



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report Nos.: 50-424/83-05 and 50-425/83-05

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

Docket Nos.: 50-424 and 50-425

License Nos.: CPPR-108 and CPPR-109

Facility Name: Vogtle 1 and 2

Inspection at licensee corporate offices in Atlanta, Georgia

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	C. M. Upright, Section Chief	Date Signed
	Engineering Program Branch	
	Division of Engineering and Operational Programs	

SUMMARY

Inspection on February 15-18, 1983

Areas Inspected

This routine, announced inspection involved eighty-eight inspector-hours at licensee headquarters in the areas of the licensee's quality assurance program, design control, procurement activities, audits, licensee actions on a previous enforcement matter, and followup on an inspector identified item.

Results

Of the six areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *P. D. Rice, General Manager Quality Assurance and Radiological Health and Safety (GMQA)
- *C. W. Hayes, Vogtle Quality Assurance Manager (VQAM)
- R. C. Walker, Senior QA Field Representative
- E. Turner, Acting Project General Manager

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 18, 1983, with those persons indicated in Paragraph 1 above. The licensee acknowledged the inspection findings.

3. Licensee Action on Previous Enforcement Matters

(Closed) Violation 424, 425/81-12-01: Failure to Control QA Department Manual Procedure Revision Distribution. Georgia Power Company's (GPC) response dated January 18, 1982, is considered acceptable by Region II. The inspector reviewed Procedure QA-04-12, QA Department Procedure Manual Control, Revision 5, to assure that the subject manual controls had been increased. Also, proper implementation of Procedure QA-04-12, Revision 5, was verified by the inspector (see Paragraph 5.a). The inspector concluded that GPC had determined the full extent of the violation, performed the necessary survey and followup actions to correct the present conditions, and developed the necessary corrective actions to preclude recurrence of similar violations. Corrective actions stated in the response have been implemented.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Quality Assurance Program (35060B)

a. QA Program Changes

The Vogtle Nuclear Plant (VNP) PSAR Chapter 17 S2 (Post-Construction Permit Supplementary Information - March 2, 1977) specifies the licensee's commitments for plant Vogtle's quality assurance program. Since the above submittal, GPC has incorporated several changes to the Vogtle PSAR QA program description which have been documented

internally and reported by letters to the Commission. These implemented changes have been accrued for input to the licensee's next revision to the PSAR which will be submitted to Region II in accordance with the newly amended regulation 10 CFR 50.55(f).

Notification of the most recent Vogtle QA program changes were by letters to NRR dated October 25, 1982, and February 8, 1983. Both letters describe significant Vogtle QA organizational changes which have been implemented. The October 25th letter discusses the creation and filling of a new position, General Manager, Quality Assurance and Radiological Health and Safety (GMQA). The GMQA is responsible to the Executive Vice President Power Supply for the overall control of the GPC QA program. Further reorganization detailed in GPC's letter dated February 8th depicts the following corporate based QA personnel reporting directly to GMQA: the Plant Vogtle QA Manager (VQAM), the Plant Hatch QA Manager (HQAM), the QA Engineering/Support Manager (QAE/SM), the QA Coordinator for Fossil and Hydro Projects, the QA Special Projects Assistant (QASPA), and a Radiological Health and Safety Representative (RHSR). The RHSR has no line QA functions.

The Vogtle and Hatch QA Managers have reporting to them their respective QA Site Manager (QASM) located at the plant site. The VQAM also has reporting to him a Project QA Engineer (PQAE).

The new QA Engineering/Support Manager position was established to support the Hatch and Vogtle QA programs by providing increased participation in solving quality-related problems, increased oversight of architectural/engineer (A/E) and contractor QA activities, regulatory and associated document review, assessment of trends, and procurement QA activities.

The QASPA position was created to develop and direct QA training programs for organizations performing quality-related activities. Additionally, the QASPA will direct or accomplish special QA projects as directed by the GMQA.

The above mentioned organizational changes are viewed as beneficial to the QA program for the following reasons. The job title of Manager which has been given to the GMQA, VQAM, and VQASM has upgraded the QA organization image in the eyes of construction and GPC management. Under this revised organization identical QA manager positions have been established for both Vogtle and Hatch making them solely responsible for the QA programs of their respective projects subordinate to the GMQA. The creation of an QAE/SM and his necessary staff appears to be a major improvement in that it strengthens GPC's QA capability to assess their program and should provide increased QA oversight of A/E design activities (oriented more towards technical/engineering review versus the usual program compliance verification approach), suppliers, and vendors. Additionally, it appears the licensee has appointed a

strong GMQA who possesses valuable broad experience in nuclear and QA activities. He appears dedicated to strengthening and upgrading GPC's overall QA program and appears to have gained necessary management support and attention in this endeavor.

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 representative's office at each plant site. The below listed QA Department procedures (for controlled manual holders Nos. 1, 3, 4, 7, and 11) were examined for changes (revisions) implemented to verify that these changes were approved at appropriate management levels, to assure that procedures are reviewed in accordance with ANSI N 18.7 - 1976, to determine if changes are necessary or desirable, and to ensure that document control (distribution) requirements had been effectively complied with:

- QA-01-01 R8 Organization and Responsibilities of the QA Department
- QA-01-05 R5 Job Functions and Responsibilities - QA Site Supervisor
- QA-02-02 R2 Timely Reporting to the NRC
- QA-03-02 R7 Training and Personnel Qualification
- QA-04-09 R4 NRC correspondence Routing
- QA-05-01 R4 Corporate Staff Audits
- QA-05-07 R6 Audit Report Writing
- QA-06-01 R1 Magnetic Particle Inspection

In addition to the above QA Department Manual procedures review, controlled manual holders Nos. 2, 4, 8, 9, 12, and 13 for the Vogtle Quality Assurance Manual were contacted and the inspector verified that the subject manual holders had received and filed the latest revision (Revision 5) to their QA manual. Revision 5 was issued as a complete manual replacement.

The inspector reviewed two near to be implemented procedures; QA-05-03, R0, Annual QA Department Assessment, and procedures QA-05-01, R5, Field Audits. Procedure QA-05-01, R5, is a complete rewrite that will encompass and thereby delete several existing audit inspection division procedures. The above new procedures should enhance the QA controls in this area.

b. Licensee Reviews of QA Program Effectiveness

A quality assurance committee (QAC) has been organized utilizing management of GPC and Southern Company Services, and acts as the advisory group to the GPC Executive Vice President Power Supply. The primary purpose of this committee is to evaluate the effectiveness of the VNP quality assurance program and to recommend corrective measures to the GPC Executive VP Power Supply where necessary. The inspector examined the proceedings of the following QAC meetings which are scheduled four times per year or on call by any member of the QAC.

<u>MEETING NO.</u>	<u>DATE</u>
44	2/25/82
45	6/22/82
46	9/21/82
47	12/8,9/82

The meeting minutes of QAC meeting No. 47 entitled Conference on QA Matters indicates a very healthy positive direction GPC management is pursuing by re-examining their QA Program, working toward upgrading standards, obtaining better qualified personnel, and in general promoting QA acceptance at all levels. The GMQA presented to GPC management an assessment audit of the QA Department operations identifying particular concerns and needed improvement areas for which resolutions were proposed and management responded with affirmative support.

c. Corporate QA-Site QA Interface

The Vogtle QASM transmits to the VQAM copies of all site audit reports, monthly copies of Vogtle's nonconformance report listing, and status. The Senior Vice President, Engineering, Construction and Project Management makes periodic visits to the Vogtle site to attend the management review meetings. Minutes for the management review meetings conducted 2/18/82, 4/12/82, 6/8/82, and 8/27/82 were examined for QA content by the inspectors. Trend analysis concerning NRC and GPC QA audit findings are presented during these meetings. The inspector was informed that a management review meeting was underway at VNP at the time of this inspection.

Within this area, no violations or deviations were identified.

6. Design Review External A/E (35060B)

a. Documents Examined

- (1) Vogtle Electric Generating Plant PSAR, Chapter 17, Sections 17.1.1-17.1.3

- (2) Southern Company Services (SCS) Quality Assurance (QA) Department Policy and Procedures
- (3) Georgia Power Company (GPC) QA Manual
- (4) QA Department Procedures Manual, Procedures
 - QA-02-01 R3 Planning & Scheduling QA Office Activities
 - QA-02-02 R2 Timely Reporting to the NRC
 - QA-02-03 R0 Procedure/Document Reviews
 - QA-03-02 R7 Training and Personnel Qualification
 - QA-03-05 R0 Qualification of Auditors
 - QA-04-02 R5 Significant Deficiency Reporting
 - QA-04-09 R4 NRC Correspondence Routing
 - QA-05-01 R4 Corporate Staff Audits
 - QA-05-01 R5 Field Audits (Not Yet Approved)
 - QA-05-04 R2 Audit/10 CFR 50, Appendix B Verification
 - QA-05-07 R6 Audit Report Writing
 - QA-05-13 R7 Open Items Control
- (5) Bechtel Power Corporation (BPC) Project Reference Manual, Part C Engineering,
 - Section 10 R6 Design Control
 - Section 20 R4 Design Review

b. QA Program Requirements

The licensee QA program as described in Chapter 17 of the Vogtle PSAR states that the requirements of the ANSI Draft Standard N 45.2.11-1973 and Regulatory Guide 1.28 are applicable to the QA program for design activities. The procedures identified in Paragraph 6.a were reviewed for compliance with these references.

c. Design Assurance Audits

The objective of this inspection was to aid in assessing the GPC QA Program effectiveness in determining the effectiveness of the BPC design activities. GPC has designated SCS as the lead organization to perform audits of BPC. The GPC VQAM has routinely participated in these audits and approves the reports prior to issuance by SCS. The inspector reviewed the qualifications of the VQAM (no other GPC QA personnel participated in the audits selected and reviewed during this inspection). The inspector selected and reviewed the March 10 and 11, 1982, and July 26-29, 1982, SCS audits of BPC design related work as representative of the audit program. Each of these included reaudit followup of previous findings. The inspector also reviewed a special reaudit conducted December 14 and 15, 1982, of the followup of open audit findings report (AFR) items.

The review of these reports determined that the objective and scope established in the audit plan was accomplished, the followup of audit findings was considered appropriate, and the corrective action programs were adequate in most cases. The worst case was related to AFR 80-8 relative to design verification procedures identified in an audit on October 14-16, 1980. The reaudit of December 14 and 15, 1982, closed the AFR based on incorporating the BPC standard procedure EDP 4.27, Design Verification, into the BPC Project Reference Manual, Part C, Section 10, Design Control.

d. Design Inputs

The inspector looked at the interfaces between GPC, SCS, and BPC for handling NRC Bulletins, Circulars, and Information Notices to assure that the NRC requirements and positions that are transmitted to the licensee are reviewed by the A/E for design input. The Project Quality Assurance Manager (PQAM) receives the bulletins, circulars, and information notices and transmits a copy to BPC. BPC reviews bulletins, circulars, and information notices for applicability to balance of plant systems and transmits a copy to Westinghouse after assigning an action item for tracking. Westinghouse reviews for applicability to the nuclear steam supply systems and sends their response to BPC. BPC transmits all responses to GPC.

The inspector reviewed the applicable correspondence between GPC and BPC to ensure that the interface procedures QA-04-09, NRC Correspondence Routine, and QA-05-13, Open Item Control were being implemented. Logs and records of NRC 1982 inspection findings, IEBs and IECs, and GPC QA open AFRs, deficiencies and observations are monitored to assure a responsible and timely response to the NRC and to assure followup of the QA open items. QA-04-09 is currently being revised to include NRC Information Notices (IN) in the system. If response to the NRC is not required, the licensee documents why Plant Vogtle will not be affected by the IEB, IEC, or IN.

Within the areas examined, no violation or deviations were identified.

7. Procurement (35060B)

a. Procurement Organizational Controls

Bechtel Power Corporation (BPC), Los Angeles is the architect engineer for Georgia Power Company (GPC) Vogtle Nuclear Plant (VNP) with Westinghouse Electric Corporation being the NSSS supplier. BPC performs vendor audits, maintains a BPC evaluated supplier list, prepares proposed supplier evaluation lists and procurement bidder list for GPC, and provides engineering and quality assurance controls in procurement of safety-related items and services.

Southern Company Services, Inc. (SCS) is the lead organization for procurement and expediting of items and services for VNP. SCS is a member of CASE and administers supplier surveillance and conducts audits of Bechtel procurement supplier quality department; these audits may be observed by the project quality assurance manager GPC. SCS is also responsible for coordinating evaluations of items under the scope of 10 CFR 50.55e.

Georgia Power Company and Alabama Power Company have conducted joint audits of SCS quality assurance department.

Procedures controlling the above activities were examined to ensure that they had been prepared by the designated authority, approved by management, and reviewed by the quality assurance manager. The procedures were reviewed to determine consistency with the commitments of GPC PSAR. The procedures included the following:

- QA-01-02, R4 Job Functions and Responsibilities/Manager of Quality Assurance
- QA-04-04, R4 Proposal - Requisition Review/Approval
- QA-04-06, R4 QA Manager Review/Approval
- QA-05-03, R3 Supplier/Audit/Inspection
- EPPM 4-20, R2 Design Contractor Controls
- EPPM 6-2, R5 Supplier Evaluation and Reevaluation for the SCS Evaluated Suppliers List
- EPPM 6-7, R14 Preparation of Engineering Requisitions

b. Procurement Document Control

Several procurement documents were reviewed to ensure that:

- Applicable regulatory requirements, design basis, and other requirements included or referenced
- Procurement document changes subjected to the same level of control as used in the original preparation
- Scope of work to be performed by the vendor identified
- Technical requirements referenced appropriate documents
- Test, inspection, and acceptance criteria identified

- Vendors had documented QA program and required to incorporate QA requirements in subcontract documents
- Special instructions/requirements included for activities such as designing, identification, fabrication, cleaning, erecting, packaging, handling, shipping, and extended storage
- Documents identified which would be sent to Georgia Power Company for review and approval
- Nonconformance reporting and control specified
- Access to the vendor's facilities and records for inspection or audit incorporated.

The procurement documents reviewed included the following:

Requisition Number 1X2AG05T, 1X4AJ05T, 1X2AG06, and 1X5AD07

Requisition Number 1X2AG05T was prepared on MAG cards to GPC purchase order format. The requisition is for;

- Steam generator upper and lower lateral supports
- Reactor coolant pump lateral supports
- Tie rod restraints
- Reactor vessel support seats
- Pressurizer supports
- Crossover leg restraints
- Main steam line supports
- Reactor coolant loop restraints
- Pipe restraint embeds
- Primary shield liner plates

These components were purchased from Bristol Steel and Iron Works on purchase order PAV-2148. The requisition identified that the order contained Q items; 10 CFR 21 reporting requirements were included; packaging and marking requirements were specified; shop inspection by Bechtel and expediting by SCS were incorporated; and free access to inspect at sub-tier-suppliers, where required, was

allowed. Applicable revisions to the specifications were incorporated by change orders 3, 4, 5, 12, and 14. The latest revision of the specification is Revision 5. The original purchase specification required these components be in accordance with ASME B&PV code 1974 edition, Summer 1976 addenda. However, the specification required ASTM A-588 material to be used in certain applications. ASTM A-588 material had not been approved for use by ASME. Also, the drawings for some of the embeds required Nelson studs to be attached, which was outside the jurisdiction of ASME code. Therefore, Bechtel removed the requirements for components to be in compliance with ASME, except for the pressurizer support steel frame fabrication, and the anchor bolts for reactor vessel lower radial support.

Requisition number 1X4AJ05T is for HVAC chilled water circulating pumps, Gould Pump Company model 3196 MT, end suction, top discharge, ASME B&PV code, Class 3. The specification was certified to meet NA3250 of ASME B&PV Code by R. A. Matinson and required the pumps to be in accordance with ASME B&PV Code, 1977 edition without addenda. The specification was reviewed to ensure that environmental conditions were specified; nozzle loadings listed; CMTR's required for pressure boundary material; COC for non-pressure boundary material; visual inspection in accordance with MSS-SP55-1971; ASME code case N82 approved for flange loadings; notification to witness hydrostatic test; hold point to approve pump curves prior to releasing pumps for shipment; long term storage procedures to be supplied; and seismic analysis for pumps and motors were required. Change Order No. 2 incorporated Revision 1 of the specification and required Part 21 reports to be submitted. Changes 7 and 10 revised the specifications. The latest revision of the specification is Revision 3.

Requisition number X2AG06 is for containment liner plates from Chicago Bridge and Iron Works (CBI). The specification was reviewed by the inspector to ensure that:

- Design pressures and temperature specified
- Environmental Conditions listed
- Seismic Conditions included
- Radiation limits applicable

The contract requires CBI to prepare drawings, furnish materials, fabricate, deliver, erect, and install the containment liner plate system including final assembly, post weld heat treatment, machining and field installation of equipment hatch, and ASME code (NPT) stamp the equipment hatch. Change notices 3, 4, and 17 revised the specification. Revision 5 is the latest specification. There have been 24 change notices on this contract.

Requisition Number X5AD07 is for containment flood level transmitter from ITT-Barton Instrument Company. The specification was reviewed by the inspector to ensure that:

- Design pressures and temperatures specified
- Environmental conditions included

The purchase order included Barton Instrument Company proposals 8M-05-82-136, dated May 28, 1982; and 8M-05-82-136, Revision 1, dated July 28, 1982; letters dated June 17 and July 26, 1982; and telexes dated August 5 and August 12, 1982.

c. Vendor Evaluation

Bechtel Power Corporation maintains an Evaluated Supplier List which is updated monthly; printouts of this list are distributed to locations that do not have access to a system terminal. The list dated February 11, 1983 was reviewed; approximately 765 suppliers were listed. It lists all Bechtel suppliers of Q-list safety-related engineering equipment or ASME B&PV code section III materials. The date, results, and type of most recent survey of the suppliers is given, ASME Certification stamps and date of expiration are shown, and other information detailed to indicate the status of supplier quality.

Audit schedules of suppliers for VNP are prepared by BPC two months in advance of the date due, and cover a three month audit plan. SCS approves the audit list and BPC conducts the audits. The schedule of audits from February through April 1983 were examined. Approximately 66 vendors were proposed for the three months, indicating an audit rate of 275 suppliers annually.

d. Audits by Southern Company Services, Inc.

Audits conducted by SCS on BPC Power Division, LA were reviewed. The audit conducted December 2, 1981, was to evaluate BPC Procurement Supplier Quality Department for:

- Organization
- Quality Program
- Instructions, Procedures, and Drawings
- Document Control
- Control of Purchased Material
- Quality Assurance Records

No findings were identified during this audit.

The audit on October 25-26, 1982, was to evaluate BPC San Francisco for:

- Organization
- Quality Assurance Program
- Instructions, Procedures, and Drawings
- Document Control
- Control of Purchased Materials, Equipment, and Services
- QA Records
- Audits

One audit finding was identified for failure to acknowledge revisions to PSQM.

Reaudit of BPC Power Division, LA on December 14-15, 1982, was to verify implementation of corrective action for previous audit findings.

Within this area, no violations or deviations were identified.

8. Audit (35060B)

a. Audit Program

The inspector examined the following controlling and proposed for implementation QA Department audit procedures, Regulatory Guide and American National Standards:

- QA-05-01, R4 Corporate Staff Audits
- QA-05-01, R5 Field Audits (proposed)
- QA-05-02, R5 Site Audits
- QA-05-03, R3 Supplier Audit/Inspection
- QA-05-03, R0 Annual QA Department Assessment (proposed)
- QA-05-04, R2 Audit/10 CFR 50, Appendix B Verification
- QA-05-07, R6 Audit Report Writing
- QA-03-05, R0 Qualification of Auditors

ANSI N45.2.12 Requirements for Auditing of QA Programs for
Nuclear Power Plant

ANSI N45.2.23 Qualification of QA Program Audit Personnel for
Nuclear Facilities

R. G. 1.144 Auditing of QA Programs for Nuclear Power Plants

Design audits are conducted to evaluate Bechtel and Westinghouse on the effectiveness with which they implement and comply with their respective QA programs. Design audits are conducted annually at a minimum. The Project QA Engineer (PQAE) from Southern Company Services is responsible for auditing Bechtel whereas the Bechtel PQAE is responsible for auditing Westinghouse. The QASM's personnel audit safety-related construction and preoperational testing activities based on a preplanned schedule which is approved by the VQAM. Random unscheduled audits are also conducted to provide a well-rounded program. The VOAM conducts an annual audit of the QASM's activities and monitors these activities through site visits, review of QASM audit reports, daily logs, and open item summaries. In conjunction with their surveillance inspections, Bechtel's Procurement Supplier Quality Department and the SCS QA Department conduct planned audits of selected suppliers.

The approved Corporate 1983 QA activities schedule and the tentative Vogtle site construction audit schedules for the period 1/82 through 6/83 were examined and discussed with the VQAM to ascertain that the QA audit program encompasses all internal and external organizations and extends to all elements of the program within a reasonable time frame. The audit team size, composition, and use of specialists routinely assigned from other organizations to the teams was discussed with QA management. The inspector examined the auditor training, experience, and certifications for two corporate level and five site QA Department audit personnel and found all qualified to the requirements of ANSI N45.2.23.

b. Audit Reviews

Audits were examined to determine applicability to the QA element audited, qualification of audit team members, and that audit findings were reported to upper management and the audited organization. The inspector determined that corrective actions as required are being initiated and that there is followup and reaudit by QA as necessary. The inspector reviewed the following audit reports:

<u>Audit Date/Or No.</u>	<u>Subject (Conducted by)</u>
10/19-21/81	Audit of QA Site Activities (Corporate QA)

12/8-9/82	Assessment Audit of QA (Corporate QA)
GD 07-82/06	Drawing Control (Site QA)
GD 07-82/28	Field Change Notice Review (Site QA)
GD 10-82/129	Audit of Procurement of Spare Parts (Site QA)
11/16-18/82	QA Management Audit (Bechtel QA)
3/23-25/82	"N" Stamp Program & BRE Surveillance (Bechtel QA)

Within the area, no violations or deviations were identified.

9. Followup on Inspector Identified Problem (92701B)

(Open) Inspector Followup Item 424, 425/82-13-02 Documentation of NCR Review for 10 CFR 50.55(e) and 10 CFR 21 requirements. The inspector reviewed the Vogtle construction procedure GD-T-01, Revision 9, Nonconformance Control, QA-04-02 and QA-05-12. GD-T-01 has been revised to document review of nonconformance reports (NCR) by the QA Site Supervisor (QASS) to determine if NCRs need to be reported to the NRC in accordance with 10 CFR 50.55(e) and 10 CFR 21, and to take the appropriate action prescribed in QA-04-02. Exhibit 6 of GD-T-01 provides a stamped checklist to document the evaluation of NCRs by the QASS. This item remains open pending implementation of this revised program and training of the QASS staff reviewers relative to these procedures.