



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-425/88-17

Licensee: Georgia Power Company
P. O. Box 4545
Atlanta, GA 30302

Docket No.: 50-425

License No.: CPPR-109

Facility Name: Vogtle 2

Inspection Conducted: March 28-31 and April 11-15, 1988

Inspector: *G. A. Belisle for* 5/13/88
R. W. Wright Date Signed

Approved by: *G. A. Belisle* 5/13/88
G. A. Belisle, Section Chief Date Signed
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection was conducted in the area of licensee management of quality assurance (QA) activities.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- S. Clark, Supervisor, Administrative Operations
- L. Coffey, Senior Buyer, Procurement and Materials
- *E. Groover, Quality Assurance Site Manager - Construction (QASM-C)
- W. Golden, Materials Planning Manager, Project Procurement Review Group (PPRG)
- C. Hayes, Vogtle Quality Assurance Manager (VQAM)
- *G. McCarley, Project Compliance Coordinator
- B. Parham, Senior Buyer, Procurement and Materials
- K. Rosanski, Manager, Project Procurement and Materials
- *J. Sanders, Assistant Project Manager
- R. Siegafoes, Project Procurement Manager
- N. Thakur, Engineering Coordinator, PPRG
- F. Zeagler, Engineering Supervisor, PPRG

Other Organizations

Southern Company Services

W. Edmundson, Project QA Engineer (PQAE)

Bechtel

S. Gupta, Supervisor, Project Engineering
D. Strohman, PQAE

Westinghouse

D. Shaw, PQAE

NRC Resident Inspector

*R. Schepens, Senior Resident Inspector - Construction (SRC)

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 15, 1988, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Quality Assurance Program (35060)

a. QA Program Changes

The Georgia Power Company (GPC) PQAE position has been eliminated by the construction QA organization. This change was instituted as part of the normal de-staffing plan in transitioning from a construction mode to an operations mode. The GPC PQAE's responsibilities were absorbed by the QASM-C and the VQAM. Two people have held the position of General Manager Quality Assurance (GMQA) since the last inspection in this area (October 20-31, 1986). The inspector examined these individuals' resumes and determined that they met the education and nuclear work experience qualifications for this position. These GMQA personnel changes were reported to the Resident Inspection staff and the Regional Project Section Chief and had no adverse effect on the QA organization's independence. On April 14, 1987, GPC management made a Vogtle Project Presentation to the Regional Staff describing Unit 2's project organization, lessons learned from Unit 1's licensing, the engineering/construction/startup test program changes, and refinements being contemplated for Unit 2.

Since the last inspection in this area, the licensee has continued to reassign GPC construction QA personnel to operations QA and has been replacing these construction QA personnel with qualified contractor audit personnel. Currently Unit 2's site QA organization consist of a GPC QA Site Manager, GPC QA Engineering Support Supervisor, three GPC auditors, and six contractor audit personnel. This staffing appears to be adequate to handle the construction work load. The inspector examined the six contractor auditor resumes and qualifications and determined that they were satisfactory.

More emphasis is being placed on the pre-op/startup program by QA. Two auditors are being physically relocated so that they can better monitor and audit pre-op/startup activities. This action will enhance QA coverage in this area.

Various GPC QA Department Manual procedures govern the activities of the QA Department in the implementation and management of the GPC QA program. These procedures apply to the QA General Office Staff and to the QA Field Staff at Plant Vogtle. The inspector examined the following listed QA Department procedures (for controlled manual holders numbers 2, 7 and 9) for changes (revisions) and verified that these changes were approved at appropriate management levels, that the procedures were reviewed at the required frequency and in accordance with procedures QA-04-01, that changes made were necessary or desirable, and that document control (distribution) requirements had been effectively complied with:

QA-04-01, R6	QA Department Procedures and QA Manuals
QA-04-02, R10	Significant Deficiency/Defect Reporting - 10 CFR 50.55(e)/10 CFR 21
QA-04-06, R9	Supplier/Bidder QA Manual Review and Approval
QA-05-01, R10	Field Audits
QA-05-02, R16	Corporate/Supplier Audits
QA-05-18, R5	Annual QA Department Assessment
QA-05-21, R2	Supplier Qualification and Surveillance

In addition to the above QA Department Manual procedure reviews, controlled manual holders of the Vogtle Quality Assurance Manual (copy numbers 2, 4, 8, 10 and 15) were contacted and the inspector verified that the manual holders had received and filed the latest revision (Revision 10) to their QA manual.

b. Licensee Reviews of QA Program Effectiveness

Plant Vogtle's Final Safety Analysis Report (FSAR), Section 17.1.1.2, states that the Quality Assurance Committee (QAC), which is composed of GPC and Southern Company Services (SCS) senior management, has the primary responsibility to gauge the effectiveness of the Vogtle QA program and to recommend corrective measures to the Senior Executive Vice President (SEVP) when necessary. The QAC schedules four meetings per year. During these meetings they are apprised of the Vogtle QA activities and status by respective organizational channels, of any major problems identified, and of the results of NRC and licensee audit reports including the findings of the Annual QA Department Assessment Report. Procedure QA-05-18 requires the GMQA to establish an assessment team (consisting of personnel not directly

associated with the areas audited) to conduct an annual assessment of the QA Department. The assessment results are presented to the SEVP normally at one of the scheduled QAC meetings. The inspector examined the 1987 Annual QA Department Assessment Report (placing major emphasis on the Plant Vogtle construction portion) which was presented to the QAC (Meeting No. 69) on March 30, 1988. After reviewing this assessment, QAC Meeting Minutes Nos. 65, 66, 67 and 68 (March 11, 1987; June 11, 1987, September 23, 1987 and January 29, 1988 respectively), and supporting documentation, the inspector concluded that the QA program for Plant Vogtle-Construction has continued to be an effective program. This program identifies deficiencies and implements corrective action.

c. Corporate QA - Site QA Interface

The VQAM transmits audits, NRC inspection synopses, readiness review findings, Institute of Nuclear Power Operations (INPO) reports, and significant items to the GMQA to keep corporate management informed and to provide information for QAC discussions and/or resolutions.

The QA Department prepares quarterly Trend Analysis Reports of NRC violations, construction QA Audit Finding Reports (AFRs), surveillance findings, and special evaluations (e.g. INPO) to provide appropriate management with early indications of possible adverse trends. Each Trend Analysis Report prepared by the QA Engineering Support Supervisor, including appropriate documentation, conclusions, and any action taken, is submitted to the QASM-C and an additional copy is sent to the GMQA at the corporate office. These trend reports are prepared in a timely fashion to support QAC meetings. The inspector examined the 2nd, 3rd, and 4th quarter Trend Analysis Reports for 1987 and the first quarter Trend Analysis Report for 1988. No adverse trends were identified in these reports during this period. Several favorable trends were identified in these reports.

Within this area, no violations or deviations were identified.

6. Design Review (35060)

a. Design Assurance - Responsibility

Design audits are intended to evaluate the architect engineer (A/E) Bechtel and the nuclear steam system suppliers (NSSS) Westinghouse (W) on the effectiveness with which they implement and comply with the quality programs presented in Appendicies 17A and 17B of Vogtle's FSAR. These audits are conducted annually as a minimum. The SCS PQAE is responsible for auditing Bechtel. He coordinates his audit plan with and receives approval of the plan from the VQAM. The

Bechtel PQAE is responsible for auditing W, and the audit plan is coordinated with and approved by the SCS PQAE. The Bechtel PQAE is also responsible for auditing the W Vogtle Structural Analysis Mobile Unit (V-SAMU), located on site, and this audit plan is coordinated with the VQAM. The audits of W and V-SAMU may be observed by the SCS PQAE and/or the VQAM. The W PQAE also performs performance oriented audits/surveillances of V-SAMU which are approved by the VQAM. These audits/surveillances are intended to be in addition to both the W (Nuclear Technology System Division Product Assurance QA System and Compliance) group annual audit of V-SAMU and Bechtel's twice a year technically oriented audits of the V-SAMU organization. The intent of the W PQAE audits/surveillances is to verify that the V-SAMU organization implements the applicable sections of the Bechtel Power Corporation Project Reference Manual in a timely and effective manner.

Distribution of all VQAM approved audit reports includes as a minimum, the audited organization, QAC members, and the Vice President - Project Director.

b. Audit Planning/Scheduling

The inspector conducted discussions with the Bechtel, SCS, and W PQAE's and examined their 1987 audit schedules to verify that a comprehensive design audit plan had been documented, implemented, and that the frequency and scope of the audits was sufficient to assure that all representative design groups were included.

c. Audits of Design

The inspector examined the following 1987 design function audits, their findings, respective finding corrective actions, and lead auditor's qualifications:

Bechtel Audit V-2 - Technical Audit of V-SAMU

SCS Audit - QA/Technical Assessment Audit of Bechtel Western Power Corporation (RWPC) Vogtle Project Engineering August 17-20, 1987

Bechtel Audit PFE 7-2 - Design Calculations

The inspector examined the W PQAE's 1987 third quarter Status Report, the seven Performance Verification Evaluation Reports (audits/surveillances) discussed therein, the five associated Quality Feedback Reports (nonconformances), and the responses and corrective action taken. The inspector also examined the lead auditor's (W PQAE) qualifications and certifications.

d. Design Inputs

The inspector examined interfaces between GPC, SCS, and Bechtel for handling NRC Bulletins (IEBs) and Information Notices (INs) to assure that NRC requirements and positions are reviewed by the A/E for design input. The VQAM reviews IEBs for general applicability to the Vogtle project and determines if a response is required. Copies of IEBs are forwarded by the VQAM to affected project managers requesting them to respond to the issue in writing when required, IEBs which state evidence of design deficiencies are forwarded to the appropriate Bechtel engineering group supervisor for evaluation and action as necessary. Written draft responses are forwarded to the Project Licensing Manager for review, comment, and to ensure that licensing requirements/commitments have been properly observed. The VQAM prepares the final response for the Vice President - Project Director's signature and transmittal to the NRC.

The inspector examined the VQAM IEB disposition log and reviewed the current status of IEB Nos. 87-01, 87-02, 88-01, 88-02, and 88-03 for Unit 2. The inspector concluded the licensee has been responsive, provides accurate reports, and maintains control over this area.

INs are handled in accordance with Nuclear Operation Procedures. The Operations Assessment Program (OAP) coordinator is the central point for receiving INs. Upon receipt, the OAP coordinator enters the IN in an OAP log, and performs a preliminary review of each IN for impact to the Vogtle plant. Those INs which do not impact the site are classified "Information Only" and may be distributed to appropriate departments. After review, if the OAP coordinator determines the IN may have significant impact on plant safety or reliability, the IN is formally transmitted to the responsible department head for further review and impact verification. A written response is required to discuss the finding results and any action taken or planned to prevent the problem. Design deficiencies are handled similar to IEBs. The OAP coordinator performs a quality review of completed responses to determine their acceptability and disposition. The OAP coordinator performs periodic OAP log checks to ensure that due dates are met and that the item's status is accurate.

Within this area, no violations or deviations were identified.

7. Procurement (35060)

a. Procurement Organizational Controls

The Vogtle Project Procurement and Materials Department is responsible for procurement, receipt, storage, equipment issuance, material, and services for Plant Vogtle. Procurement teams from GPC, SCS, and BPC participate in, and contribute to, the procurement activities conducted for Plant Vogtle.

Current procurement activities for Unit 2 are primarily centered around replacement parts, which are initiated by the PPRG. Procured items and equipment are generally purchased from original sources using existing job material requirements (specifications). The PPRG is responsible for ordering permanent plant materials needed to support construction and startup activities, for resolving issues related to procuring items involving specifications, for quality/technical requirements, for reviewing purchase requisitions, and for purchase change orders for the adequacy of technical and quality requirements.

Any initial new purchase requisitions for safety-related items receives the PQAE's review and approval. Additionally, all revisions to existing specifications as far as model, type, and some quantity changes require a Bechtel PQAE's review for procedural correctness and proper quality requirements.

Project procurement polices are to maintain alternate sources of supply when possible, to use domestic suppliers whenever practical, and to award contracts based on the lowest evaluation price provided the supplier meets the necessary quality and delivery requirements.

b. Procurement Action Review

The inspector selected two procurement contracts (Anchor Darling PAV 2-00051 Change Order (C/O) 112 and Brown Boveri PAV 2-0027 C/O 111) and three service procurement contracts (Butler Service Group, Inc. PAV-13452, Law Engineering Testing Company PAV-1216, Soil and Materials Engineering Inc. PAV-01037) for review to ensure that:

Applicable technical, regulatory, quality assurance and other requirements were included or referenced.

Subsequent changes to technical or QA requirements were adequately reviewed.

Purchaser notification points, hold points, and access rights had been incorporated in the documentation where applicable.

10 CFR Part 21 requirements were specified.

Applicable specifications were incorporated.

The contractor was required to impose applicable QA requirements on subcontractors where applicable.

Source selection was accomplished in accordance with procedural requirements.

The vendor was an approved supplier.

The above procurement contract documentation review resulted in one discrepancy being identified to the licensee. Change Order No. 112 (dated March 24, 1988) to Purchase Order PAV 2-00051 referenced that the items being procured must conform to the requirements of Specification X4AR01, Revision (Rev) 12 when Rev 15 of this specification was actually in effect. In accordance with procedures, the licensee immediately issued C/O 113 to this contract correcting the oversight. The inspector conducted discussions with PPRG personnel and examined their copy of specification X4AR01 and identified that they had Rev 15 of this specification in their files. Examination of the effects caused by the interim specification changes (Revs 13, 14, 15) revealed they were primarily administrative in nature and had no effect on the hardware being procured. The inspector reviewed all other prior C/Os to this contract and identified no other similar findings. This appeared to be an isolated case. The licensee volunteered to do a broader sampling of contracts awarded versus specifications referenced to assure themselves that this truly was an isolated occurrence. This subsequent contract review revealed that out of 169 C/Os examined (all issued since October 1987) which referenced 114 safety related specifications only one other instance of a wrong specification revision was identified. In this case, Rev 6 to Specification X3AC02 was specified, whereas Rev 8 was in effect. Examination of these applicable revision changes revealed that Rev 7 made a change which in turn was nullified by Rev 8 returning the contract back to the provisions of Rev 6. Consequently no real problem existed.

A new Desk - Top Instruction (RDT-A-02, Specification Review) was issued (April 5, 1988) to the PPRG which provides guidelines, further checks, and assurances that this isolated instance of a wrong specification revision being referenced on procurement documents would not recur. Since the discrepancy identified was an isolated case having no safety significance and the licensee has taken proper corrective action and actions to prevent recurrence, a violation is not warranted.

c. Vendor Evaluation

Suppliers are selected either from the Bechtel Evaluated Suppliers List (ESL), holding either an American Society of Mechanical Engineers (ASME) Material Supplier (MS) or Manufacturer's (MM) Quality System Certificate, or from the GPC Qualified Suppliers List (QSL). If the supplier is not recognized on any of the above listings, Project Procurement may initiate a request to have either the General Office Procurement Review Section (PRS-GO) or BPC conduct a supplier review.

The inspector reviewed the latest QSL, dated April 1988, and various recent monthly issues of the ESL. The BPC maintained ESL lists all Bechtel approved suppliers of Q-list safety-related engineering equipment or ASME approved code vendors for materials. The date, results, and type of supplier survey is given. ASME certification numbers and expiration date are shown, problem vendors are noted, and other information is noted to assist in evaluating the vendor's QA program status. The GPC PRS-GO maintained QSL does not identify problem vendors; however, if the suppliers name is not listed in the QSL, the Project simply does not purchase materials from him.

Supplier audit schedules are prepared by BPC two months in advance of the due date and cover a three month audit plan. SCS approves the audit list and uses SCS and BPC supplier quality representatives to conduct audits as needed. These audits are conducted on at least a triennial basis for contractors performing continuing work on GPC purchase orders, or at least once during performing single or multiple purchase orders and subcontracts having limited duration. Supplier audits are reported to the Vogtle Project and the VQAM. Yearly vendor evaluations are performed by SCS. The inspector examined the BPC Supplier Quality Program Audit Schedule for the period covering January 1987 to January 1988. The following listed supplier audit reports, supplier evaluations, and Coordinating Agency for Supplier Evaluation (CASE) reports were examined to determine their adequacy of the scope of review, findings, and followup actions taken to resolve their findings. The inspector also reviewed the qualifications of all lead auditors involved.

<u>Supplier</u>	<u>Audit, Evaluation, CASE Report</u>	<u>Date</u>
Brown Boveri	SCS Supplier Quality Evaluation	April 8, 1987
	Bechtel Full Scope Survey	April 17-18, 1986
	CASE Audit	May 7, 1985
	SCS Supplier Quality Evaluation	August 13, 1984
	Bechtel Audit No. 83-229	September 7, 1983
CBI Service Inc.	SCS Supplier Quality Audit	March 9-10, 1988
Anchor Darling Valve Co.	Bechtel Audit No. 87-23	March 4-6, 1987
	Transmittal of Audit No. 87-23	
	Results to CASE Data Center	July 16, 1987
	SCS Supplier Quality Evaluation	March 7, 1988

Within the area, no violations or deviations were identified.

8. Audits (35060)

References:

- a. QA-05-01 Field Audits, R16
- b. QA-05-02 Corporate/Supplier Audits, R16
- c. QA-05-18 Annual QA Department Assessment, R5
- d. QA-03-05 Qualification of Auditors, R6

The VQAM verifies that GPC, Bechtel, Westinghouse, and SCS delegated audits are performed. He also verifies that suppliers of materials, equipment, or services are audited.

The inspector reviewed references a. through d. to confirm that the licensee is implementing an effective internal and external QA audit program. Interviews were held with the VQAM and QASM-C to obtain their understanding of the audit program. The internal audit schedule for 1987 was reviewed and confirmed to encompass essential program elements. Examination of the 1987 GPC audit schedule and discussions with the Construction QA Engineering Support Supervisor revealed that all audits schedule for 1987 were completed in the 1987 timeframe except for one. Audit CP09/88-03 (an electrical system audit) was originally scheduled for completion in November 1987 but was actually completed in January 1988 due to late audit checklist input by the Readiness Review Team. Several scheduled audits were delayed or moved ahead of their originally scheduled dates so that the auditors could review their particular activities at the best possible time. All were completed in the 1987 timeframe. Regardless, the late audit, and the delaying or moving of audit time schedules are within the licensee's programmatic timeframes for accomplishing these audits. A total of 55 audits, 9 contractor assessments and 22 activity oriented surveillances were completed by the Construction QA Department for Unit 2 during 1987. Most audits have been conducted by the site QA staff; however, the QASM-C has utilized SCS auditor expertise on a few occasions (Audits CP01-87/11 and 87-05) to perform contractor assessment audits. The site QA audit staff was found to be sufficient in number, experience and expertise to effectively carry out the construction audit program requirements.

The inspector selected the following QASM-C audits performed during 1987 for review:

CP02-87/01	QA Audit of Drawing/Document Control
CP03-87-26	QA Audit of Warehouse Activities
CP08-87-13	QA AUudit of Material Suppliers Program
CP09-87/12	QA Audit of Electrical Field Operations/Cleveland Electric
CP10-87-08	QA Audit of Mechanical Systems

These audits were examined for the following attributes:

The audit plan/checklists were complete and satisfactorily covered the QA element audited.

The auditors were properly qualified.

Audit findings were reported to upper management and the organization audited.

Corrective actions for findings were timely, appropriate, and satisfactorily followed up.

Within this area, no violations or deviations were identified.