BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

NRC Docket Nos. 50-424, 50-425

In the Matter of

GEORGIA POWER COMPANY

SUPPLEMENT 10 TO

APPLICATION FOR LICENSE

UNDER THE ATOMIC ENERGY ACT OF 1954

AS AMENDED

FOR

VOGTLE ELECTRIC GENERATING PLANT

UNITS 1, 2

The Applicant, Georgia Power Company, hereby supplements its Application for a Construction Permit and Operating License, originally submitted on August 1, 1972, by the addition of supplementary material attached hereto.

D. O. Foster

by: D. O. Foster
Vice President and General Manager
Vogtle Project

Sworn to and subscribed before me, this 16th day of December, 1983.

Sue N. Bacchus

Notary Public
Notary Public, Georgia, State at Large
My Commission Expires March 21, 1985

INSTRUCTION SHEET
SUPPLEMENT NO. 10

ALVIN W. VOGTLE NUCLEAR PLANT
PRELIMINARY
SAFETY ANALYSIS REPORT

DO NOT REMOVE EXISTING WHITE PAGES

Replace Table of Contents pages S9 xxv thru S9 xxviii with pages S10 xxv thru S10 xxviii.

Replace Chapter 17 page S9 17-iii with S10 17-iii; replace pages S9 17.1-27a and S9 17.1-28 with pages S10 17.1-27a and S10 17.1-28; replace figure 17.1-1.

Replace Appendix 17A pages S9 17A-i thru S9 17A-iv with pages S10 17A-i thru S10 17A-iv; replace pages S9 17A-7 and S9 17A-8 with pages S10 17A-7 and S10 17A-8; replace pages S9 17A-13 and S9 17A-14 with pages S10 17A-13 and S10 17A-14; replace pages S9 17A-15 thru S9 17A-16 with pages S10 17A-15 thru S10 17A-16; replace page S9 17A-33 with page S10 17A-33; replace pages S9 17A-33a and S9 17A-34 with pages S10 17A-33a and S10 17A-34; replace pages S9 17A-43 thru S9 17A-54 with pages S10 17A-43 thru S10 17A-54; replace figure 17A-7.

Replace Appendix 17C pages S9 17C-i thru S9 17C-4a and figure 17C-1 with pages S10 17C-i thru S10 17C-4a and figure 17C-1.

DO NOT REMOVE EXISTING WHITE PAGES

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Review Supervisor onsite verifies that documentation is complete and on file at the plant site prior to installation or use of material or equipment. |S9 |S10

The QASM audits the construction site activities to ensure that adequate procedures exist for control of incoming material and equipment, and that these procedures are being followed. |S9

17.1.8 IDENTIFICATION AND CONTROL OF MATERIAL, PARTS, AND COMPONENTS

The GPC requires that BPC design documents outline identification and control requirements for materials, parts, and components. BPC ensures that supplier's quality assurance programs and procedures incorporate identification and control requirements. S9 The VQAM, through monitoring of reports and participating in selected audits of suppliers, verifies that required identification and control requirements are implemented during manufacture.

S9 The VQAM, by observing selected audits, verifies compliance to BPC, SCS, and W procedures for item identification and control. (See Subsection 17.1.18.)

Control of materials, parts, and components at the construction site is governed by approved procedures. S9 The QC Inspectors, while receiving materials, parts, or components, are required by their internal procedures to determine that these items are properly identified, and to verify that supporting documentation conforms to item identification.

S9 The QASM audits the GPC Field Construction Group and site contractors to verify that adequate procedures are available for item identification and control, and to verify adherence to these procedures.

17.1.9 CONTROL OF SPECIAL PROCESSES

S9 The VQAM assures, through audits, that BPC design documents outline requirements for the control of special processes such as welding, nondestructive examination, heat treating, and S9 cleaning. In addition, BPC ensures that supplier's quality assurance programs and procedures incorporate requirements for the control of special processes. The VQAM, through monitoring S9 of reports and participating in selected audits of suppliers, verifies that required control of special processes is implemented during manufacture.

S9 During plant construction, control of special processes are governed by site contractor's procedures approved by BPC. The S9 GPC QC Group monitors special process activity to ensure that approved procedures are followed. Internal procedures of S9 the GPC Field Construction Group require that the following areas are checked for compliance:

A. Training, testing, and certification of operator and inspection personnel involved with special processes.

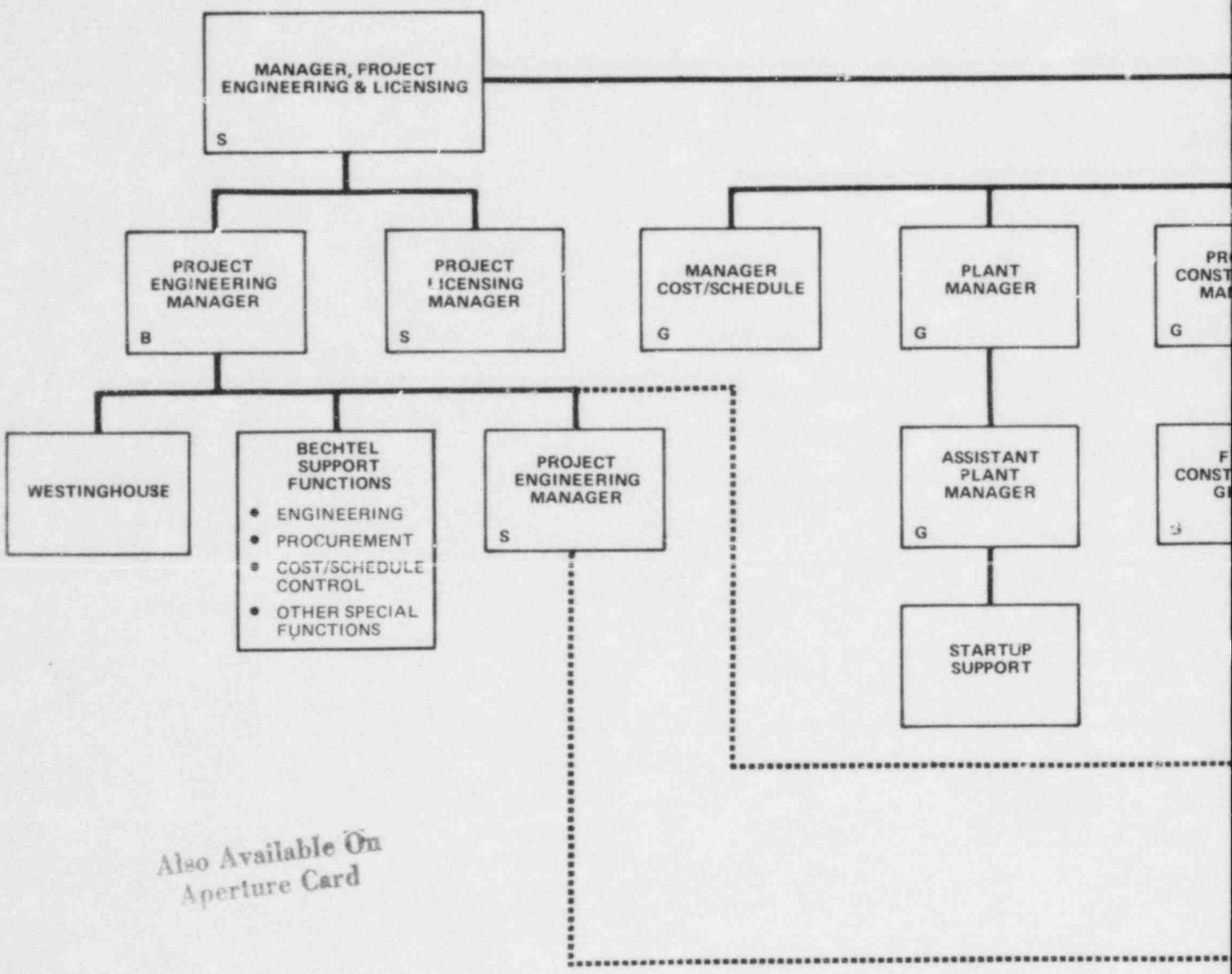
THIS CHART IS INTENDED TO REFLECT REPORTING RELATIONSHIPS AND NOT NECESSARILY LEVELS OF RESPONSIBILITY, SENIORITY OF POSITIONS, OR WORKING RELATIONSHIPS.

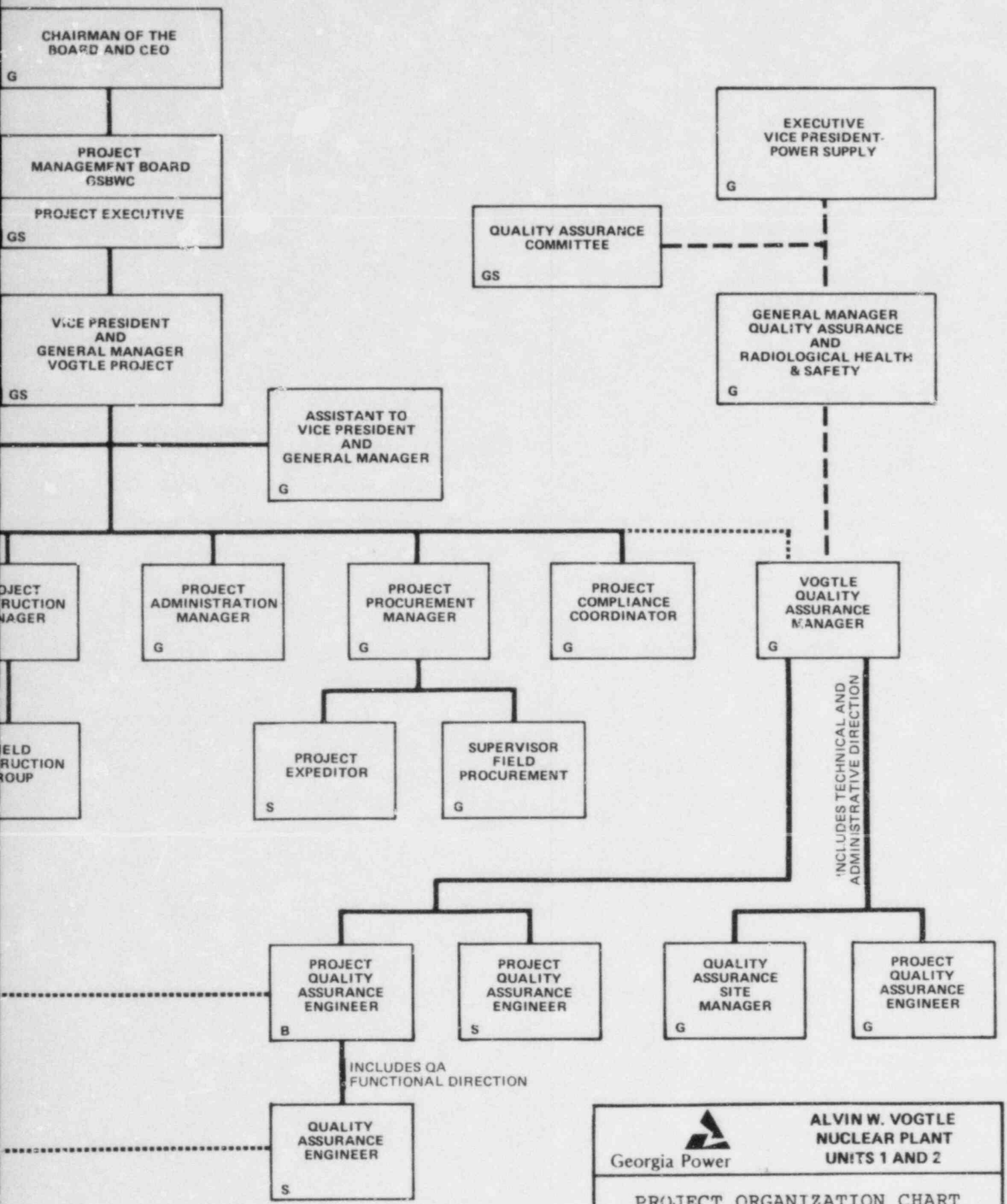
RESPONSIBILITY ENTITY

G GEORGIA POWER CO.
S SOUTHERN COMPANY SERVICES, INC.
B BECHTEL POWER CORPORATION
C CO-OWNERS
W WESTINGHOUSE

LEGEND

——— VOGTLE PROJECT DIRECTION
▪▪▪▪▪▪▪ VOGTLE PROJECT COORDINATION
— — TECHNICAL AND ADMINISTRATIVE (FUNCTIONAL) DIRECTION





Georgia Power

ALVIN W. VOGTLE NUCLEAR PLANT UNITS 1 AND 2

PROJECT ORGANIZATION CHART FOR QUALITY ASSURANCE

FIGURE 17.1-1

VNP

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services for special processes, such as welding, nondestructive examination, and protective coatings.

17A.1.3 PROCUREMENT

Bechtel Procurement provides services to the divisions for both home office and field-procured items. Figure 17A-4 identifies the organization of Procurement. Procurement does not establish technical or quality requirements contained in procurement documents, nor does it approve changes thereto; these functions are the responsibility of the Engineering Department.

The primary quality functions of Procurement are: supplier surveys, quality surveillance, and audit of manufacturer's (supplier) activities. These functions are the responsibility of the Manager Supplier Quality. The Procurement supplier quality function is independent of purchasing and expediting functions. The Supplier Quality Department program applied to power projects is established by the Manager Supplier Quality, and coordinated by the Manager of Quality Assurance - BPM. Procurement Supplier Quality under the administration of SCS, furnishes quality surveillance services which provide an added degree of confidence that supplier-furnished material and equipment conforms to the requirements of the procurement documents; and that applicable quality verification documentation is complete and acceptable for items released for shipment. S10 S2 S10

Procurement Supplier Quality:

A. Prepares and maintains the Procurement Supplier Quality Manual. S2 S9

B. Trains and qualifies BPC Procurement Supplier Quality personnel. S2

C. Performs inplant surveys of suppliers.

D. Performs inplant audits of supplier's QA activities.

E. Performs surveillance inspection of items and documentation in accordance with the Procurement Supplier Quality Manual (PSQM) procedures, instructions and engineering requirements, and releases equipment for shipment. S10

F. Evaluate supplier QA program and bidder QA plan.

17A.1.4 MATERIALS AND QUALITY SERVICES (M&QS) S2

Materials and Quality Services is responsible for furnishing specialized metallurgical, quality control, and auditing services

to Bechtel Divisions. Their quality functions for power projects are coordinated by the Manager of Quality Assurance - BPM. Figure 17A-5 illustrates the organization of the Materials and Quality Services Department.

Materials and Quality Services:

A. Develops and qualifies welding and nondestructive examination procedures.

B. Trains and qualifies Bechtel nondestructive examination personnel.

C. Supports Engineering and Construction in the preparation of special process procedures.

D. Provides technical direction to field welding engineers.

E. Reviews supplier and contractor welding and nondestructive examination and protective coating procedures, and quality assurance manuals for ASME materials and metal structures applications.

F. Prepares and maintains the Bechtel Quality Assurance Manual for ASME Nuclear Components (BQAM-ASME), and provides liaison with the ASME and authorized inspection agencies in matters associated with compliance with the ASME B&PV Code, BQAM-ASME, and the control of the ASME code symbol stamps.

G. Participates in audits of Bechtel field construction, which include compliance with the Quality Assurance Manual for ASME, Section III, "Nuclear Components," and perform audits of Bechtel and subcontractor field welding and nondestructive examination, and protective coatings programs.

H. Participates as specialists in surveys and audits of material and component suppliers and subcontractors.

I. Consults with Engineering, Procurement, Construction, and Quality Assurance on quality control and failure analysis problems involving materials, welding, protective coatings, and nondestructive examination.

J. Supports Engineering in the preparation of specifications for components, piping, metal structures, and protective coatings, and in the selection of materials.

Table 17A-1
VNP PROJECT QUALITY PROGRAM INTERFACES

BPC VNP Project Functions	OVERALL PROJECT FUNCTIONS					
	Engineering	Purchasing	Procurement Supplier Quality	Construction	Preoperational Testing	Quality Assurance
Engineering:						
BOP	-	B,G	B.S	G	B.G	B
NSSS	W	B	B.S	G	B.G	B
Purchasing:						
BOP	B.G	G	B.S	-	B	B
NSSS	B.G	W.G	B	-	B	B
Procurement Supplier Quality:	B,S	B,G,S	S.B.W	-	-	G.B.S
Preoperational Testing	B	B	-	-	G	B
Quality Assurance	B	B	B	-	B	G.S.B.W

S2 S10 S9 S10

Table 17A-2
VNP QUALITY PROGRAM ACTIVITY RESPONSIBILITIES

BPC VNP Project Functions	SALIENT QUALITY PROGRAM ACTIVITIES			
	Originate	Verification	Approval	Audit
Engineering	B.S	B.S	B	G.S.B
Purchasing	B.S	S	B.G.	G.S.B
Procurement Supplier Quality	B.S	B.S	B.S	G.S.B
Preop. Test Procedures	B	B	G	G.S.B
Quality Assurance	B	B	G.S.B	G.S.B

S2 S10 S2

LEGEND:
G - Georgia Power Company
S - Southern Company Services, Inc.
B - Bechtel LAPD
W - Westinghouse WNES

S9

S2 G. Assuring proper implementation and compliance with BPC VNP project procedures for the SCS design scope of work.

17A.1.6.2 Project Engineering

S9 The Project Engineering Manager through assigned Project Engineers provides project direction to the discipline groups and is responsible for the conduct of engineering on the S2 project, including the SCS design activities. The Project Engineers may be assisted by one or more Assistant Project S9 Engineers. The Project Engineering Manager, Project Engineers, Assistant Project Engineers, Engineering (discipline) Group S2 Supervisor, SCS Project Engineering Manager, engineers, designers, and draftsmen comprise the project engineering team.

S9 The Project Field Engineer (PFE) is the jobsite representative of the Project Engineering Manager.

S9 The Project Engineering Manager is responsible for assuring that drawings, specifications, procedures, and instructions conform to SCS and GPC requirements, BPC standards, applicable industry standards, regulatory agency requirements, and the design bases as defined in Safety Analysis Reports.

S9 The Project Engineering Manager is assigned Project Engineers by Division Engineering Management, and engineers, designers, and draftsmen from the various disciplines by the Chief S9 Engineers. This project engineering team is responsible for BPC engineering design work performed by the project, and for checking and verification functions performed on the project. Special design support is furnished to the project by specialty S9 groups. The Project Engineering Manager is responsible for assuring that special design work, conducted off the project, is subjected to the same degree of checking and control as that conducted on the project.

The project engineering team is responsible for:

A. Preparing calculations, drawings, and specifications that constitute the engineering design.

S9 B. Conducting their work in accordance with established engineering procedures and project quality program procedures.

C. Coordinating selected design reviews and checking with Chief Engineers and their staffs.

F. Identifying the need for quality surveillance and audit of suppliers. S9

G. Reviewing selected quality surveillance and audit reports. S9

H. Reviewing and approving design changes, and approving disposition of those nonconformances with "repair" or "use as is" recommendations.

I. Reviewing selected contractor drawings, procedures, test data, manuals, and reports.

J. Interfacing (including control of technical information), reviewing and accepting supplier-developed stress reports and seismic calculations, tests, etc.

K. Preparing engineering requisitions, based on BPC-approved purchase recommendations and technical instructions from Project Engineering, in support of GPC-preparation of purchase orders and contracts. S10

The PFE and supporting staff are assigned to the jobsite. The PFE reports directly to the Project Engineering manager for technical and project direction. The PFE also receives direction from the project engineering manager for Bechtel's jobsite "N" - Certificate Holder responsibilities. The PFE coordinates with the Owner's construction supervision for activities and scheduling requirements. The PFE provides project direction to the project field engineering personnel assigned by the division engineering disciplines to originate, review or authorize design changes in the field in coordination with home office engineering and as required by construction. S9

17A.1.6.3 Project Procurement

The Project Procurement Manager provides coordination, and is responsible for the conduct of project procurement activities. The Project Procurement Manager and Technical Services Group are responsible for: S10

A. PURCHASING (For a limited scope only):

1. Developing bid lists for GPC approval.

2. When required, acting as primary interface with prospective vendors for performing vendor prequalification.

3. Acting as primary interface with bidders prior to award, and after award, with the vendor concerning matters resulting in purchase order and contract changes.

4. Purchasing functional interfaces.

5. Qualification of bidders.

6. Bidding activities, including preparation of the commercial evaluation of bid proposals.

7. Coordinating evaluation of Suppliers Quality Assurance Program Manuals and Plans with PSQ Technical Services Group and Project Quality Assurance.

S10

S10 B. PROCUREMENT SUPPLIER QUALITY/DIVISION TECHNICAL SERVICES GROUP:

S9 1. Evaluating Supplier's Quality Assurance Programs and Plans.

17A.1.6.4 Preoperational Testing

The VNP project function of preoperational and post-construction testing is the responsibility of GPC. The BPC Project Startup Engineer supervises the home office startup activities, providing Startup engineering assistance to GPC. He is supported by functional Startup engineers, which comprise the home office Project Startup group.

The home office Project Startup group is responsible for:

A. Coordinating test specifications for preoperational tests.

B. Preoperational testing functional interfaces.

S2 17A.1.7 SCS DESIGN TEAM PARTICIPATION

S9 SCS participates in the design of the VNP by providing
S2 detailed design services for specifically designated systems and
S2 facilities. Certain of these activities may be safety-related.
S9 Design participation by SCS is done under the direction of BPC, and in accordance with the BPC VNP Project Reference Manual (PRM) procedures, as modified with procedure supplements incorporated in the VNP PRM to account for differences in organization. The presently assigned scope of work for SCS includes the turbine building, and structures and utilities separate from the power block.

S9 SCS performs design and engineering functions, including
S2 analyses under SSE and tornado wind loadings, etc., in accor-
S9 dance with the methods specified in the PSAR, and in accordance with the supplemental design criteria issued by BPC. Work
S2 is performed in accordance with BPC VNP quality assurance program, as reviewed and approved by BPC and GPC.

Table 17A-5 (Continued)

VNP PROJECT REFERENCE MANUAL

PART D - Procurement - Primary Responsibility of the Project Procurement Manager S9

Section 1 - Bid List

Establishes the preparation, review, and approval of a master bid list for the VNP project, and for checking and revising the list of bidders prior to issuing each bid request. S2

Section 2 - Purchasing

Defines the methods and procedures used by BPC purchasing and subcontract departments to process its scope procurements for equipment, material, and services for the VNP project; also includes coordination with GPC Procurement. S2 S10 S2

Section 3 - Supplier Quality S9

Describes the quality surveillance and supplier qualification procedures used to implement the applicable requirements of the Bechtel Procurement Supplier Quality Manual. This section also identifies which activities will be performed by SCS to implement the Quality Assurance Program. S10 S9 S10

Section 4 - Expediting

Provides for the expediting of vendor drawings and associated data, recording actions taken, status reports, and report distribution. S2

Section 5 - Reporting of Defects and Noncompliance Nuclear Regulatory Commission 10 CFR 21

Provides instruction for the incorporation of provisions of 10 CFR 21 in project procurement documents for nuclear safety-related items. S9

Table 17A-5 (Continued)

VNP PROJECT REFERENCE MANUAL

Section 6 - Supplier Annual Performance Evaluation and Audits	S9
Describes SCS responsibility to evaluate supplier performance in maintaining the accepted quality program, to determine if a supplemental audit is required, to coordinate the audit, and to ensure conformance with Regulatory Guide 1.144.	S10 S9 S10
Section 7 - Evaluation of Supplier's Quality Program By Procurement Supplier Quality Department	S9
Defines how project evaluations of suppliers' quality programs are performed to determine compliance and commitment to requirements identified in engineering and procurement documents.	S10 S9

Table 17A-5 (Continued)

VNP PROJECT REFERENCE MANUAL

PART E - Quality Assurance - Primary Responsibility of the Project Quality Assurance Engineer

S9

Section 1 - Project Quality Audits

Provides for the audit of project functions and division support organizations involved to verify compliance with the established quality program.

S2

Section 2 - Supplier System Audits

Conducts audits of the NSSS and supplier with participation by GPC and SCS.

Section 3 - Project Surveillance

S9

Describes the program of surveys conducted of discrete subjects of limited scope when problems are identified or suspected to verify compliance with quality program commitments.

Section 4 - Bid Evaluation

Describes the incorporation of supplier quality program evaluation and verification of processing of information in the bid evaluation summary.

S2

Section 5 - Stopwork Action

Identifies stopwork conditions, and incorporates the steps to evaluate such conditions for issuing and distributing Stopwork Notices, and for the approval and closeout of such notices.

S9

Section 6 - Corrective Action Requests

Describes the implementation of corrective actions initiated to correct unacceptable conditions, and subsequent follow-up to verify implementation and effectiveness of corrective actions.

S2

specific attribute, and its similarity with previously proven designs. Verification of this checking and review program is obtained through appropriate signature on the documents, approval records, or where applicable, by review meeting minutes or reports.

In some instances, design verification may be obtained by tests. In such cases, test programs and results are thoroughly reviewed by project and technical staff personnel, and the procedures used meet the requirements of ANSI N45.2-1971, Section 4.3.

Design changes, including field changes, are subjected to design control measures commensurate to those applied to the original design. BPC policy requires that proposed changes to the design require review and approval by the design group that was responsible for the original design. Specifically, this requires that changes to design requirements, or completed designs produced by project engineering, which may be proposed by suppliers, contractors, GPC Construction, or others, must be reviewed and accepted by Project Engineering. Certain design work, such as small pipe details, may be completed by field engineering. This work is performed in accordance with requirements prescribed by design engineering, and important aspects, such as stress analysis, systems separation, and fire protection, are reviewed by Project Engineering or other designated design office specialists. |S9

Checking and review of significant design changes are performed to a level commensurate with that of the original design. Suppliers are not allowed to make changes from BPC design requirements or BPC-approved supplier design documents without obtaining approval from the BPC Project Engineering Manager. |S9 Construction site changes to engineering design are documented by means of change notices or change requests which require authorization by Project Engineering. Significant or unique changes are individually authorized by the Project Engineering Manager. |S9

17A.4 PROCUREMENT DOCUMENT CONTROL

17A.4.1 PROCUREMENT DOCUMENTS |S2

Procurement actions for Q-List items and services employ specifications and quality assurance requirements established by the project engineering team. |S10

Project Engineering prepares (or provides) the technical and quality requirements appearing in procurement documents. Engineering applies similar policies and procedures to the preparation of procurement documents as those applied to design documents. Project Engineering is responsible for assuring

that applicable regulatory requirements, design bases, and other requirements, such as supplier quality program requirements that are necessary to obtain and verify quality, are included or referenced in the procurement documents.

Procurement specifications include specific technical requirements for the equipment and services to be furnished, which define specific codes, standards, tests, inspections, and records to be applied or furnished. The procurement documents also include quality assurance requirements, either in separate specifications that define requirements for the supplier's quality assurance program, or by incorporating the appropriate requirements in the technical specifications and associated documents. Quality assurance programs may be specified by invoking appropriate sections of ANSI N45.2-1971 and the ASME Pressure Vessel Code as applicable, or by incorporating requirements equivalent to these standards. The procurement documents S9| also establish provisions for quality surveillance and audit, provide for extension of the applicable requirements to subtier procurements, include provisions for control and approval of supplier nonconformances, and establish requirements for preparation and delivery of documentation. Specific requirements are provided for documents that must be submitted for S9| review, and/or verification.

17A.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

The documented instructions and procedures governing the program are identified in Section 17A.2. These meet the requirements of ANSI N45.2-1971, Section 6.

Written, formal instruction from Project Engineering to GPC Construction is in the form of engineering specifications and addenda, or change notices thereto, and drawings and design change notices. These documents contain reference, or require procedures and instructions, as appropriate, and provide necessary acceptance criteria. These documents, when approved by Project Engineering, provide authorization for construction work.

BPC procurement documents require suppliers and contractors to S9| submit specified drawings and procedures to BPC for acceptance prior to start of fabrication or construction. BPC reviews of these documents are performed to determine that interfacing design features are compatible with overall design and installation requirements, and that procedures are acceptable.

Verification that work is accomplished in accordance with approved instructions, procedures, and drawings is obtained through the various levels of surveillance, inspection, and audit described in other paragraphs of this appendix.

17A.6 DOCUMENT CONTROL

The program documents, identified in table 17A-3, provide means for document control. For the project functions of engineering, purchasing, procurement supplier quality, and preoperational testing, control procedures provide for the review, approval, and release of documents and changes thereto. Document control systems incorporate the requirements of ANSI N45.2-1971, Section 7. S2

Document control centers for the project are set up in the home office. The home office Document Control Center is under the supervision of the Manager of Division Engineering. Controlled documents are released, received, controlled, and distributed through the center. S9

Approved drawings and specifications prepared by Project Engineering are issued to organizations responsible for performing the work, and to those responsible for inspection. Control registers identifying the drawings and specifications, and their current status, are issued periodically. Transmittal forms are employed to forward drawings and specifications, and require signed receipts be returned from the addressee.

Changes made to approved design documents by Project Engineering, or proposed by suppliers and GPC Construction, are reviewed and approved by the Project Engineering Manager, in accordance with established procedures which provide that changes are reviewed in the same manner as the original issue. S9

Vendor-submitted documents such as drawings, specifications, procedures, manuals, and other data are classified as vendor prints, and are controlled through the use of the control logs that provide identification and status or vendor documents. Transmittal forms are used to return and show approval status of evaluated vendor documents. BPC procurement supplier quality representatives are informed as to the current status of vendor documents, and copies of applicable vendor documents are formally transmitted to the construction site by transmittal forms which require signed receipts be returned from the addressee. S9 S2

Control of documents is regularly audited by project Quality Assurance Engineers.

17A.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

Files of currently capable suppliers and contractors are maintained by BPC Procurement. These files identify suppliers and contractors who have demonstrated their ability to provide quality material, equipment, or services, or have been

established as capable by survey. Supplier's and contractor's quality history files contain information on scope of services and capability, identify projects currently employing the supplier or contractor, and include results of recent shop surveys and audits. Periodic reports identifying data contained in quality history files are issued by the Procurement Supplier Quality S9| Department to interested groups within the divisions.

S2| Additionally, the Materials and Quality Services Department reviews and maintains controlled copies of supplier quality S2| assurance/quality control manuals of material suppliers, and welding, nondestructive examination. and protective coating procedures for work involving compliance with the ASME Boiler S9| and Pressure Vessel Code. M&QS reviews and evaluates these documents with the assistance of Procurement Supplier Quality and periodically issues summary listings of the approved vendor information on file. This information is available to the VNP project for assistance in identification and evaluation of qualified sources.

S2| Procurement Supplier Quality Department procedures include provisions for source surveys which may be used to supplement data in a supplier's quality history file in cases where the scope of services or quality requirements of new work exceeds that for which the supplier was previously qualified, in cases where new sources are being considered for selection, or when S9| no work or report has been generated during the previous two years.

S9| The VNP Procurement group prepares a draft bid list of safety-related items, identified in Section 17.3 for review and S9| approval by GPC. The approved bid list is periodically reviewed, in light of current information available, to determine if a revision is necessary prior to release of a bid S9| package. GPC is contacted verbally for confirmation of the selected bidder list for a particular item.

S10| Project Engineering develops a recommended scope of quality S9| surveillance services for equipment for approval by SCS. The S2| scope of procurement supplier quality services approved by SCS S9| is identified in the Supplier Quality Activity Log.

Prior to fabrication, the following technical and quality requirements must be met:

- Determination by Project Engineering that the source is responsive to the technical requirements of the specification.

- Determination by Project Engineering and Project Quality Assurance that the supplier's or contractor's quality assurance program is capable of meeting the specified requirements. S10

The quality assurance program evaluation may be achieved by review of: controlled program manuals previously submitted and evaluated by responsible BPC personnel; manuals and procedures submitted to BPC, or made available for BPC review in the biddder's facilities, in connection with the specific procurement; or summary descriptions submitted with the proposal. For supplier work covered entirely by ASME Boiler and Pressure Vessel Code, Section III requirements, possession of the appropriate "N" stamp, and review of the bidder's Certificate of Authorization constitutes an acceptable minimum requirement for source qualification.

Upon award of a purchase order for a Q-List item that includes procurement supplier quality surveillance, SCS prepares a quality surveillance plan for review and approval by Project Engineering and Project Quality Assurance. This plan, based on standard procedures from the Procurement Supplier Quality Department, provides for the identification of witness and hold points, and identifies the examinations and tests that are selected to be witnessed by the supplier quality representative. Quality surveillance may be performed by resident or part-time (itinerant) SQR under the administration of SCS. Reports documenting inspections performed, tests witnessed, and discrepancies observed are prepared by PSQR and distributed by SCS to appropriate Engineering, Procurement, and Quality Assurance personnel, and project participants in accordance with project procedures. SQRs are also responsible for reviewing and verifying specified supplier quality assurance records. S10 S10 S10 S10 S10 S10

Documentary evidence that the item conforms to procurement documents required to be available at the construction site prior to installation or use includes as follows:

A. For equipment subject to surveillance and not covered by ASME Boiler and Pressure Vessel Code Requirements - An executed Certificate of Conformance* or receipt of the specified documentation package. In addition, S9

*NOTE: Certificate of Conformance - a document identifying the specific technical requirements met by the item (by referencing the appropriate BPC specification and other important governing codes and standards) executed by an authorized representative of the supplier.

S10 S2 S10 S2 S10 documentary evidence that the SQR has reviewed the documentation package and released the item. This may be accomplished by the SQR's signature on the Certificate of Conformance or the documentation package, or receipt of the supplier quality representative's report.

S9 B. For equipment subject to quality surveillance and covered by ASME Boiler and Pressure Vessel Code requirements - The same requirements as in A, above, plus the appropriate Code Data Report forms and other S10 documents required by BQAM-ASME III.

S9 C. For equipment not subject to quality surveillance - Quality verification documentation required to be submitted by procurement specifications or material requisition. These are reviewed and verified by GPC personnel as a part of receiving inspection.

D. For nuclear steam system supplier-furnished items - Appropriate certification from the nuclear steam system supplier in accordance with his approved quality program.

Complete quality verification record packages are requested to be delivered prior to or with the shipment. Completed quality verification records packages are transmitted to GPC at the construction site. Project Engineering may elect to have selected quality verification documentation delivered to the design office for review by so specifying in procurement documents.

S10 S9 Audits of suppliers performing continuing work for the VNP are conducted as a minimum on a triennial basis; audits of selected suppliers performing limited-duration assignments are conducted at least once during the life of the contract. Selected suppliers of Q-List items, who are required to provide S9 a quality assurance program, are subject to audits; audits are S10 conducted on suppliers whose programs require quality S9 surveillance.

17A.8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

S9 For procured items, requirements for the identification and control of materials, parts, and components are incorporated into procurement specifications in accordance with Section 17A-4.

17A.9 CONTROL OF SPECIAL PROCESSES

The requirements of ANSI N45.2-1971, Section 10, and provisions of the ASME Boiler and Pressure Vessel Code are incorporated as applicable in procurement documents for Q-List items. Special processes requiring procedure and/or personnel qualification beyond those required by the code, are identified in specifications, by reference to appropriate industry codes and standards, where available, or by specific identification in the specification. The requirements for welding and nondestructive examination comply with applicable portions of the ASME Boiler and Pressure Vessel Code, AWS Standards, and SNT-TC-1A, and supplements as applicable. Cleaning and flushing procedures and personnel qualifications conform to the requirements of ANSI N45.2.1-1973. Special process qualification data are subject to review by BPC.

Implementation of these controls is verified by the Procurement Supplier Quality representative. S9

Other unique special processes or work operations identified by the nuclear steam system supplier or Project Engineering are properly specified in engineering documents.

17A.10 INSPECTION

For procured items, requirements for quality surveillance are incorporated into procurement specifications in accordance with Section 17A.4. S9

As described in Section 17A.7, supplier's and contractor's programs are subject to quality surveillance by BPC PSQR's. S9

17A.11 TEST CONTROL

For procured items, requirements for test control are incorporated into procurement specifications in accordance with Section 17A.4. Preoperational and startup testing is under the control of GPC. BPC Startup Engineers provide assistance to GPC in the preparation of preoperational plans, schedules, and specifications that include, when required, provisions to collect, analyze, and evaluate test results in accordance with the criteria of ANSI N45.2-1971. S9

17A.12 CONTROL OF MEASURING AND TEST EQUIPMENT

For procured items, requirements for the control of measuring and test equipment are incorporated into procurement specifications in accordance with Section 17A.4. S9

17A.13 HANDLING, STORAGE, AND SHIPPING

S9 For procured items, requirements for handling, storage, and shipping are incorporated into procurement specifications in accordance with Section 17A.4.

For supplier or contractor work, special handling, storage, shipping, and preservation requirements are identified in procurement specifications which either provide, or require the supplier or contractor to provide, the required procedures and instructions. The packaging, handling, and shipping practices
S10 of the suppliers are subject to quality surveillance prior to shipment, to verify compliance with requirements defined in procurement documents.

When required, special procedures and requirements for handling or storage are issued by Project Engineering to the construc-
S9 tion site. These documents are reviewed as appropriate by BPC Engineering or specialists.

17A.14 INSPECTION, TEST, AND OPERATING STATUS

S9 For procured items, requirements for inspection, test, and operating status controls are incorporated into procurement specifications in accordance with Section 17A.4.

17A.15 NONCONFORMING ITEMS

S9 For procured items, requirements for the control of nonconforming items are incorporated into procurement specifications in accordance with Section 17A.4.

Nonconformances discovered during receiving inspection or construction activities are controlled and documented in accordance with GPC procedures. Procedures provide for submitting dispositions of "use as is" and "repair" to BPC Project Engineering for approval, and for GPC Inspection to verify that nonconformances have been completed in accordance with the disposition.

Suppliers and subcontractors are required to advise BPC of all nonconformance from procurement documents or BPC-approved designs for which the recommendation disposition is "repair" or
S2 "use as is." BPC reserves the right to accept or reject the disposition. BPC also requires suppliers to submit proposed repair procedures for major nonconformances for approval by Project Engineering prior to their use. Reports of noncon-
S10 formances are prepared by the supplier, supplier quality
S2 representatives, or Project Engineering to assure complete and adequate documentation.

Copies of completed nonconformance reports are forwarded to the jobsite prior to, or with, the release of the item, or identification of outstanding nonconformances will be included in the supplier quality representative's report. S2 S10

17A.16 CORRECTIVE ACTION

The corrective action program provides procedures for prompt identification of conditions adverse to quality which may require corrective action.

Within the BPC program, the identification of situations which may need corrective action is accomplished through review of nonconformance reports, supplier quality surveillance activities, Quality Assurance surveillance and monitoring programs, and Quality Assurance audits. Corrective action is controlled and documented by means of corrective action reports and the associated procedure. These provide for: (a) The identification and reporting by any member of the project team of situations or occurrences that warrant corrective action. (b) Determination of the cause and identification of the corrective action to be taken by the responsible organization. (c) Reporting the cause and corrective action to proper level of management. (d) Final verification by the BPC PQAE that corrective action has been taken. (e) Review by Quality Assurance management for implication or effect on other work. S9 S2

In the design phase, corrective action involving design documents, and investigation of cause and actions taken to preclude recurrence, is applied to errors detected after the design verification process is completed. Errors detected after the verification process are formally documented and are reviewed for corrective action. These are documented by reports such as: supplier discrepancy reports, field nonconformance reports, startup reports, or feedback from utilities during operation of the plant. Significant problems are also reviewed for programmatic corrective action by Quality Assurance. S2

This program also provides the evaluation of conditions reported, which may require reporting to the NRC by GPC in accordance with the requirements of 10 CFR 50.55 (e).

17A.17 QUALITY ASSURANCE RECORDS

The requirements of ANSI N45.2-1971, Section 18, are applied to BPC activities. Records produced as a result of the quality program are prepared and maintained by project groups, suppliers, and contractors as their work is being performed.

Project Engineering records are retained by the project engineering team as work is performed. Copies of released drawings, specifications, and similar documents are placed in engineering office files, transmitted to the GPC construction office, and submitted to SCS and GPC. At the completion of engineering, final copies of these records are provided to SCS and GPC. BPC Engineering retains control of design calculations and analyses. These are available for review by SCS and GPC and appropriate regulatory bodies as required.

Supplier records, which verify quality of their work, are requested from the supplier for transmittal to the construction site. In some instances, with the agreement of BPC, SCS, and GPC, suppliers are permitted to retain custody of certain records if retention procedures and storage facilities are adequate, and access is provided to SCS, GPC, and BPC.

ANSI N45.2.9 is used as a guideline for auditing records requirements.

17A.18 AUDITS

A comprehensive program of audits is conducted by BPC covering the various activities of the quality assurance program.

The requirements of ANSI N45.2-1971, Section 19, are incorporated into procurement specifications for suppliers and contractors who are required to have audit programs. The BPC audit program conforms with the requirements of ANSI N45.2-1971, Section 19, and conforms with the provisions of Regulatory Guide 1.144. S9

The comprehensive BPC audit program includes both frequent audits conducted by project Quality Assurance personnel, as well as formal periodic team audits performed by personnel independent of project activities. Audit activities include the following;

A. Continuing individual audits of project engineering activities by office Quality Assurance personnel assigned to the project. These audits are planned, scheduled, and documented. Results are reported to the Project Engineering Manager, and Quality Assurance Manager Projects (immediate functional supervisor of the Project Quality Assurance Engineer). S9

B. Periodic audits of BPC suppliers and contractors performing Q-list work subject to quality surveillance are conducted by Procurement Supplier Quality Central Auditing Group, with appropriate assistance from QA, Engineering, M&QS specialists, and Quality Control personnel. These audits are conducted on at least a triennial basis for contractors performing continuing work on GPC purchase orders or contracts, or at least once during performance on single or multiple purchase orders and subcontracts having a limited duration. During the period between triennial audits, annual evaluations will be made by SCS to assess supplier quality program performance and determine if a supplemental audit is needed. Supplier audits are reported to the supplier-affected projects, to PSQ and QA management. Results of these audits are placed in supplier and contractor quality history files. S9 S10 S9 S9 S10 S9

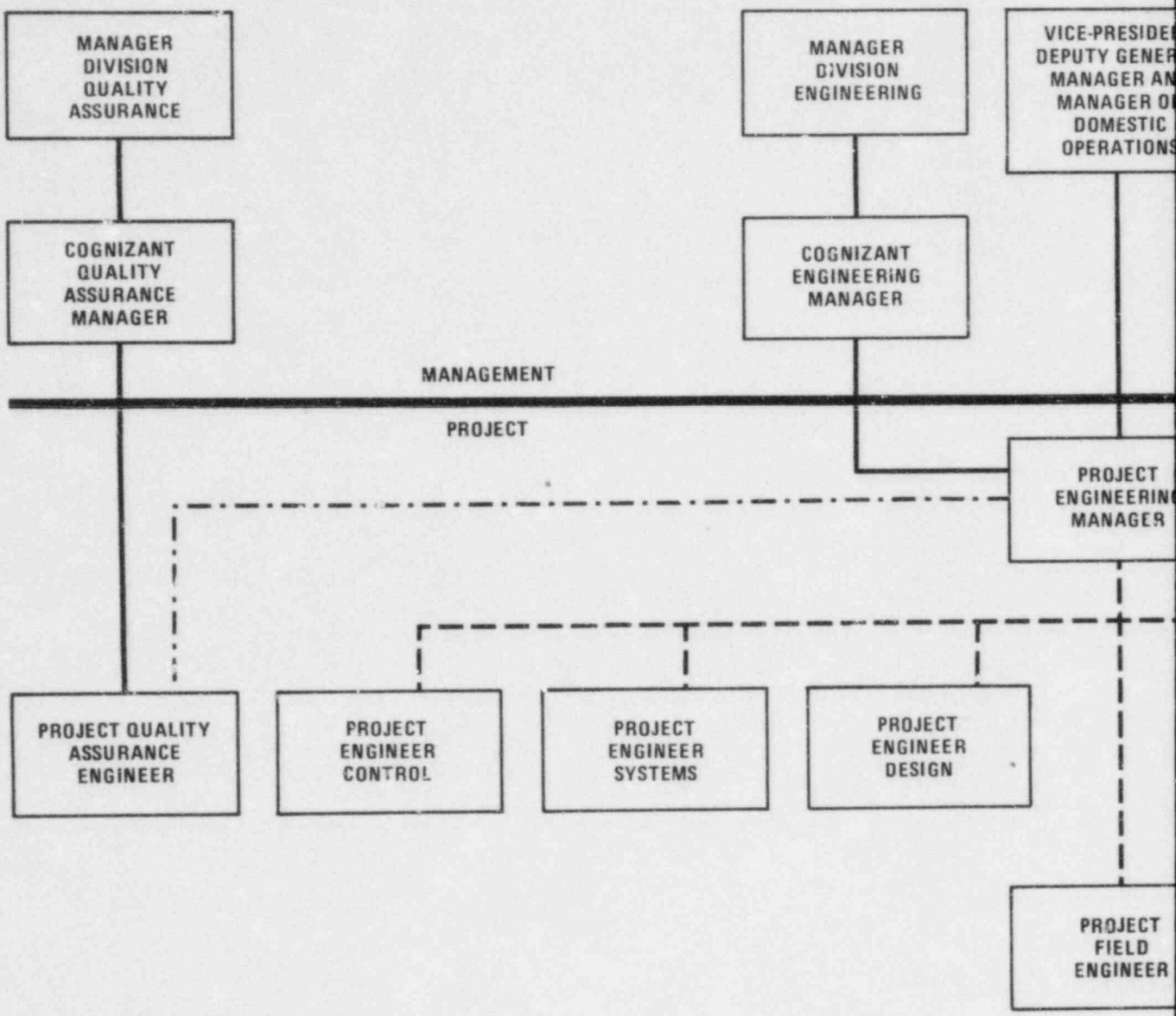
C. Formal audits of Project Engineering design and procurement activities by Quality Assurance audit teams under the direction of Division Quality Assurance Manager, assisted by M&QS specialists and others, as required. These audits are conducted at least annually, and results are reported to the management of the function audited, cognizant project management, division management, and the BPM Manager of Quality Assurance. These audits are responsive to requirements of NRC regulations and those of ASME Boiler and Pressure Vessel Code, Section III. S2 S9

D. Audits of division technical staff and services activities performed on an annual basis under the direction of the Division Quality Assurance Managers. These audits cover those groups doing design and/or review outside of direct control of the Project Engineering Manager. Results of these audits are reported to the manager or supervisor of the function audited, division management, and BPM Manager of Quality Assurance. S9 S9

E. Audits of Procurement, BPC-PSQ, SCS-SSA and M&QS conducted annually by Quality Assurance personnel under the direction of BPM Manager of Quality Assurance. These audits are conducted for the benefit of all divisions, and division QA personnel participate in the audits. Results of these audits are reported to cognizant management of the audited group, QA management in each division, and the BPM Manager of Quality Assurance. S10 S9 S9

Audit programs include provisions for identification of deficiencies, determination that corrective action is defined, and followup to verify that corrective action has been taken and is effective. Audits include selective review of procedures, work practices, and examination of items and records. Records of audits are available.

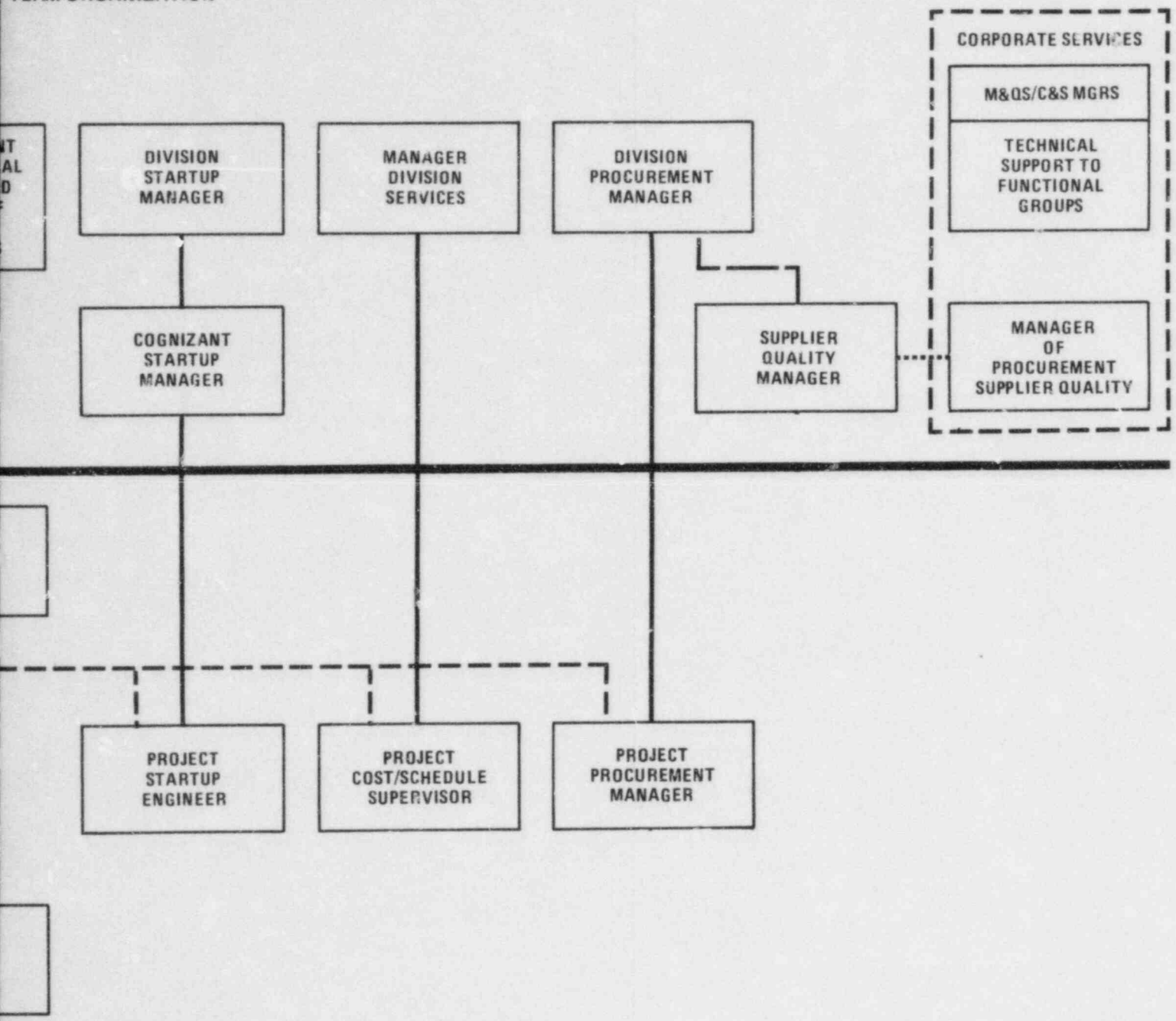
ALVIN W.
PROJECT



LEGEND

- TECHNICAL & ADMIN. DIRECTION ONLY
- PROJECT DIRECTION
- PROJECT COORDINATION
- TECHNICAL DIRECTION
- ADMINISTRATIVE DIRECTION ONLY

VOGTLE NUCLEAR PLANT
TEAM ORGANIZATION



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Appendix 17C

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APPENDIX 17C

SOUTHERN COMPANY SERVICES, INC.
AUDITING AND SUPPLIER SURVEILLANCE INSPECTION FUNCTIONS

S2

17C.0 INTRODUCTION

Appendix 17C is limited to the auditing functions and those duties with regard to supplier evaluation and surveillance assigned to the VNP Project Quality Assurance Engineer (SCS PQAE), and the SCS Supplier Surveillance Administrator (SCS-SSA) who are supported in this function by the SCS Quality Assurance Department and appropriate GPC and BPC personnel. S9 S10

The following sections address those parts of 10 CFR 50, Appendix B 18 criteria which are applicable. S2

I	Organization	Section 17C.1
II	Quality Assurance Program	Section 17C.2 and 17C.3
VII	Control of Purchased Material, Equipment, & Services	Section 17C.5 and 17C.6 S10 S9
XVII	Quality Assurance Records	Section 17C.4
XVIII	Audits	Section 17C.5 S2

17C.1 SCS ORGANIZATIONAL ELEMENTS ASSOCIATED WITH THE PQAE AND SSA FUNCTIONS S10 S2

Only those organizational elements of SCS that relate to the SCS PQAE and the SCS-SSA responsibilities are described in this appendix. The responsibilities of individuals and groups within SCS (Figure 17C-1) relating to the direction, verification, and support of these functions are as follows: S9 S10 S2

17C.1.1 EXECUTIVE VICE-PRESIDENT ENGINEERING S9

The SCS Executive Vice-President Engineering is responsible for SCS engineering and associated functions, including SCS quality assurance activities. Specifically he approves the general policy and procedures with regard to implementation of the auditing and supplier surveillance inspection activities. He is a member of the VNP Project Management Board and of the GPC QA Committee. S2

17C.1.2 DIRECTOR, ENGINEERING SERVICES S9

The Director of Engineering Services has functional and administrative supervision of the SCS Manager, Quality Assurance (SCS MQA). S2

17C.1.3 MANAGER, QUALITY ASSURANCE

The SCS MQA is responsible for the implementation of QA procedures applied to the SCS auditing and supplier surveillance inspection activities. Detailed procedures for accomplishment S2

S2 of these activities are contained in the SCS QA Department Policy and Procedures Manual which is approved by the SCS MQA.

17C.1.3.1 Manager, Project and Supplier Section

S9 The manager, Project and Supplier Section, has responsibility for the development and implementation of QA Department procedures relating to monitoring and auditing of VNP design and procurement activities. Also included is the monitoring and auditing of the supplier surveillance program applicable to Q-list items as well as the performance of supplier surveillance applicable to selected items.

S10 17C.1.3.2 Section Supervisor, Supplier Surveillance

S9 The Supervisor, Supplier Surveillance, administers the contract
S2 for supplier surveillance inspection services and assures the
S9 adequacy of the supplier surveillance inspection program in conjunction with the SCS PQAE.

17C.1.3.3 Supplier Surveillance Administrator

Administration of the Vogtle Project Supplier surveillance activities for equipment designed by Bechtel Power Corporation is the responsibility of the SCS Supplier Surveillance Administrator (SCS-SSA). The SCS-SSA receives project direction from Bechtel Power Corporation Project Engineer Manager (PEM), functional and administrative from the Section Supervisor, Supplier Surveillance and project coordination from the SCS-PQAE.

Specific duties and responsibilities of the SCS-SSA include:

S10 A. Performing annual evaluations to assess suppliers' Quality program performance.

B. Coordinating supplier quality assurance audits with BPC Procurement Supplier Quality Dept. or SCS QA Dept.

C. Consulting with BPC engineering prior to their recommendations for changes in the surveillance scope of work for SCS approval.

D. Prepare quality surveillance plans for review and approval by BPC engineering.

E. Coordinating BPC Procurement Supplier Quality services with BPC project engineering requirements.

F. Ensuring that surveillance reports are reviewed and that, when discrepancies are identified, action is taken by BPC engineering. S10

17C.1.3.4 Supervisor, Projects

The Supervisor, Projects QA Section, has functional and administrative supervision of the SCS PQAE. S2 S9

17C.1.3.5 SCS Project Quality Assurance Engineer S10

Implementation of the Vogtle Project Supplier surveillance inspection activities and auditing of engineering is the responsibility of the SCS PQAE. The SCS PQAE receives project direction from and is accountable to the VQAM for the performance of assigned activities and to the SCS Supervisor, Project QA Section for functional and administrative supervision. The SCS PQAE has authority from the VQAM to stop, in a timely manner, work which is not in compliance with specifications or procedures. S2 S9 S2

Specific duties and responsibilities of the SCS PQAE include: S9

A. Verify through audits of BPC that VNP engineering contractors and suppliers have developed and implemented acceptable QA programs. S2

B. Assure through audits the adequacy of the VNP supplier quality surveillance program activities. S9

C. Advises the VQAM regarding the status and results of the supplier surveillance inspection programs, audits, and quality problems. S2

D. Monitors quality surveillance inspection reports on the project and takes action as necessary to assure timely resolution of quality problems. S9 S2

E. Review and approve the scope of surveillance activities. S10 S9

17C.1.3.6 Qualifications-QA Personnel S10

Qualifications for the position of SCS QA managers are as follows: S9

A. Have a degree in engineering from accredited college or university.

B. Have at least five years' experience in an engineering organization, including association with quality assurance and quality control techniques. S2

Qualifications for the positions of Supervisor and SCS PQAE are as follows: S9

A. Have a degree in engineering or comparable training and experience.

B. Three years' engineering or quality experience, or equivalent.

17C.2 SCS PROCEDURES APPLICABLE TO THE VNP QA PROGRAM S2

SCS auditing and supplier surveillance inspection Quality Assurance activities on VNP are performed in accordance with procedures contained in Section 7 of the SCS Engineering Policy and Procedures Manual (EPPM) and the SCS QA Department Policy and Procedures Manual.

These procedures ensure that the above tasks performed by the SCS QA Department for the VNP project are conducted in accordance with the quality policies of SCS, and meet the applicable parts of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" (October 11, 1971), NRC Regulatory Guide 1.28 "Quality Assurance Program Requirements (Design and Construction)," NRC Regulatory Guide 1.144 "Auditing of QA Programs for Nuclear Power Plants" (January 1979), and the following ANSI standards: S9

ANSI N45.2-1971 "Quality Assurance Program Requirements for Nuclear Power Plants." S2

ANSI N45.2.9-1973 "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants" (Draft 11, Rev. 0 - March 1973).

17C.3 QUALITY ASSURANCE TRAINING S9

SCS has both formal and on-the-job training programs for quality assurance personnel. Quality assurance representatives attend formal, organized training programs inside and outside of the company. Training courses are conducted by the SCS Training Department on subjects such as generating systems, supervision training, etc. In addition, periodic meetings are conducted in which the latest pertinent procedures, regulations, guides, etc., are discussed and evaluated. S2

S2 S9 The SCS QA training program includes auditor training which is designed to develop qualified auditors in accordance with the requirements of NRC Regulatory Guide 1.144 (January, 1979). Records of individual qualifications and training are on file in the SCS QA Deparment.

S2 17C.4 QUALITY ASSURANCE RECORDS

S9 S2 S9 The SCS QA Department has a record system which ensures that quality assurance records, such as audit reports, generated by the SCS QA Department for VNP are filed, stored, and maintained as required by VNP procedures, which assure compliance with applicable codes, standards, and regulatory requirements.

S2 ANSI N45.2.9, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants," was used as a guide in the development of the SCS records control system.

S10 17C.5 QUALITY ASSURANCE AUDITING

S9 The SCS PQAE, supported by the SCS QA Department, is responsible for surveillance and monitoring of the quality performance of engineering and procurement activities assigned to BPC and for assuring that programs are in effect for resolving quality problems and nonconformances arising in these activities.

S9 The SCS PQAE is also responsible for periodic QA auditing of BPC.

S2 S9 S2 Audits are conducted when a need is indicated as a result of QA Program surveillance or when a periodic QA Program audit indicates that it would be appropriate. These audits are conducted annually as a minimum.

S9 The SCS PQAE develops audit agendas, leads the audits of BPC, and prepares the audit reports. The audit agenda is approved by the VQAM. The SCS PQAE may be assisted in the conduct of the audits by other SCS QA Department personnel. The VQAM may act as an observer at these audits.

S9 S10 The VNP activities of Bechtel's Procurement Supplier Quality Department are audited annually by the SCS QA Department's Section Supervisor, Supplier Surveillance.

S2 S9 S2 BPC PQAE takes the lead in conducting audits of Westinghouse. The VQAM and SCS PQAE may accompany the BPC PQAE on these audits. These audits are conducted annually as a minimum.

S10 Periodic audits of suppliers and contractors performing Q-list work subject to quality surveillance are conducted on at least a triennial basis for contractors performing continuing work on GPC purchase orders or contracts, or at least once during performance on single or multiple purchase orders and contracts having a limited duration. During the period between triennial

audits, annual evaluations will be made by the SCS-SSA to assess supplier quality program performance and determine if a supplemental audit is needed. S10

The SCS PQAE reviews and approves the annual evaluations made by the SCS-SSA to assess supplier quality program performance and determine if a supplemental supplier audit is required. S9 S10

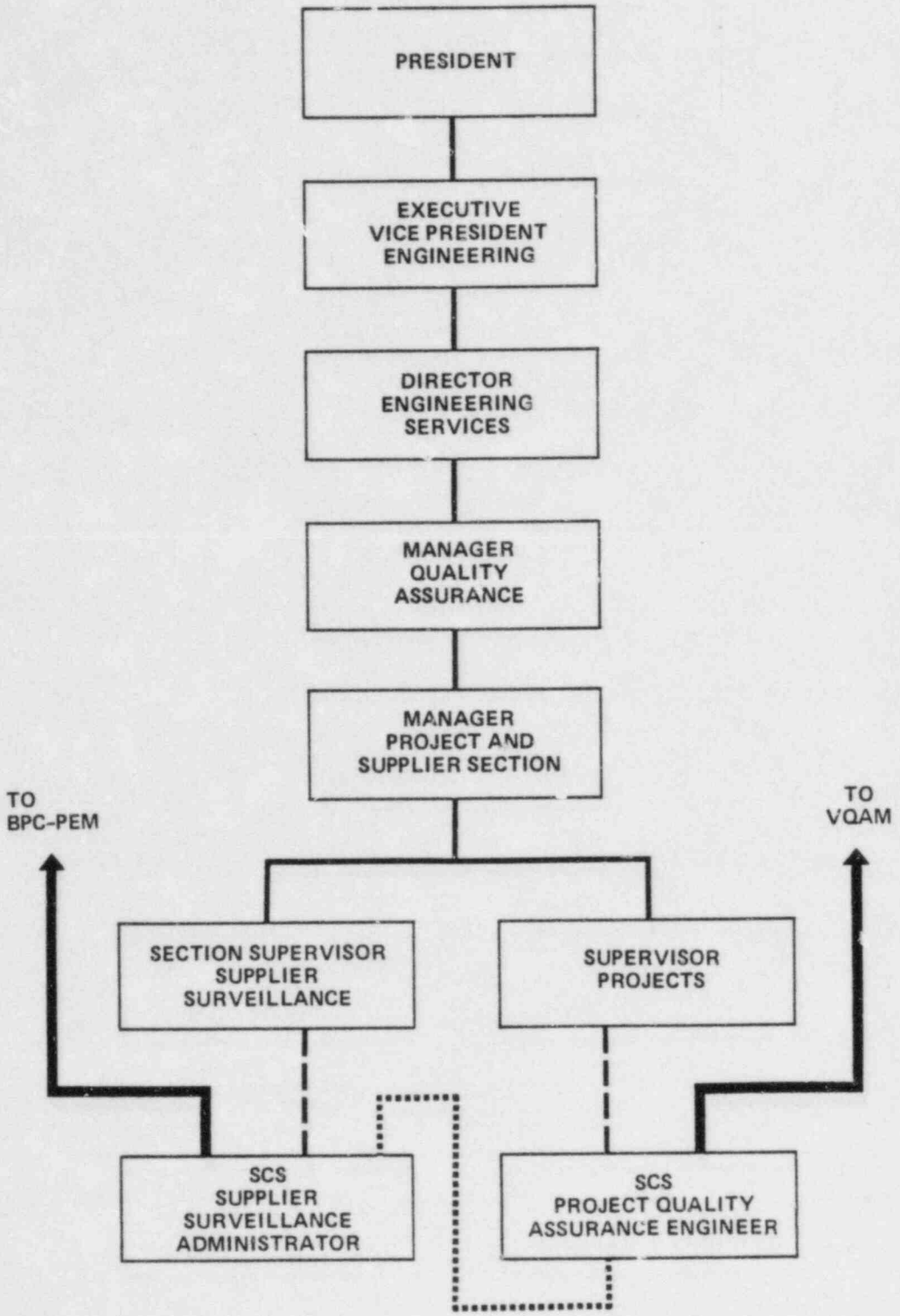
BPC or SCS QA Department conducts audits of selected suppliers of safety-related components and materials for VNP, except for certain construction materials if procured directly by GPC. SCS and GPC Quality Assurance personnel selectively participate in these audits. S9 S2

17C.6 SUPPLIER SURVEILLANCE

BPC Project Engineering develops a recommended scope of quality surveillance services for equipment for approval by SCS-PQAE. The scope of procurement supplier quality services approved by SCS-PQAE is identified in the Supplier Quality Activity Log.

Upon award of a purchase order for a Q-List item that includes supplier quality surveillance, the SCS-SSA prepares a quality surveillance plan for review and approval by BPC Engineering. This plan provides for the identification of witness and hold points, and identifies the examinations and tests that are selected to be witnessed by the BPC procurement supplier quality representative. S10

Reports documenting inspections performed, tests witnessed, and discrepancies observed are prepared by BPC Supplier Quality Representatives (SQR). These reports are distributed to appropriate Engineering, Procurement, and Quality Assurance personnel, and project participants in accordance with project procedures by the SCS-SSA.



LEGEND

- LINE RESPONSIBILITY
- FUNCTIONAL DIRECTION
- PROJECT DIRECTION
- PROJECT COORDINATION

*GPC QUALITY ASSURANCE COMMITTEE MEMBER

Georgia Power

ALVIN W. VOGTLE NUCLEAR PLANT UNITS 1 AND 2

SOUTHERN COMPANY SERVICES, INC.
QUALITY ASSURANCE
ORGANIZATIONAL CHART

FIGURE 17C-1