSCs that are not APC or RRC (defense-in-depth).

Also, include at least five SSCs that are APC or RRC. Verify that the performance of all suppliers was monitored.

3. In the sample of completed procurements, verify the evaluation relied on an appropriate combination of the following methods:
   - Surveillance of work activities;
   - Inspection of facilities and processes;
   - Review of plans and progress reports;
   - Surveillance of manufacturing processes and methods;
   - Processing and use of change information;
   - Review of internal assessments;
   - Review and disposition of nonconformances; and
   - Selection, qualification, and performance monitoring of subtier suppliers?

Interviews:

1. The procurement quality manager

2. QA personnel who participated in monitoring the suppliers, including source inspection

3. The procurement manager

4. Procurement organization personnel who participate in monitoring supplier performance

5. QC personnel who participate in supplier monitoring activities

Interviews should determine how a graded approach is used to identify and execute supplier monitoring activities. Special attention should be applied to the process for monitoring suppliers of APC/RRC SSCs.

Field Observations:

None

Results:

Records Reviewed:

Procedures

- 24590-WTP-3DP-G06B-00011, Rev. 0, *Evaluation of Supplier Quality Assurance Program*
- 24590-WTP-GPP-GPX-00601, Rev. 5, *Subcontract and Purchase Order Management - General*
- 24590-WTP-3DP-GO3B-00010, Rev. 4, *Engineering Planning and Control*

- 24590-WTP-3DP-GO6B-00001, Rev. 12, *Material Requisitions*
- 24590-WTP-GPP-PSQ-010, Rev. 3, *Supplier Quality Program Description*
- 24590-WTP-GPP-PSQ-0020, Rev. 5, *Supplier Qualification*
- 24590-WTP-GPP-PSQ-0025, Rev. 3, *Supplier Corrective Action Report*
- 24590-WTP-GPP-MGT-013, Rev. 6, *Acceptance of Procured Material*
- 24590-WTP-GPP-PSQ-050, Rev. 5, *Receiving Inspection*
- 24590-WTP-GPP-PSQ-042, Rev. 5, *In-Process Source Verification*
- 24590-WTP-GPP-PSQ-043, Rev. 5, *Source Verification Reporting*
- 24590-WTP-GPP-PSQ-047, Rev. 6, *Quality Deficiency Reports*

Engineering Specifications

- 24590-HLW-3PS-ADDH-T0001, Rev. 4, *Engineering Specification for System HMH Shield Doors, Containment Doors, and HLW Overpack*
- 24590-WTP-3PS-G000-00001, Rev. 0, *General Specification for Supplier Quality Assurance Program Requirements*
- 24590-QL-MRA-ADDH-00008, Rev 0, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*
- 24590-CM-POB-ED00-00001, Revisions 1 – 10, "125VDC System" (McLaren, Inc.)
- 24590-CM-POA-ET00-00003, Revisions 0 and 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations" (Turtle and Hughes, LLC)
- 24590-CM-POA-MPE0-00001, Rev. 8, "Steam Ejectors"
- 24590-CM-POA-PS02-00007, Revs. 0-13, *Pipe Spool Fabrication (Services)*, J. H. Kelly, LLC
- 24590-CM-POB-PS02-00007, *Pipe Spool Fabrication*

Supplier Deviation Requests

- 24590-WTP-SDDR-E-06-0011 (Eaton Corp.)
- 24590-WTP-SDDR-E-06-0012 (Eaton Corp.)
- 24590-WTP-SDDR-E-06-0016 (Eaton Corp.)

Source Verification Reports

- 24590-CM-YQA-ET000-30001, Rev. 0
- 24590-CM-YQA-ET000-30002, Rev. 0
- 24590-CM-YQA-ET000-30003, Rev. 0
- 24590-CM-YQA-ET000-30004, Rev. 0
- 24590-CM-YQA-ET000-30005, Rev. 0
- 24590-CM-YQA-ET000-30006, Rev. 0
- 24590-CM-YQA-ET000-3A001-1, Rev. 0
- 24590-CM-YQA-ET000-3A001-2, Rev. 0
- 24590-CM-YQA-ET000-3A001-3, Rev. 0
- 24590-CM-YQA-ET000-3A001-4, Rev. 0
- 24590-CM-YQA-ET000-3A001-5, Rev. 0
- 24590-CM-YQA-ET000-3A001-6, Rev. 0

- 24590-CM-YQA-ET000-3A001-7, Rev. 0

Supplier Corrective Action Reports

- 24590-WTP-SCAR-QA-05-112 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-05-113 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-071 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-072 (Oregon Iron Works, Inc.)

Material Acceptance Plans

- 24590-WTP-MAP-AS-04-00485, *Fasteners*
- 24590-WTP-MAP-AS-04-00237, *Stainless Steel Pipe Spool Fabrication*

Personnel Interviewed:

Akerman, S.
Canazaro, D. J.
Pisarcik, D. J.
Truman, D

Discussion of Results:

The assessors reviewed the BNI procedures governing source inspection and supplier corrective action. They then evaluated application of these processes to one Q-level and three non-Q purchases. These were:

- Shield doors
- 125VDC system
- Liquid filled transformers
- Steam ejectors

From these purchases, the assessors reviewed right of access requirements in purchase orders, material acceptance plans, source verification reports, supplier deviation requests, and supplier corrective action reports.

All field documentation reviewed by the assessors was in order and appeared to reflect a disciplined approach to supplier performance monitoring. However, as discussed in the CRAD "Inspection," BNI did not specify when to apply the five levels of inspection; Levels 0, 1, 2, 3, and 4.

BNI used their source verification and supplier qualification (periodic re-qualification) processes to monitor supplier performance. Planning of supplier inspection activities was accomplished through the MAP process. Personnel conducting supplier monitoring activities issues source verification reports, and deficiencies were documented in quality deficiency reports and supplier corrective action reports. While these processes were designed primarily for Q-level procurements, BNI applied features of them to non-Q purchases of some engineered items.

The supplier deviation request (SDDR) process allowed suppliers to document proposed resolutions to technical issues with purchase order requirements. SDDRs were reviewed by appropriate technical authorities. They provided a means for suppliers to proceed with work when they could not comply with requirements of the purchase order or if they identified a better way to achieve BNI's cost, schedule, or technical objectives.

Conclusions:

BNI had reasonable procedures for supplier monitoring and followed them. Supplier monitoring was accomplished through the source verification and supplier requalification processes. BNI conducted source inspection activities and documented results. Deficiencies were resolved through documented processes. Suppliers were provided with a means for documenting deviations from purchase requirements that, by procedure, received appropriate review and approval.

The process for grading inspections was not defined in procedures, but this is documented in a different CRAD document.

Issues:

None

Submitted by: 2/20/07 Reviewer / Date	Approved: 2/26/07 Review Team Lead / Date

Criteria Review and Approach Document

Functional Area:	Contractor:	Date:	CRITERIA MET
PROC.5 – Inspection	Bechtel National, Inc.	February 9, 2007	YES: ____ NO: X

Performance Objective:

An inspection process assures conformance with purchased item requirements.

Requirements:

1. Inspect and test specified items, services, and processes using established acceptance and performance criteria.

Criteria:

1. The inspection process provides for identifying inspections and tests to ensure conformance with purchase requirements.

2. Design and procurement documents specify critical or important acceptance parameters for inspection.

3. Inspections include verification that specified documentation has been provided by the supplier and that items were not damaged during shipment.

4. Inspections include an appropriate mix of the following methods:
   - Inspections of materials or equipment at the supplier's plant,
   - Receipt inspection of the shipped items,
   - Review of objective evidence such as certifications and reports, and
   - Verification or testing of items before or following shipment.

Approach:

Note: This assessment will not include a comprehensive evaluation of the BNI receipt inspection process.

Record Review:

1. Review contractor procedures to verify an appropriate graded approach is specified for inspection. Verify the graded approach identifies appropriate requirements for APC / RRC SSCs.

2. Select a sample of completed procurements. Include at least one safety SSC and at least three commercial SSCs that are not APC or RRC (defense-in-depth).

Also, include at least five SSCs that are APC or RRC. Verify that appropriate inspections were specified and performed, both at the vendors' facilities and at the Hanford Site.

3. For the inspections in the sample, verify that inspection results were appropriately evaluated and dispositioned.

Interviews:

1. The procurement quality manager
2. QA and / or QC personnel who participated in inspecting purchased items at the suppliers' facilities
3. The manager responsible for receipt inspection
4. Engineering organization personnel who participated in identifying inspection requirements

Interviews should determine that participants recognize a coherent, documented process by which critical or important acceptance parameters for inspection are identified, inspections are accomplished, results are evaluated, and problems identified during inspections are appropriately resolved.

Field Observations:

Have the contractor walk through at least one receipt inspection activity.

Results:

Records Reviewed:

Material Acceptance Plans

- 24590-WTP-MAP-AS-04-00485, *Fasteners*
- 24590-QL-MRA-PB00-00004 (Associated MAP for stainless steel pipe bulks)
- 24590-WTP-MAP-AS-04-00237, *Stainless Steel Pipe Spool Fabrication*

Purchase Orders / Material Requisitions

- 24590-QL-MRA-ADDH-00008, Rev 0, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*
- 24590-CM-POB-ED00-00001, Revisions 1 – 10, "125VDC System" (McLaren, Inc.)
- 24590-CM-POA-ET00-00003, Revisions 0 and 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations" (Turtle and Hughes, LLC)

- 24590-CM-POA-MPE0-00001, Rev. 8, "Steam Ejectors"

- 24590-CM-POA-PS02-00007, Revs. 0-13, *Pipe Spool Fabrication (Services)*, J. H. Kelly, LLC
- 24590-CM-POB-PS02-00007, *Pipe Spool Fabrication*

Procedures

- 24590-WTP-GPP-MGT-013, Rev. 6, *Acceptance of Procured Material*
- 24590-WTP-3DP-GO6B-00001, Rev. 12, *Material Requisitions*
- 24590-WTP-GPP-PSQ-050, Rev. 5, *Receiving Inspection*
- 24590-WTP-GPP-PSQ-042, Rev. 5, *In-Process Source Verification*
- 24590-WTP-GPP-PSQ-043, Rev. 5, *Source Verification Reporting*
- 24590-WTP-GPP-PSQ-047, Rev. 6, *Quality Deficiency Reports*

Source Verification Reports

- 24590-CM-YQA-ET000-30001, Rev. 0
- 24590-CM-YQA-ET000-30002, Rev. 0
- 24590-CM-YQA-ET000-30003, Rev. 0
- 24590-CM-YQA-ET000-30004, Rev. 0
- 24590-CM-YQA-ET000-30005, Rev. 0
- 24590-CM-YQA-ET000-30006, Rev. 0
- 24590-CM-YQA-ET000-3A001-1, Rev. 0
- 24590-CM-YQA-ET000-3A001-2, Rev. 0
- 24590-CM-YQA-ET000-3A001-3, Rev. 0
- 24590-CM-YQA-ET000-3A001-4, Rev. 0
- 24590-CM-YQA-ET000-3A001-5, Rev. 0
- 24590-CM-YQA-ET000-3A001-6, Rev. 0
- 24590-CM-YQA-ET000-3A001-7, Rev. 0

Supplier Corrective Action Reports

- 24590-WTP-SCAR-QA-05-112 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-05-113 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-071 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-072 (Oregon Iron Works, Inc.)

Personnel Interviewed:

Truman, D., Supplier Quality
Anderson, R., Supplier Quality
Cox, J. W., Receiving Inspector
MacBay, R. J., Receiving Inspection

Discussion of Results:

The assessor reviewed procedures applying to both the source inspection and receiving inspection processes. He found that the procedures in the BNI Supplier Quality Manual applied to Q-level procurements unless specified by Engineering for non Q procurements.

The assessor reviewed the BNI procedures governing material acceptance, source inspection, supplier deficiency reporting, and receiving inspection. He reviewed source inspection documents for procurements of:

- Shield doors
- 125VDC system
- Liquid filled transformers
- Steam ejectors

Acquisition Services and Supplier Quality personnel worked together to develop Material Acceptance Plans (MAPs) for these purchases that addressed both source and receiving inspection requirements. Inspectors then used the MAPs while conducting inspections. When inspectors identified deficiencies, they documented them in Quality Deficiency Reports. During source inspection, inspectors documented programmatic issues in Supplier Corrective Action Requests. Source inspectors documented all source inspection activity in Source Verification Reports and on the MAP form. Receiving inspectors documented deficiencies in Quality Deficiency Reports (QDR). Inspectors interviewed said that if a QDR failed to resolve a deficiency, they would submit a nonconformance report. Completed inspections were documented on the MAP form.

The assessors reviewed Source Verification Reports and other source inspection documents for the four procurements. Inspection activity was well documented, as was deficiency resolution.

The assessors interviewed one receiving inspector and the acting receiving inspection supervisor at the Marshalling Yard. The assessor selected one inspection that was scheduled for accomplishment and for which the material was already on-site. The material was a lot of Q-level stainless steel piping and fittings supplied by Puget Sound Pipe and Supply. At the request of the assessor, the inspector stepped through the receiving process, demonstrating how he would verify and document acceptance of each attribute on the MAP. The assessor identified no deficiencies or other issues in the receiving inspection process.

The assessor interviewed a Supplier Quality Representative (SQR) in the Supplier Quality organization regarding a MAP he had prepared. The SQR described the process he used to take information from the engineering specification to develop the MAP. When asked about grading requirements because the example MAP was for Additional Protection Class equipment, the SQR stated this was not a consideration. (This answer was consistent with the process described in 24590-WTP-GPP-MGT-013, Rev. 6, *Acceptance of Procured Material*, which did not address grading of decisions based on consequences of failure of the item.)

The assessor also interviewed the Lead SQR and asked how the Supplier Quality organization achieves consistency in how MAPs are prepared. He said that he reviews and performs surveillances on MAPs and is then able to guide personnel toward consistency. The SQR showed the assessor a book of Supplier Quality Bulletins that provided useful information from management on how to achieve consistent performance among SQRs.

The assessor noted that 24590-WTP-GPP-MGT-013 identified five inspection levels ranging from 0 to 4. Level 0 was defined as no inspection while Level 4 was defined as resident inspection. When the assessor was unable to find any guidance on when to apply the various levels, he asked the Manager of Supplier Quality how appropriate levels were specified. The Manager of Supplier Quality confirmed that there was no written guidance on this and stated that levels for individual procurements are established through dialog among Supplier Quality, Engineering, and Acquisition Services.

Conclusions:

The assessor concluded that, for Q-level items, appropriate inspection processes were specified. Also, while the Supplier Quality Manual was specifically for Q-level procurements, BNI often applied the processes of the manual to non-Q procurements of engineered items. All inspection documentation reviewed by the assessor appeared to be in order.

BNI did not have a process for selecting inspection requirements based on the grading criteria of the BNI Quality Assurance Manual. While inspections specified in the MAPs reviewed by the assessor, there were no selection criteria for determining what level of inspection should be applied to an item or what attributes to inspect.

Issues:

BNI had no process for grading the application of inspection requirements based on safety or facility mission consequences of failure of the item.

There was no procedural direction of any kind for selecting one of the five inspection levels for a procurement.

Submitted by: 2/26/07 Reviewer / Date	Approved: 2/26/07 Review Team Lead / Date

Criteria Review and Approach Document

Functional Area: **PROC.6 – Supplier Documentation**	Contractor: Bechtel National, Inc.	Date: February 12, 2007	CRITERIA MET YES: _X__ NO: ____

Performance Objective:

Supplier-generated documents are accepted through the procurement system and controlled and processed by the end-user organization.

Requirements:

1. Prepare, review, approve, issue, use, and revise documents to prescribe processes, specify requirements, or establish design.

2. Incorporate applicable requirements and design bases in design work and design changes.

Criteria:

1. Supplier-generated documents are accepted through the procurement system and controlled and processed by the end-user organization.
    - These documents may include certificates of conformance, drawings, analyses, test reports, maintenance data, nonconformance documentation, corrective actions, approved changes, waivers, and deviations.

Approach:

Record Review:

1. Review contractor procedures to verify an appropriate graded approach is specified for supplier documentation. Verify the graded approach identifies appropriate requirements for vendors of APC/RRC SSCs.

2. Select a sample of completed procurements. Include at least one safety SSC and at least three commercial SSCs that are not APC or RRC (defense-in-depth). Also, include at least five SSCs that are APC or RRC. Verify that supplier documents were specified, developed, submitted, and approved for all suppliers.

Interviews:

1. The procurement quality manager

2. QA personnel who participated in reviewing and accepting supplier documents

3. The procurement manager

4. Procurement organization personnel who participated in evaluating supplier documents in the sample

5. Engineering organization personnel who participated in specifying and evaluating supplier documents in the sample

The interviews should determine that there is a well understood process by which documents are specified for suppliers and are then reviewed and accepted by the contractor.

Field Observations:

None

Results:

Records Reviewed:

Procedures / Guides / Directives

- 24590-WTP-3DP-G06B-00010, Rev. 3, *Specifying Supplier Quality Assurance Program Requirements*
- 24590-WTP-G04B-G06B-00049, *Engineering Specifications*
- 24590-WTP-GPG-ENG-037, Rev. 7, *Supplier Document Request and Review*
- 24590-WTP-GPP-GPX-00205, Rev. 5, *Requisitions*
- 24590-WTP-GPP-GPX- 00213, Rev. 3, *Prequalification of Bidders and Bid List Development*
- 24590-WTP-GPP-GPX-00302_1, *Bidders List Development*
- 24590-WTP-GPP-GPX-00402_1, *Evaluation of Proposals/Source Selection*
- 24590-WTP-GPP-GPX-00301, Rev. 02, *Solicitations, Proposal Evaluation, Negotiations, and Award Documentation*
- 24590-WTP-3DP-G06B-00011, Rev. 0, *Evaluation of Supplier Quality Assurance Program*
- 24590-WTP-GPP-GPX-00601, Rev. 5, *Subcontract and Purchase Order Management - General*
- 24590-WTP-3DP-GO3B-00010, Rev. 4, *Engineering Planning and Control*
- 24590-WTP-3DP-GO6B-00001, Rev. 12, *Material Requisitions*
- 24590-WTP-GPP-PSQ-010, Rev. 3, *Supplier Quality Program Description*
- 24590-WTP-GPP-PSQ-0020, Rev. 5, *Supplier Qualification*

Engineering Specifications

- 24590-HLW-3PS-ADDH-T0001, Rev. 4, *Engineering Specification for System HMH Shield Doors, Containment Doors, and HLW Overpack*

- 24590-WTP-3PS-AFPS-T0001, Rev. 2 and Rev. 3, *Engineering Specification for Shop Applied Special Protective Coatings for Steel Items and Equipment*
- 24590-WTP-3PS-D000-T0001, Rev. 6, *Engineering Specification for Concrete Work*
- 24590-WTP-3PS-EKP0-T0001, Rev. 3, *Engineering Specification for Electrical Requirements for Packaged Equipment "QL"*
- 24590-WTP-3PS-G000-00001, Rev. 0, *General Specification for Supplier Quality Assurance Program Requirements*
- 24590-WTP-3PS-G000-T0003, Rev. 1, *Engineering Specification for Packaging, Handling, and Storage Requirements*
- 24590-WTP-3PS-07, Rev. 1, *Engineering Specification for Package Systems*
- 24590-WTP-3PS-SS00-T0001, Rev. 4, *Engineering Specification for Welding Structural Stainless Steel and Welding of Structural Carbon Steel to Structural Stainless Steel*
- 24590-WTP-3PS-SS90-T0001, Rev. 1, *Engineering Specification for Seismic Qualification of Seismic Category I/II Equipment and Tanks*

Correspondence

- BNI letter CCN 142403, to Konrad Lasota, Oregon Iron Works, Inc. "P.O. 24590-QL-POA-ADDH-00009, Shield Doors Melter Cave/Crane Maintenance L/DS QL-1," dated August 29, 2006
- BNI letter CCN 024110, R. Steve Sallee to Rich Anderson, Oregon Iron Works, "Results of Supplier Quality Assurance Manual Review – Oregon Iron Works, Inc.," dated October 25, 2001
- ASME letter, Sandra K. Bridges to Jerry Takeuchi, Oregon Iron Works, "Renewal of ASME Certification of Authorization, "PP" #8814, "S" #15,702, and "U" #7985," dated June 22, 2001

Purchase Orders / Material Requisitions

- 24590-QL-MRA-ADDH-00008, Rev 0, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*
- 24590-CM-POB-ED00-00001, Revisions 1 – 10, "125VDC System" (McLaren, Inc.)
- 24590-CM-POA-ET00-00003, Revisions 0 and 1, "13.8kV – 480V Liquid Filled Transformers and Secondary Unit Substations" (Turtle and Hughes, LLC)
- 24590-CM-POA-MPE0-00001, Rev. 8, "Steam Ejectors"
- 24590-CM-POA-PS02-00007, Revs. 0-13, *Pipe Spool Fabrication (Services)*, J. H. Kelly, LLC
- 24590-CM-POB-PS02-00007, *Pipe Spool Fabrication*

Miscellaneous

- Purchase order "boiler plate" requirements and preparer notes, Section 4B, "Special Conditions"
- Purchase order "boiler plate" requirements and preparer notes, Section 9, "Quality Systems Requirements"

- Supplier QA Program Data Sheet, Tyco

Personnel Interviewed:

Akerman, S.
Ang, T. O.
Bronner, A. S.
Brown, R. E.
Cook, R. E.
Goh, L. H.
Grusetski, J. A.
Holland, A. X.
Leam, J.
Pisarcik, D. J.
Salasky, B. A.
Simpson, D. D.
Thompson, A. N.
Wolfer, D.
Wuennecke, D. J.

Discussion of Results:

The assessors reviewed the BNI procedures governing the specification, review, and acceptance processes for supplier documentation. The assessors also reviewed the procurement packages for four procurements, including a sample of supplier documents. The assessors reviewed the following purchases:

- Shield doors (Q-level, safety equipment)
- 125VDC system (non-Q, APC)
- Liquid filled transformers (non-Q, APC)
- Steam ejectors (non-Q, APC)

For the most part, procedures were in place, supplier documentation was specified, and documents were accepted. However, there was one exception. BNI personnel sometimes did and sometimes did not request QA program documentation from suppliers. Personnel interviewed by the assessors said that management had relaxed its expectations on requesting QA program documents for non-Q purchases (e.g., QA manuals and ISO 9000 certificates), but personnel appeared to be confused about what to do. Interviewed personnel said that some would always order QA program documents while others never would.

If BNI did obtain QA program documents, there was additional confusion about what to do with them. If engineers (sometimes in Acquisition Services, sometime in Design Engineering) requested QA engineers to review the documents for acceptance, some QA engineers would review them but others would not. Those who would not review them told requesting engineers that they would only review QA documents for Q-level

purchases. In those cases, engineers responsible for the procurement would review the QA program documents themselves. However, there were no documented criteria for these reviews, and BNI provided the assessors with no evidence that these engineers were qualified to perform the reviews.

Conclusions:

BNI had generally appropriate procedures for specifying and accepting submittals. With the exception of QA program documents, the assessors did not see any deficiencies in BNI processes or practices. However, the direction on obtaining, reviewing, and accepting QA program documents for non-Q purchases was inadequate to assure consistent and meaningful evaluation of QA programs.

The practice of obtaining and accepting QA program documents for non-Q procurements could add unnecessary cost and actually increase BNI's risk with the purchases. Generally, QA program documents for non-Q suppliers say little and have limited value. Unlike programs implementing NQA-1, they tend to be sales pitches for the companies that highlight quality ideals that management may or may not actually implement. Therefore, when an Acquisition Services or Design Engineering engineer (who is usually unqualified to evaluate a QA program) accepts a QA program it may provide false confidence in the supplier. False confidence could lead to decisions not to specify other requirements that could more meaningfully assure the quality of the purchase.

Issues:

- BNI did not enforce a consistent policy regarding when to specify submittal of QA program documents for non-Q purchases.
- BNI had no criteria for accepting QA program documents for non-Q suppliers.
- Engineering personnel who reviewed and accepted QA program documents were often unqualified for this task.

Submitted by: 2/20/07 Reviewer / Date	Approved: 2/26/07 Review Team Lead / Date

Criteria Review and Approach Document

Functional Area:	Contractor:	Date:	CRITERIA MET
PROC.7 – Procurement of Nuclear Safety Grade Items	Bechtel National, Inc.	February 9; 2007	YES: __X__ NO: ____

Performance Objective:

Items procured for safety applications in nuclear activities or structures, systems, and components meet specified safety standards.

Requirements:

1. Procured items and services meet established requirements and perform as specified.

Criteria:

1. Items procured for safety applications in nuclear activities or structures, systems, and components are either:
   - Purchased from a supplier whose quality assurance program has been evaluated and found acceptable or
   - Purchased as commercial-grade items for dedication to the safety service?

Approach:

Record Review:

1. Review contractor procedures to verify they specify that safety equipment is either procured from approved suppliers or dedicated to safety service.

2. Select a sample of completed procurements of safety SSCs. Verify they were either procured from approved suppliers or dedicated to safety service.

Interviews:

1. The procurement quality manager

2. The procurement manager

3. Procurement organization personnel who participated in supplier selection for the sample

4. Engineering organization personnel who participated in supplier selection for the sample

Field Observations:

None

Results:

Records Reviewed:

Procedures / Guides / Directives

- 24590-WTP-3DP-G06B-00011, Rev. 0, *Evaluation of Supplier Quality Assurance Program*
- 24590-WTP-3DP-G06B-00010, Rev. 3, *Specifying Supplier Quality Assurance Program Requirements*
- 24590-WTP-G04B-G06B-00049, *Engineering Specifications*
- 24590-WTP-G04B-G06B-00905, Rev. 7, *Determination of Quality Levels*
- 24590-WTP-QAM-QA-01-0001, Policy Q-02.1, Revisions 3 – 7, BNI Quality Assurance Manual Policy: "Quality Assurance Program"
- 24590-WTP-GPG-ENG-039, Rev. 4, *Quality Designation and Grading*
- 24590-WTP-GPG-ENG-037, Rev. 7, *Supplier Document Request and Review*
- 24590-WTP-GPP-PSQ-0020, Rev. 5, *Supplier Qualification*
- 24590-WTP-GPP-PSQ-021, Rev. 2, *Supplier QA Program Review*
- 24590-WTP-GPP-PSQ-022, Rev. 3, *Supplier Pre-Award Survey*
- 24590-WTP-GPP-PSQ-023, Rev. 4, *Supplier Post-Award Audits*
- 24590-WTP-GPP-PSQ-024, Rev. 2, *Supplier Annual Evaluations*

Purchase Orders / Material Requisitions

- 24590-QL-MRA-ADDH-00008, Rev 0, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*

Correspondence

- BNI letter CCN 142403, to Konrad Lasota, Oregon Iron Works, Inc. "P.O. 24590-QL-POA-ADDH-00009, Shield Doors Melter Cave/Crane Maintenance L/DS QL-1," dated August 29, 2006
- BNI letter CCN 024110, R. Steve Sallee to Rich Anderson, Oregon Iron Works, "Results of Supplier Quality Assurance Manual Review – Oregon Iron Works, Inc.," dated October 25, 2001
- ASME letter, Sandra K. Bridges to Jerry Takeuchi, Oregon Iron Works, "Renewal of ASME Certification of Authorization, "PP" #8814, "S" #15,702, and "U" #7985," dated June 22, 2001
- BNI letter W. R. Klinger to Jerry Takeuchi, Oregon Iron Works, "BNI Survey 24590-SSV-QA-01-006, Rev. 0"

- BNI letter CCN 049429, H. N. Crotts to Jerry Takeuchi, Oregon Iron Works, "Addition to Commodity MEEM for Oregon Iron Works, Inc. on the Bechtel National, Inc. Approves Supplier List"
- BNI letter CCN 114104, "Bechtel National, Inc. Supplier Survey of Oregon Iron Works, Inc.," dated March 15, 2005
- BNI letter CCN 123988, Sven Akerman to Jerry Takeuchi, Oregon Iron Works, Inc., "Quality Assurance Program Review for Oregon Iron Works," dated July 13, 2005
- BNI letter CCN: 118473, Sven Akerman to Vince Archibald, Oregon Iron Works, "Quality Assurance Program Review for Oregon Iron Works," May 5, 2005
- BNI letter CCN: 126797, Sven Akerman to Jerry Takeuchi, Oregon Iron Works, "Bechtel National, Inc. Audit of Oregon Iron Works' Clackamas, Oregon Facility, 24590-WTP-AR-QA-05-059, Rev. 0," dated September 7, 2005
- BNI letter CCN: 131844, Sven Akerman to Jerry Tekeuchi, Oregon Iron Works, "Bechtel National, Inc.'s Additional Quality Assurance Requirements for Qualifying Original Equipment Manufacturers of Measuring and Test Equipment," dated November 21, 2005
- BNI Supplier Qualification memorandum CCN: 130709, Rick Sutter to Brian Johnson, "Oregon Iron Works Quality Assurance Manual Revision 7, Dated December 27, 2005," dated January 31, 2006
- BNI letter CCN: 143155, "Bechtel National, Inc. Audit of Oregon Iron Works – 24590-WTP-AR-QA-06-039, Revision 0," dated August 18, 2006

Supplier Corrective Action Reports

- 24590-WTP-SCAR-QA-05-112 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-05-113 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-071 (Oregon Iron Works, Inc.)
- 24590-WTP-SCAR-QA-06-072 (Oregon Iron Works, Inc.)

Specifications

- 24590-HLW-3PS-ADDH-T0001, Rev. 4, *Engineering Specification for System HMH Shield Doors, Containment Doors, and HLW Overpack*
- 24590-WTP-3PS-AFPS-T0001, Rev. 2 and Rev. 3, *Engineering Specification for Shop Applied Special Protective Coatings for Steel Items and Equipment*
- 24590-WTP-3PS-G000-00001, Rev. 0, *General Specification for Supplier Quality Assurance Program Requirements*
- 24590-WTP-3PS-G000-T0003, Rev. 1, *Engineering Specification for Packaging, Handling, and Storage Requirements*
- 24590-WTP-3PS-07, Rev. 1, *Engineering Specification for Package Systems*
- 24590-WTP-3PS-SS00-T0001, Rev. 4, *Engineering Specification for Welding Structural Stainless Steel and Welding of Structural Carbon Steel to Structural Stainless Steel*
- 24590-WTP-3PS-SS90-T0001, Rev. 1, *Engineering Specification for Seismic Qualification of Seismic Category I/II Equipment and Tanks*

Personnel / Positions Interviewed:

- Ang, T. O.
- Canazaro, D. J.
- Grusetski, J. A.
- Leam, J.
- Pisarcik, D. J.
- Simpson, D. D.
- Thompson, A. N.

Discussion of Results:

The assessors reviewed the BNI procedures governing the selection of suppliers. This included both procedures issued by Engineering and procedures issued by Acquisition Services. These procedures required that purchase of safety equipment be classified as Q-level. Procedures required that Q-level purchases be made from suppliers operating under QA programs applying NQA-1 as the implementing standard. As an alternative items could be purchased as commercial grade items, then be dedicated to safety service. (The process of commercial grade item dedication will be evaluated in an upcoming ORP assessment.)

The assessors selected one Q-level procurement to evaluate. This was the procurement of the shield doors specified in material request 24590-QL-MRA-ADDH-00008, *Handling, Storage, Maintenance & Property Control for HMH Shield Doors*. This purchase was awarded to Oregon Iron Works, Inc. after the original supplier, Unidynmics, Inc., was bankrupted.

The scope of this procurement was to take possession of the incomplete shield doors and transport them from Texas to Oregon. They were then to be stored and evaluated. The evaluation was to determine the projected cost if Oregon Iron Works was to complete fabrication of the shield doors.

Oregon Iron Works had performed safety work for BNI in the past, and they were listed on the BNI Approved Suppliers List. Oregon Iron Works had been qualified through an on-site evaluation and had been subject to periodic reevaluations and audits.

Conclusions:

BNI had appropriate procedures for qualifying suppliers to provide safety items. Procedures required that suppliers possess a quality assurance program conforming to NQA-1, or that commercial grade items be dedicated for safety service. Qualified suppliers were maintained on the Approved Suppliers List and were subject to periodic requalification.

BNI appropriately qualified Oregon Iron Works to perform the specified work on the shield doors.

Issues:

None

Submitted by: 2/20/07 Reviewer / Date	Approved: Review Team Lead / Date