



U.S. Department of Energy  
**Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

04-ESQ-055

Mr. J. P. Henschel, Project Director  
Bechtel National, Inc.  
2435 Stevens Center  
Richland, Washington 99352

Dear Mr. Henschel:

CONTRACT NO. DE-AC27-01RV14136 – ASSESSMENT REPORT A-04-ESQ-RPPWTP-008  
– BECHTEL NATIONAL, INC. (BNI) QUALITY ASSURANCE (QA) ASSESSMENT FOR  
THE PERIOD MAY 10 – 14, AND MAY 24 – 28, 2004

This letter forwards the results of the U.S. Department of Energy, Office of River Protection Assessment A-04-ESQ-RPPWTP-008, “Bechtel National, Inc. (BNI) Quality Assurance Assessment,” which was conducted from May 10 – 14, and May 24 – 28, 2004. The attached Assessment Report (A-04-ESQ-RPPWTP-008) documents the details of the assessment.

The assessment team found the BNI QA organization was effective in implementing its QA program responsibilities. The assessment also determined the procedures specifying those responsibilities adequately met the requirements of the 24590-WTP-QAM-QA-01-001, “Quality Assurance Manual (QAM).” The assessment resulted in no Findings and two Observations associated with the Supplier Evaluation process:

Observation 1: BNI overlooked preparing the final report documenting the evaluation of additional work scope for one supplier evaluation.

Observation 2: There were inconsistencies and possibly errors in the grading of Audit Team leader exams.

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

Sincerely,

Roy J. Schepens  
Manager

ESQ:SAV

Attachment

cc w/attach:  
R. D. Davis, BNI  
G. Shell, BNI

U.S. DEPARTMENT OF ENERGY  
Office of River Protection

INSPECTION: BNI Quality Assurance Assessment

REPORT NO: A-04-ESQ-RPPWTP-008

FACILITY: Bechtel National, Inc.

LOCATION: 2430 Bldg. Stevens Center Place

DATES: May 10-14, and May 24-28, 2004

INSPECTORS: Sam Vega, Assessment Team Leader  
Paul Hernandez, Assessment Team Member  
David Brown, Assessment Team Member

APPROVED BY: P. Carier, Verification and Confirmation Official,  
Environmental Safety & Quality (ESQ) Division

## **Executive Summary**

### **Introduction**

During the period of May 10 - 14 and May 24 - 28, 2004, the U.S. Department of Energy, Office of River Protection conducted an assessment of the Bechtel National, Inc. (BNI) Quality Assurance (QA) Program. The assessment was conducted in two parts. From May 10 - 14, 2004, the assessment looked at supplier qualification for placement in the BNI approved supplier list. From May 24 - 28, 2004, the assessment reviewed the remainder of the BNI quality programs. The assessment focused on assessing the effectiveness of the BNI QA organization's implementation of requirements and responsibilities for QA processes and procedures as identified in 24590-WTP-QAM-QA-01-001, "Quality Assurance Manual (QAM)," Revision 4b, dated November 26, 2003. To accomplish this, the assessment primarily reviewed QA Manager/QA organization activities as specified in QA process implementing procedures.

### **Significant Issues and Conclusions**

The assessment found the BNI QA organization was effective in implementing its QA Program responsibilities. The assessment also determined the procedures specifying those responsibilities met the requirements of the BNI QAM. The assessment resulted in no Findings and two Observations associated with the Supplier Evaluation Process:

**Observations 1:** BNI overlooked preparing a final report documenting the evaluation of additional work scope for one supplier evaluation.

**Observation 2:** There were inconsistencies and possibly errors in the grading of Audit Team Leader exams.

### **Management Program and Processes**

The Contractor had established a QA organization with sufficient authority and independence, and with appropriate structure and processes to adequately implemented QAM Management Programs and Process requirements. The QA organization activities reviewed were effective, the management and maintenance of the QAM and the QA Provisions Document (the Contractor's requirements compliance matrix) were adequate, and the Contractor had established a workplace atmosphere where reporting and resolution of conditions adverse to quality was encouraged at all levels.

### **Personnel Training and Qualification**

BNI had a sound personnel training and qualification program for quality assurance lead auditors and Price-Anderson Amendments Act (PAAA) staff. The contractor procedures clearly defined its processes for qualifying and maintaining qualification for these positions. Personnel

performing audits and PAAA evaluations were knowledgeable and appropriately qualified. Implementation of qualification and training requirements for these positions was adequate.

### **Quality Improvement**

The Contractor QA organization had adequately implemented applicable QAM Quality Improvement Processes requirements. The QAM activities reviewed met requirements and effective processes were in place to detect and prevent quality problems. Items and services not meeting requirements were adequately identified, controlled and corrected. The corrective action process for deficiencies of appropriate significance required the identification of root or apparent causes and corrective actions to prevent reoccurrence. Trending efforts focused on identifying potential areas for improvement.

### **Documents and Records**

The Contractor adequately implemented the QAM requirement for a QA Manager review and concurrence of all WTP project administrative and technical procedures implementing QA requirement.

### **Work Processes**

The QA Manager/QA organization adequately implemented QAM Work Process responsibilities for reviewing, concurring, and monitoring implementation of administrative and technical procedures which incorporated QA requirements. Oversight activities performed by the QA organization were used to monitor QAM related work processes and to assure they were performed to approved procedures.

### **Design**

The Contractor QA organization had adequately implemented applicable QAM requirements for Design and Software QA. The QAM activities reviewed met requirements and processes were in place to assure procedures and processes developed met QAM requirements. The teaming and early involvement of QA by the Information Technology organization in software development were viewed as a positive effort in assuring that QA requirements were introduced and addressed from the beginning of any software development or software procurement effort.

### **Approved Supplier List (ASL)**

The Contractor's implementation of the process for evaluating suppliers was adequate. There was notable progress made recently in improving the supplier evaluation process. As part of these improvements, the Contractor had issued a suite of new procedures that more clearly

defined activities for supplier qualification and for maintaining that qualification. With one exception, supplier evaluations were documented appropriately, and the contractor maintained sufficient documented evidence of each supplier's qualification. The Contractor performed periodic follow-up audits to maintain suppliers on the ASL. Personnel performing supplier evaluations and audits were knowledgeable and qualified.

Two Observations were noted associated with the Supplier Evaluation Process:

**Observations 1:** BNI overlooked preparing a final report documenting the evaluation of additional work scope for one supplier evaluation.

**Observation 2:** There were inconsistencies and possibly errors in the grading of Audit Team Leader exams.

### **Procurement; Nonconformance control tag application**

The QA Manager/QA organization had adequately implemented procedures that met QAM requirements associated with nonconformance reporting and control. The contractor also adequately identified, segregated, and dispositioned nonconforming items.

### **Management Assessment**

The Contractor QA Manager had adequately implemented the Management Assessment requirements found in the QAM and implemented in 24590-WTP-GPP-MGT-002, Revision 3, "Management Assessment." The management assessment activities reviewed met requirements and results were properly recorded and reported.

### **Independent Assessment**

The Contractor QA Manager had adequately implemented QAM requirements for planning and performing independent assessments as specified in 24590-WTP-GPP-QA-203, Revision 3, "Auditor/Lead Auditor Training and Qualification," and 24590-WTP-GPP-QA-501, Revision 3, "Independent Assessment (Audit)." The independent assessment activities reviewed by the Team were effective and properly scheduled to assure all QA program elements were assessed at least once within a three year period. Assessment staff (Auditors, Technical Experts, and Lead Auditors) was properly trained, and sufficient records were maintained to verify/assure the competence and independence of the audit teams.

## **Bechtel National, Inc. (BNI) Quality Assurance (QA) Assessment**

### **Assessment Purpose and Scope**

During the period of May 10 - 14 and May 24 - 28, 2004, the U.S. Department of Energy (DOE), Office of River Protection (ORP) conducted an assessment of the BNI QA Program. The assessment was conducted in two parts. From May 10 - 14, 2004, the assessment looked at supplier qualification for placement in the BNI approved supplier list. From May 24 - 28, 2004, the assessment reviewed the remainder of the BNI quality programs. The assessment focused on assessing the effectiveness of the BNI QA organization's implementation of requirements and responsibilities for QA processes and procedures as identified in 24590-WTP-QAM-QA-01-001, "Quality Assurance Manual (QAM)," Revision 4b, dated November 26, 2003. The assessment primarily reviewed QA Manager/QA organization activities as specified in QA process implementing procedures. Assessment activities also included reviewing objective evidence (records, reports, files, checklists, rosters, etc.) demonstrating completion of process activities, observing (where possible) activities being performed, and interviewing key personnel responsible for accomplishing process activities. Specific QA Program topics covered during this assessment included:

- Management Program & Processes;
- Personnel Training and Qualification;
- Quality improvement;
- Documents & Records;
- Work Processes;
- Design;
- Approved Supplier List;
- Procurement;
- Management Assessments; and
- Independent Assessments.

### **Management Program and Processes**

- QA Organization and QA Management responsibilities: The assessors verified the QA Manager had sufficient functional authority, independence, and responsibility to adequately perform his assigned responsibilities. The QA Manager reported to the Waste Treatment and Immobilization Plant (WTP) Project Director for project QA matters and was responsible for ensuring the establishment and implementation of an appropriate QA program compliant with QAM requirements. The QA Manager also reported to the BNI Corporate QA Manager for program definition and as a means for resolving QA implementation issues should the need arise. Documentation and interviews indicated a commitment to establishing a workplace atmosphere where implementation of QA process and activities were supported. The reporting and resolution of conditions adverse to quality was encouraged at all levels;

- Providing guidance and oversight of QA requirements implementation: The assessors verified the QA organization provided guidance to and oversight of Contractor activities associated with implementing QAM requirements. Responsibilities for providing interpretation of QA requirements and QA related guidance included the development of the QAM, QA policies, and associated implementing procedures. In addition, area team QA representatives were assigned to project teams and WTP facilities, and guidance was provided by the QA Manager to the Project Director and Project Management in forums such as Project Management staff meetings, presentations, and e-mails. The QA organization reviewed and commented on procedures and documents (including revisions to these procedures and documents) developed outside the QA organization which implemented QAM requirements to assure applicable requirements were addressed and effectively implemented;
- Stop Work Authorization: In the past year, BNI had not issued any stop work orders, but the assessors reviewed the Contractor procedure 24590-WTP-GPP\_MGT-008, Revision 0, “QA Stop Work/Management Suspension of Work” and determined that the processes prescribed in the procedure were adequate in meeting QAM requirements. Any BNI employee or subcontractor has authority to stop or suspend work. Stop work orders require oversight and review by the QA organization. The establishment of corrective actions necessary to resume work require concurrence by the QA organization. When interviewed, the QA Manager possessed a working knowledge of the process and his responsibilities;
- Organizational interface: The assessors determined the interfaces and communication vehicles utilized by the Contractor’s QA Manager included participation in project Director staff meetings, Critical Items Meetings, Project Safety Committee meetings, and the Safety/Quality Council. In addition, the QA organization established interfaces by assigning QA representatives at each facility to function as points-of-contact for QA related issue or questions. Trending reporting, audits and surveillances, and the corrective action and nonconforming processes also served as interfaces and opportunities to provide input to other contractor organizations. The assessors identify no issues related to organizational interfaces;
- Indoctrination and Training of QA Requirements: Through a review of procedures and training profiles maintained in the Learning Management System, the assessors verified the QA manager/organization has adequately established courses for the indoctrination of Contractor staff on QA requirements, and had established adequate training criteria for the QA staff. The assessors reviewed the lesson plan and course material for course 24590-WTP-CRM-TRA-000502, “Quality Assurance Program Overview. During the course of this assessment, the QA organization provided this course to new employees. The assessors interviewed the trainers (QA engineer and Price-Anderson Amendments Act Coordinator [PAAA]) and found the indoctrination adequate; and
- Development and Maintenance of the BNI QAM and the QA Provisions Document: The assessors reviewed Contractor procedures for developing and maintaining the QAM and the QA Provisions Document. The QA Manager was responsible for the developing and maintaining the QAM, and for assuring it continued to meet DOE requirements. To

accomplish this, the QA Manager reviewed and approved all QAM and Provisions Document revisions. Through interviews with the QA Manager and by verifying the existence of the QA manager's approval signature on the documents, the assessors verified proper QA involvement in the process. The adequacy of past revisions and the document/record control process were covered in detail in previous ORP assessments.

### **Conclusions:**

The assessors concluded the Contractor QA organization had adequately implemented applicable QAM requirements for management programs and processes. QAM activities met requirements and the QAM and the QA Provisions Document were adequately maintained. Management of the QA program was adequate. The Contractor had established a workplace atmosphere where reporting and resolution of conditions adverse to quality was encouraged at all levels.

### **Personnel Training and Qualification**

- Lead Auditor Certification: The assessors reviewed four lead auditor certification records and associated training profiles, which were electronically maintained in the BNI training management system. The assessor concluded the training and certification process was adequately documented and properly maintained; and
- PAAA Qualification and Training: The assessors reviewed the procedure prescribing the PAAA Coordinator and Evaluator training and qualification program. The assessors reviewed a sample of four resumes and four training profiles (this was a 100% sampling) and interviewed two of the three evaluators to verify adequate completion of required training, and to verify experience in the areas of PAAA, quality assurance, radiological protection, and licensing of nuclear facilities.

### **Conclusion:**

BNI had a sound personnel training and qualification program for quality assurance lead auditors and PAAA staff. The contractor procedures clearly defined its processes for qualifying and maintaining qualification for these type positions. Personnel performing audits and PAAA evaluations were knowledgeable and appropriately qualified. Implementation of qualification and training requirements for these positions was adequate.

### **Quality Improvement**

- The assessor reviewed the Contractor's Quality Improvement processes to verify adequate implementation and conformance to QAM requirements associated with the QA Manager/QA organization responsibilities. Procedure and processes reviewed included:



- Nonconformance reporting;
  - Corrective Action management;
  - PAAA; and
  - Trending.
- Nonconformance Reporting: The assessors interviewed QA staff, performed field verifications, reviewed Nonconformance Reports (NCRs), and reviewed the procedures specifying the process for reporting nonconforming items to verify compliance with QAM requirements. The assessors also verified that the QA organization (QC inspector in this case) reviewed and concurred with NCR dispositioning and verified completion of corrective actions. The assessors verified nonconforming items were properly tagged and segregated to prevent their use by physically checking WTP related NCR items in holding areas at the construction site. No issues were identified;
  - Corrective Actions: The assessors verified the Contractors compliance with corrective action QAM requirements by sampling some of the activities required by that process. This included reviewing corrective action and root cause analysis procedures, interviewing Contractor staff and management responsible for the activities, and reviewing corrective action reports. Process activities verified included QA review and concurrence of process procedures, QA concurrence with causal analysis and corrective action plans, and proper management notification when a corrective action report is written. No Issues were identified;
  - PAAA: The assessors verified the Contractors compliance with PAAA requirements by sampling activities required by the process. The assessors reviewed the process from the initial review of reported deficiencies for PAAA applicability to the final PAAA Review Board Recommendation to the Project Director on reporting the deficiency in NTS. Objective evidence reviewed included PAAA evaluations of deficiency reports and the PAAA review Board meeting minutes and supporting documentation including final recommendations. In addition, process procedures were reviewed, and the Contractor PAAA Coordinator was interviewed. No deficiencies were identified; and
  - Trending: The assessors verified the Contractors compliance with QAM trending requirements by reviewing the trending process procedure, interviewing the responsible manager and reviewing the last two trend reports issued. Trending efforts focused on identifying areas for possible improvement, including those with recommendations to management. No deficiencies were identified.

## **Conclusions:**

The assessors concluded the Contractor QA organization had implemented applicable QAM requirements for Quality Improvement Processes adequately. The QAM activities reviewed met requirements. The Contractor's processes to detect and prevent quality problems were adequate. The corrective action process, for deficiencies of appropriate significance, required the identification of root or apparent causes, and corrective actions to prevent reoccurrence. Trending efforts focused on identifying potential areas for improvement.

## **Documents and Records**

- To verify the required QA reviews were performed, the assessors reviewed six documents and records program procedures, one engineering procedure, one human resources procedure, and the management assessment procedure. These procedures were all developed and maintained outside the QA organization. In addition, all procedures reviewed during this assessment were checked for QA concurrence signatures indicating the required reviews were performed. For this assessment, the scope for this activity was limited only to confirm the QA Manager or his designee had reviewed and concurred with the procedures related to QAM requirements. Other ORP assessments address this topic in more detail.

## **Conclusion:**

The assessors concluded the Contractor adequately implemented the QAM requirement for a QA Manager review of WTP project administrative and technical procedures that implement QA requirements.

## **Work Processes**

- The assessors reviewed a sample of seventeen assorted administrative and technical procedures to verify that QA had reviewed and concurred. In addition, the assessors interviewed quality assurance, procurement, and supplier quality staff to walk through and understand the processes utilized. The assessors were able to follow, in real time, the revision of an active procedure, 24590-WTP-GPP-GPX-00301, Revision 1, "Solicitation," which was being revised and changed to 24590-WTP- GPP-GPX-00301, Revision 2, "Solicitation, Proposal, Evaluation, Negotiations, and Award Documentation;" and
- A QA Document/Procedure review matrix was used to assign reviewer responsibilities. Review assignments were made based on the reviewer's area of expertise. Comments were provided back to the originator by means of the Comment Resolution Form. When all comments were resolved and approved, the document was signed off by both the Acquisition Services Manager and the Quality Assurance Manager. This final step of the process was not observed by the assessors, but the entire process was understood by the individuals interviewed.

**Conclusion:**

The assessors concluded the QA Manager/QA organization adequately implemented QAM Work Process responsibilities for reviewing administrative and technical procedures which incorporated QA requirements. Oversight activities performed by the QA organization assured QAM related work processes were performed to approved procedures.

**Design:**

- The assessors reviewed the Contractor's Design processes to verify adequate implementation and conformance to QAM requirements associated with the QA Manager/QA organization responsibilities. To accomplish this, the assessor reviewed process procedures, interviewed responsible staff and management, and reviewed records documenting completion of required activities. Design Process QA organization activities reviewed included:
  - Establishment of design control processes;
  - Establishment of software QA requirements and policies and procedures; and
  - Providing QA related technical assistance to WTP Project organizations.
- The assessors verified the QA organization had procedures in place to assure design and engineering procedures were reviewed, concurred, and signed by the QA Manager. The assessors also verified evidence of QA signature approval on design and engineering procedures indicating they were reviewed and concurred by the QA organization. The assessors performed a spot check of the BNI Quality Assurance Provisions Document to assure Design/Engineering Procedures adequately addressed the QAM Requirements; and
- The assessors also performed a spot check review of the BNI QA Provisions Document to verify QAM requirements for software QA were adequately implemented into procedures. The assessors verified software QA procedures were reviewed and properly maintained. For BNI, software procedures and processes were developed and maintained by the Information Technology (IT) Manager. Software QA procedures were reviewed and approved by the QA Manager. In addition, the QA organization has representation in WTP IT Management/Planning Council whose purpose is to support the development, enhancement, and implementation of project IT policy, procedures processes, and priorities (which includes software QA). An assessor attended one of the IT council meetings, and discussed council activities with the council member from the QA organization. QA representation in the IT council assured the QA Organization provided appropriate technical assistance/guidance to directors, managers, and staff in meeting [software] QA requirements by assuring QAM requirements were considered and addressed from the beginning of any IT software development or procurement process.

## Conclusions:

The assessors concluded the Contractor QA organization had adequately implemented applicable QAM requirements for Design and Software QA. QAM activities met requirements and processes were in place to assure procedures and process developed met QAM requirements. QA participation in the IT Management/Planning Council assured QA requirements were introduced and addressed from the beginning of any IT software development or procurement process.

## Approved Supplier List (ASL)

- QA Program and Procedures: The assessors reviewed the Contractor's supplier qualification program procedures to assess adequacy. The procedure reviewed addressed QA program reviews, supplier surveys, supplier audits, deficiencies, management of the ASL, and annual supplier evaluations. These procedures satisfied the requirements of the BNI QAM. Recent procedure improvements (which included adding additional procedures) have added more "how to" information which more clearly specified BNI management expectations. The assessors' review of these procedures indicated an improvement over the old method;
- Identification of Requirements: Prior to supplier evaluations, Engineering identified applicable NQA-1 requirements in Program Requirements Checklists (also known as Supplier Quality Assurance Program Requirements Data Sheets). A "design guide" (24590-WTP-GPP-QA-401) provided direction and criteria to engineers preparing the data sheets. Data sheets had been peer reviewed, reviewed by QA, and then approved by both Engineering and QA management. Personnel performing supplier evaluations used the data sheets to indicate the NQA-1 criteria to evaluate during their supplier evaluations. The assessors determined this process was understood by responsible staff and adequately implemented;
- Supplier Evaluations: The assessors reviewed a sample of supplier evaluation (the BNI term is supplier survey) reports and interviewed two audit team leaders. Evaluation reports included checklists showing criteria evaluated, whether the criteria were satisfied, and a brief descriptions criteria implementation. Evaluation criteria were based on the requirements data sheets specifying which criteria of NQA-1 and NQA-2 were required for the specified procurement. The assessors reviewed the data sheets associated with the sample of supplier evaluation reports and compared them to what was addressed during the evaluation. No errors were identified;
- The assessors noted one situation in which a supplier evaluation was not fully documented. An individual performing a supplier survey recognized that a work scope change had not been factored into the requirements data sheets. The work scope change involved adding computer hardware and software, but Engineering had not modified the data sheet to include NQA-2, Subpart 2.7, which specified requirements for the software life-cycle applicable to software development. The evaluator reported the problem and a software QA specialist was sent to the facility for a follow-up evaluation, but the report for this follow-up was never

issued due to confusion as to who was responsible to generate the report. Evidence existed which documented the performance of the assessment and the final results. When the assessors brought the missing report to the attention of BNI management, actions were initiated to formalize the results of the follow-up assessment (Observation: A-04-ESQ-RPP-WTP-008-O01). Other than this example, no errors were identified;

- BNI sometimes used other organizations to perform supplier evaluations. Many evaluations were performed by members of the Nuclear Industry Assessment Committee (NIAC), a consortium of companies with a common interest in supplier quality. NIAC used a standard checklist which was used in some of the evaluations reviewed by the assessors. BNI was not comfortable with NIAC supplier due to possible conflict of interest issues, and had discontinued the use of NIAC evaluations. The assessors noted NIAC checklists were relatively sketchy and did not correlate with NQA-1 requirements. However, Audit team Leaders interviewed understood this and supplemented their reviews to include verification of NQA-1 criteria. The assessors reviewed checklists currently used and determined they were adequate because the checklists addressed NQA-1 requirements;
- Audits and Assessments: The assessors reviewed a sample of supplier audits and found supplier audits were more detailed than supplier evaluations. Supplier evaluations were performed prior to awarding a contract. Supplier audits are performed at both the commencement of contracted work and triennially (to maintain supplier on the ASL). BNI initiated the use of supplier audits because of the difficulty encountered in assessing supplier programs prior to awarding contracts. This was because few, if any, suppliers were performing nuclear-grade work prior to contract award, and thus, many QA programs were too new to provide sufficient objective evidence needed to evaluate the effectiveness of implementation. The Contractor was satisfied this was the best approach to assuring supplier quality, considering that virtually no suppliers had sufficient experience with nuclear-grade work. From the material reviewed, the assessors felt the timed supplier audits were for the most part effective and useful for identifying quality problems before products were delivered, but late identification of issues could also cause production delays;
- Personnel Qualifications: The assessors reviewed the qualification records for two audit team leaders (ATL). Qualifications were appropriate; and
- The qualification examinations for the two ATLs had minor, but unexplained anomalies. One question appeared on both exams but was graded differently between them. Both examinees provided the same answer, but one was marked correct and the other was marked incorrect. Also, a question that appeared on only one test was marked incorrect, but both the assessors and the BNI Procurement QA manager judged the ATL candidate had answered it correctly. (Observation: A-04-ESQ-RPP-WTP-008-O02).

### **Conclusion:**

Since the last assessment of this area by ORP, the Contractor has made progress in improving its supplier qualification process. It had issued a suite of new procedures that more clearly defined its processes for qualifying and maintaining qualification of suppliers. With one exception,

supplier evaluations were appropriately documented. BNI performed periodic follow-up audits to maintain suppliers on the ATL. Personnel performing supplier evaluations and audits were knowledgeable and qualified. Inconsistencies in the grading of audit team leader qualification examinations were identified. Because so few suppliers had nuclear industry experience, BNI was performing audits of previously qualified suppliers at the time they began fabrication. While audits performed before work began would be unlikely to identify some important QA program weaknesses, discovering weaknesses at the time of fabrication could disrupt the construction schedule. Overall, the assessors determined the Contractor's supplier qualification program was adequate.

### **Procurement; Nonconformance control tag application**

- The assessors reviewed the activities described in procedure 24590-WTP-GPP-CON-7104, Revision 5, "Nonconformance Reporting & Control," which addressed responsibilities and requirements from identification of nonconformances through the final disposition of such items. The procedure satisfied the requirements of the QAM;
- The assessors reviewed a sample of three nonconformance reports and interviewed engineering personnel who were involved with the identification or resolution of the nonconformances to verify the procedure was adequately implemented:
  - NCR-24590-WTP-NCR-CON-04-0063, "3/32 and 1/8 Diameter E8018-B2 Electrodes." The weld rod electrodes did not include as-welded tension test results as required in the Field Material Request. The assessors visually inspected the weld rod electrodes which were segregated in a controlled, locked room and labeled to prevent inadvertent use. The recommended disposition was to ship back one unopened can of each weld rod electrode diameter to the supplier for completion of the specified testing that was originally missed. The supplier was instructed to resubmit the required mechanical test data as originally specified on the purchase order. The assessors did not identify any issues;
  - NCR-24590-WTP-NCR-CON-04-0094, "Concrete Repairs to Walls 2-33 and I-76", identified several rock pockets in walls 2-33 and I-76. The defective concrete material was removed to determine the extent of the voids and all suspect areas were chipped down to sound concrete. Repairs are to be performed in accordance with the Concrete Work specification. The assessors did not identify any issues; and
  - NCR Number NCR-24590-WTP-NCR-CON-04-0101, "Two horizontal #5 U bars at HVAC opening," identified missing #5 rebar in a HVAC opening. The recommended disposition was to repair through the installation of two #5 U bars with standard hooks. The bars are required to run as far as possible against the existing construction joint. Both of these nonconformances were red-tagged. All repairs will be inspected prior to closing out the NCRs. The assessors did not identify any issues.

## **Conclusion:**

The assessors determined the QA Manager/QA organization had adequately implemented procedures that meet QAM requirements associated with nonconformance reporting & control. The assessors also determined the contractor adequately identified, segregated, and dispositioned nonconforming items.

## **Management Assessment**

- The assessors verified adequate implementation of the management assessment program by the QA manager. For Fiscal Year 2003, three management assessments were performed, one of which was at the project management level and covered the overall QA program. The other two management assessments were performed by the functional area managers and covered the PAAA program, and Supplier QA. The current 2004 schedule has one Management Assessment scheduled for 2004. This meets the minimum established in 24590-WTP-GPP-MGT-002, Revision 3, "Management Assessment," where each project level manager will perform at least one management assessment of their area annually. The scope of this assessment was to address all QA Program activities, which satisfied QAM requirements. Based on past performance and interviews with the QA organization's management, the assessors determined that the QA Manager and/or the QA functional managers will add more focused management assessments of specific areas/activities as conditions warrant. For example, there is a current management assessment planned to assess the effectiveness of QA support to the procurement process. This management assessment was initiated because of issues identified with the Submerged Bed Scrubber Condensate Vessel procurement;
- The assessors verified the QA organization performs oversight of the BNI management assessment program. Oversight responsibilities were satisfied by requiring each independent assessment performed by the QA organization to include as part of the assessment scope verification of that management assessment requirements were satisfied by the assessed organization. The assessors reviewed four independent assessments performed by the QA organization, and no problems were identified; and
- Distribution of management assessments was established in procedure 24590-WTP-GPP-MGT-002, Revision 3, "Management Assessment." Functional area management assessments were distributed to the project level manager, and project level management assessments were distributed to the Project Director. The Management Assessment Coordinator periodically revised the Management Assessment Schedule, and included in the distribution letter a listing, by title, of all the year's management assessments performed to date. Distribution of schedule revisions included the Project Director. The assessors found no issues with the QA Manager's performance, coverage, and distribution of the management assessment Performed by the QA organization.

## **Conclusions:**

The assessor concluded the Contractor QA Manager had adequately implemented the Management Assessment requirements found in the QAM and implemented in 24590-WTP-GPP-MGT-002, Revision 3, "Management Assessment." The management assessment activities reviewed met requirements and results were properly recorded and reported.

## **Independent Assessment**

- The assessors verified the independent assessment procedures defined criteria for technical specialists, auditors, and lead auditor training, qualification and certification. Procedures 24590-WTP-GPP-QA-203, Revision 3, "Auditor/Lead Auditor Training and Qualification," and 24590-WTP-GPP-QA-501, Revision 3, "Independent Assessment (Audit)," have adequately established the training and certification criteria for audit personnel. Qualification requirements for experience, education, and training are established via the Human Resource (HR) maintained position descriptions and Contractor grade levels. For audit team personnel (auditors and technical experts), the Lead Auditor was responsible to document verification of qualification in each audit report. The QA Manager was responsible for certifying lead auditors as specified in the QAM and 24590-WTP-GPP-QA-203, Revision 3, "Auditor/Lead Auditor Training and Qualification." The assessors reviewed personnel files maintained by HR for four audit personnel (auditors/lead auditors) to verify adequate education, training, and experience requirements were met. The assessors also verified that the Lead Auditors had evaluated audit team member qualifications against established criteria. This was accomplished by interviewing two lead auditors and by reviewing the statements in four independent assessments indicating what was done to verify team qualification. No problems were identified;
- The assessors verified adequate training and documentation of training and certification; and
- The assessors also verified audits schedules were properly maintained, distributed, and revised as needed. The assessors verified audit teams were staffed with qualified individuals who were independent of the work being looked at, and that audits and surveillances were performed as scheduled. No issues were identified.

## **Conclusions:**

The assessors concluded the Contractor QA Manager had adequately implemented the independent assessment requirements found in the QAM and implemented in 24590-WTP-GPP-QA-203, Revision 3, "Auditor/Lead Auditor Training and Qualification," and 24590-WTP-GPP-QA-501, Revision 3, "Independent Assessment (Audit)." The independent assessment activities reviewed met requirements, independent assessments were properly scheduled to assure all QA program elements were assessed at least once within a three year period. Audit staff was properly trained, and sufficient records were maintained to verify/assure the competence and independence of the audit teams.



**List of Assessment Items Opened, Closed, and Discussed**

Opened

- |                           |             |  |
|---------------------------|-------------|--|
| A-04-ESQ-RPP-WTP-008-001: | Observation | BNI overlooked preparing a final report documenting the evaluation of additional work scope for one supplier evaluation. |
| A-04-ESQ-RPP-WTP-008-002: | Observation | There were inconsistencies and possibly errors in the grading of Audit Team Leader exams.                                |

Closed

None.