

VOGTLE ELECTRIC GENERATING PLANT

UNIT 1

READINESS REVIEW

MODULE 5 - OPERATIONS ORGANIZATION  
AND ADMINISTRATION

9406010170 940512  
PDR ADOCK 05000424  
PDR

## PREFACE

Georgia Power Company (GPC), in order to gain added assurance of the operational readiness of the Vogtle Electric Generating Plant (VEGP), is conducting a pilot Readiness Review Program. The VEGP pilot Readiness Review program is a systematic, in-depth self-assessment of work processes and verification of compliance with regulatory commitments. To accomplish the VEGP pilot Readiness Review program, the work processes and regulatory commitments were divided into manageable segments called "modules." There are approximately 20 modules. Each module is a predefined scope of VEGP activities.

Each module is intended to provide a brief description of the method of complying with project licensing commitments, pertaining to the module scope, found in the FSAR and is not intended to make further commitments or revise in any way prior commitments. Any differences between the commitments discussed in this document and the FSAR are unintentional and the FSAR governs.

Activities common to several modules are provided as General Appendixes. There are approximately 10 appendixes. These appendixes are referenced, as appropriate, in the modules and are augmented in each module with module-scope-specific details as needed.

The VEGP Readiness Review program is being conducted on a schedule to provide added operational readiness assurance to GPC management in support of the VEGP Unit 1 operating license. However, conclusions reached regarding programmatic and technical adequacy through review of VEGP Unit 1 are indicative of Unit 2 since both units are being designed and constructed together under a single Quality Assurance program, and like management controls, procedures, etc., and to the same specifications and criteria.

Stone and Webster Engineering Corporation has been contracted to provide technical management and technical personnel to implement an independent design review as a part of the Readiness Review program. Additionally, Stone and Webster is reviewing project responses to Readiness Review findings for technical adequacy.

The VEGP Readiness Review program is not intended to eliminate or diminish any authorities or regulatory responsibilities now assigned to or exercised by the Nuclear Regulatory Commission or Georgia Power Company. Further, the Readiness Review program is not intended to change the techniques of inspections or assurance of quality program activities. Rather, the VEGP Readiness Review program is an added program initiated by GPC management to assess the VEGP, and provide additional feedback to management so that they may initiate any needed corrective actions in an orderly and timely manner.



The scope of work processes and regulatory commitment compliance covered by each module will be assessed by and the module prepared and reviewed by individuals collectively familiar with the design, construction, and operational processes of nuclear power plants. It is the collective opinion of the Readiness Review Task Force, Readiness Review Board, and GPC management that, based on their experience, the methodology used in the module process will assess, on a programmatic basis, the adequacy of project commitment implementation.

Readiness Review Discrepancy Reports and resulting dispositions are reviewed by the Readiness Review program quality assurance staff and are input to the normal project process for safety significance and potential reportability evaluations in accordance with regulatory requirements.

This module, Operations Organization and Administration, covers the Administration Department and Regulatory Compliance Department of the Nuclear Operations (NO) organization. An overall view of the Nuclear Operations organization is presented. As appropriate, this module points the way to other Nuclear Operations modules for detail discussion of other NO activities.

## EXECUTIVE SUMMARY

### Introduction

A Readiness Review program was conducted to ascertain whether the Vogtle Nuclear Operations organization and administration activities have been implemented in compliance with the Final Safety Analysis Report (FSAR) commitments and whether compliance is verifiable in existing project documentation. The results of this program are documented in this module.

GPC Nuclear Operations personnel have been assigned to the Vogtle project since 1976. A comprehensive formal Vogtle Nuclear Operations (VNO) organization delineating plant management and supervisory positions was approved in February 1982. Since then, it has evolved as necessary to support the preparations for operations and the initial test program.

Nine Readiness Review Team members having 76 combined years of nuclear experience, expended in excess of 1100 manhours examining more than 4600 VNO program elements to ascertain whether VNO organization and administration was properly implemented. The review team members included specialists from Georgia Power Company and Stone and Webster Engineering Corporation. Fifteen findings were identified and are described in section 6 of this module.

Based on the examination of the 4600 program elements and detail review and evaluation of the 15 findings the Readiness Review Team concluded that the operations organization is based on sound management principles, is well planned and detailed, and complies with FSAR commitments. Positive attributes identified include:

- Approved plant procedures are used to carry out work processes, thus ensuring that procedures are workable before fuel load;
- Procedures incorporate sound administrative controls to ensure the quality of work processes and related records;
- The operations organizational structure is properly designed to direct and perform activities for operation of the plant.

The verification program was structured to select a sample of Nuclear Operations activities for examination. This method required that the sample be significant; relevant to FSAR commitments; and generally representative of the administrative controls, procedures, methodology, and program documentation.

The review was conducted in two phases:

- A review of Nuclear Operations documents to ascertain whether commitments were identified and incorporated into appropriate implementing documents;
- A review of work in process for visual and documentary evidence that personnel correctly interpret Nuclear Operations commitment implementing documents and properly execute the requirements of these documents.

Verification reviews were structured to disclose discrepancies in the implementation of licensing commitments. When discrepancies were identified a Readiness Review Finding (RRF) form initiated corrective action by the project organization. Readiness Review assigned each discrepancy a finding number that was used as a control to ensure that corrective action was completed. The findings were evaluated for individual and collective significance with respect to the adequacy of the Nuclear Operations organization.

Evaluations of the individual findings resulted in the identification of two areas of possible collective significance. These areas involve discrepancies in procedure compliance or weaknesses in program procedures.

The project organization, in the course of their evaluation, addressed the issues of root cause, collective significance, and the possibility of transference. The adequacy of corrective action and response by the project group was assessed by the Readiness Review Team and found to be acceptable.

Details of both the individual and collective significance of evaluations and resulting corrective actions are provided in section 6 of this module. Section 7 provides a summary listing of the in-process corrective actions. Following is a brief summary of the results of each of the two types of reviews conducted.

#### Program Review of Organization and Administration Documents for Commitment Verification

A review of organization and administration documents was made to ascertain whether commitments applicable to the operations organization and administration were incorporated into Nuclear Operations procedures.

The Readiness Review Team prepared a commitment matrix. The FSAR (for this module amendment 14 was used) is the controlling or "baseline" document for the identification of commitments. The matrix (section 3) which lists the commitments contains 260 commitments.

The team then reviewed operations organization and administration procedures to ascertain whether commitments were addressed. Draft procedures were reviewed and/or procedure writers were interviewed to determine if commitments were being properly incorporated. Commitments were verified either to be in an approved procedure, a draft procedure, or in a tracking system and identified for inclusion in the appropriate procedure. An implementation matrix was prepared by the Readiness Review Team which matched each commitment to a procedure that will or already implements the commitment.

#### Review of Work In-Process for Evidence of Proper Execution of Work Processes

A review of work activities and documentation of these activities was conducted for evidence that Nuclear Operations personnel correctly interpret operations documents and properly execute work.

A review plan was developed that reflected the review of three major areas, namely Operations Quality Control, Regulatory Compliance, and Document Control. The following elements were chosen for observation: procedure review, approval and control, Measuring and Test Equipment (M&TE), control and quality of records, Quality Assurance (QA) audit findings, Quality Control (QC) inspections and QC inspector qualifications, Plant Review Board (PRB) activities, operations assessment program (OAP), commitment tracking program, and surveillance test tracking program.

Review of these items included direct observation of activities, interviews with line supervisors, departmental personnel, and review of completed documents. These reviews confirmed the effectiveness of controls within operations organization and administration. These reviews resulted in 16 RRFs that were issued to Nuclear Operations. After evaluation and obtaining further information, 1 RRF was reduced to a non-finding, leaving a total of 15 findings.

The project responded to the 15 findings by addressing the root cause of the deficiency and providing corrective action for each finding. The Readiness Review Team evaluated the responses for root cause, adequacy of corrective action, collective significance, the possibility of transference, and reportability.

The 15 findings were categorized as either procedure noncompliance or procedure/program inadequacy.

The possible collective significance of the several findings associated with procedure noncompliance was evaluated by the Readiness Review Team. The team concluded that these were

isolated occurrences and therefore of no collective significance. Corrective action was taken to bring the identified records into full compliance. Nuclear Operations response for corrective action was accepted by the Readiness Review Team.

The possible collective significance of the findings associated with the program procedure weakness was evaluated by the Readiness Review Team. The team concluded that these were isolated instances and therefore were of no collective significance.

The project responded by identifying procedure revisions to correct the isolated inadequacies. This corrective action was reviewed and accepted by the Readiness Review Team.

#### Readiness Review Quality Assurance Surveillance

The process for the development of this module was monitored by the Readiness Review staff quality assurance representative for general adequacy. The finding reports issued by Readiness Review and their responses were reviewed individually and collectively for root causes and generic issues; i. e., trends. Based upon review of the responses and commitments to individual finding reports and generic concerns, the resolutions were determined to be adequate.

All findings were initially distributed to project QA for a reportability review [10 CFR 21, 10 CFR 50.55(e)] in accordance with existing QA procedures. In addition, all findings were screened by Readiness Review QA to determine if any required additional evaluation by the project for reportability. None were identified.

#### Readiness Review Team Conclusion

Pending implementation of the corrective action, none of the identified deficiencies, either collectively or individually, are such that the adequacy of the VEGP operations organization and administrative controls are called into question. The Vogtle operations organization is based on sound management principles. Adequate administrative controls are incorporated into program documents to ensure the quality of work being performed by Nuclear Operations including the implementation of specific FSAR commitments. Organizational structure is sufficient to direct, coordinate, and perform activities essential to safe plant operations. At the present early stage of plant operations, the plant operations effort is proceeding in a quality manner. Changes accomplished and planned in response to review findings are expected to enhance the plant operations effort.

## TABLE OF CONTENTS

### 1.0 Introduction

#### 1.1 Module Scope, Status, and Schedule

- 1.1.1 Nuclear Operations Organization
- 1.1.2 Administrative Controls
- 1.1.3 Plant Review Board
- 1.1.4 Regulatory Compliance
- 1.1.5 Administration
- 1.1.6 Operations Quality Assurance Program

### 2.0 Organization and Division of Responsibility

#### 2.1 Organization

- 2.1.1 Current Operations Organizations
- 2.1.2 Operations Organization During Unit 1 Operations

#### 2.2 Division of Responsibility

#### 2.3 Departments

- 2.3.1 Administration Department
- 2.3.2 Regulatory Compliance Department
- 2.3.3 Health Physics Department
- 2.3.4 Chemistry Department
- 2.3.5 Maintenance Department
- 2.3.6 Operations Department
- 2.3.7 Engineering and Services Department
- 2.3.8 Training Department

#### 2.4 Interfaces with other Organizations

- 2.4.1 Nuclear Operations - Quality Assurance
- 2.4.2 Nuclear Operations - Nuclear Chemistry and Health Physics
- 2.4.3 Nuclear Operations - Nuclear Engineering
- 2.4.4 Nuclear Operations - Engineering and Construction Services
- 2.4.5 Nuclear Operations - Southern Company Services

#### 2.5 Significant Organization Changes

### 3.0 Commitments

- 3.1 Introduction
- 3.2 Definitions
- 3.3 Sources
- 3.4 Commitment Matrix
- 3.5 Implementation Matrix



#### 4.0 Program Description

##### 4.1 Implementation of 10 CFR 50 Appendix B

- 4.1.1 Organization
- 4.1.2 Operations Quality Assurance Program
- 4.1.3 Design Change Control
- 4.1.4 Procurement Document Review
- 4.1.5 Instructions, Procedures, and Drawings
- 4.1.6 Document Control
- 4.1.7 Control of Purchased Material, Equipment, and Services
- 4.1.8 Identification and Control of Materials, Parts, and Components
- 4.1.9 Control of Special Processes
- 4.1.10 Inspections
- 4.1.11 Test Control
- 4.1.12 Control of Measuring and Test Equipment
- 4.1.13 Handling, Storage, and Shipping
- 4.1.14 Inspection, Testing, and Operating Status
- 4.1.15 Nonconforming Materials, Parts, or Components
- 4.1.16 Corrective Action
- 4.1.17 Quality Assurance Records
- 4.1.18 Audits

##### 4.2 Transition from the Initial Test Program to the Operational Phase of Vogtle Electric Generating Plant (VEGP)

##### 4.3 Nuclear Utility Management and Human Resources Committee (NUMARC)

##### 4.4 Independent Safety Engineering Group

##### 4.5 Reports to the NRC

- 4.5.1 Safety Limit Violation
- 4.5.2 Reportable Events
- 4.5.3 Reporting of Operating Information

##### 4.6 Administration Department Programs

- 4.6.1 Fitness for Duty Program
- 4.6.2 Document Control

##### 4.7 Overtime Controls

##### 4.8 Procedure Control

##### 4.9 Regulatory Compliance Department Programs

- 4.9.1 Commitment Tracking Program
- 4.9.2 Permits and Licenses Monitoring
- 4.9.3 Operations Assessment Program
- 4.9.4 Surveillance Test Tracking Program

- 4.10 Medical Evaluation of Nuclear Power Plant Personnel  
Requiring Operator Licenses
- 5.0 Audits
  - 5.1 Project Audits and Responses
- 6.0 Operations Organization and Administration Verification
  - 6.1 Verification Scope and Plan
  - 6.2 Findings, Responses, and Corrective Actions
    - 6.2.1 Summary Evaluation
    - 6.2.2 Collective Evaluation
    - 6.2.3 Individual Findings
- 7.0 Assessment
  - 7.1 Summary of Open Corrective Action
  - 7.2 QA Statement
  - 7.3 General Manager Nuclear Operations
  - 7.4 Readiness Review Board
  - 7.5 Resumes
  - 7.6 Transmittal Letter



## 1.0 INTRODUCTION

### 1.1 MODULE SCOPE, STATUS, AND SCHEDULING

This module describes the Vogtle Nuclear Operations (VNO) administrative controls established and implemented to ensure safe plant operation and to protect both employee and public health and safety. It also describes the organization that implements plant administrative controls.

The activities and responsibilities of the Plant Review Board (the onsite Nuclear Safety Review Group), the Regulatory Compliance Department, and the Administration Department are discussed. Activities and responsibilities of the remaining plant departments are discussed in detail in other modules, as identified in Table 1.1-1.

This module also discusses Nuclear Operations responsibilities for, and implementation of, the Operations Quality Assurance Program (OQAP).

#### 1.1.1 NUCLEAR OPERATIONS ORGANIZATION

The organization described is that established for plant commercial operation which is the same as that established during initial testing.

The organization described in this module covers responsibilities from the senior vice president, nuclear operations, down through the plant superintendent level. The responsibilities of each superintendent are identified and discussed in general terms in this module. Responsibilities of each superintendent (except regulatory compliance and administration) are discussed in detail in other modules as appropriate. Detailed responsibilities of superintendents of regulatory compliance and administration through certain professional level personnel are also discussed in this module.

Interfaces with the general office and external organizations are also delineated and discussed.

Specific functions addressed in this module are:

- Operations Quality Control (QC);
- Identification of persons who are fit for duty;
- Programmatic identification and correction of deficiencies;
- Document control;

- Commitment tracking program;
- Operations assessment program;
- Technical specification surveillance tracking program;
- Procedure development and change control;
- OQAP.

The Nuclear Operations organization is staffed with management and superintendent positions filled. Positions not presently filled will be filled as their functions are required to meet the organization's needs. The details of the organization set forth in this module reflect the status as of June 28, 1985.

#### 1.1.2 ADMINISTRATIVE CONTROLS

Administrative controls as they relate to 10 CFR 50, Appendix B, 18 criteria are described. Implementing procedures are identified in Table 4.1.1. This table lists the 18 criteria, the Readiness Review modules, and the implementing procedures for the 18 criteria. The table also shows which procedures and modules address each of the individual criteria.

The administrative controls are being developed and implemented on an ongoing basis as necessary to support plant staff activities. As procedures are approved, they are issued and implemented. It is planned to have plant administrative procedures necessary for implementation of the OQAP approved, issued, and implemented at least 90 days prior to fuel load.

Each department, through its procedure coordinator, is responsible for maintaining, updating, and revising its procedure schedule. The plant procedure coordinator compiles the input from each department and publishes an update once each quarter. In addition, the plant procedure coordinator maintains a list of approved procedures. As of June 1, 1985, 1556 of 2551 Unit 1 and Common procedures are approved and implemented, as appropriate.

#### 1.1.3 PLANT REVIEW BOARD (PRB)

The composition of the PRB, duties, and responsibilities are described.

The Plant Review Board is established. It is carrying out its duties and responsibilities on a continuing schedule as required to support preparations for operations.

It meets at least once each calendar month or as requested by the chairman or a member of the board (procedure 00002-C, Plant Review Board - Duties and Responsibilities).

#### 1.1.4 REGULATORY COMPLIANCE

The organization and responsibilities for the Regulatory Compliance Department are described in section 2.3.2. Duties for personnel from the superintendent down through certain professional levels are presented.

The Regulatory Compliance Department is established and performing its assigned duties and responsibilities.

The staffing required for Unit 1 operation is authorized and staffing is completed as personnel needs are identified.

#### 1.1.5 ADMINISTRATION

The organization and responsibilities for the Administration Department are described in section 2.3.1. Duties for personnel from the superintendent down through certain professional levels are discussed.

The Administration Department is established and performing its assigned duties and responsibilities.

The staffing required for Unit 1 operation is authorized and staffing is completed as personnel needs are identified.

#### 1.1.6 OPERATIONS QUALITY ASSURANCE PROGRAM

Implementation of the OQAP by the plant organization is discussed in section 4.0. The licensing commitments and procedures implementing these commitments are identified and delineated in section 3 of this module.

The OQAP is established and is being implemented as plant procedures are approved and issued.

The OQAP will be fully implemented at least 90 days prior to fuel load.

0001e

TABLE 1.1-1

## VNO DEPARTMENTS AND DETAILING MODULES

<u>VNO Department</u>	<u>Module No.</u>	<u>Module Title</u>
Training	2	Operations Training and Qualification
Operations Engineering Maintenance	7	Plant Operations and Support
Health Physics Chemistry	9A 9B	Radiological Protection Chemistry

## 2.0 ORGANIZATION AND DIVISION OF RESPONSIBILITY

This section defines the Operations Organization planned for unit operations. The organization is described for positions from the senior vice president, nuclear operations, down through the plant superintendent level. For each plant department at Vogtle, the organization, responsibilities, and supervisory duties are discussed. The Administration Department and Regulatory Compliance Department programs are presented in detail. The other departments are specifically addressed in other modules (Table 1.1-1). A table delineating major organizational changes since February 12, 1982 (Table 2.5-1) is included in section 2.5.

## 2.1 ORGANIZATION

### 2.1.1 CURRENT OPERATIONS ORGANIZATION

The current operations organization (during initial testing) is the same as the organization for Unit operations. The initial test program (which interfaces with the VNO organization) is discussed in Module 3A.

### 2.1.2 OPERATIONS ORGANIZATION DURING UNIT 1 OPERATIONS

Beginning with Unit 1 fuel load, the Operations organization will be as shown in Figure 2.1-1, Plant Organization. For those activities concerning Unit 1 which require project support, the general manager, Vogtle Nuclear Operations Department (GMVNOD), reports to the vice president and general manager, Vogtle project (VPGMVP). He will also report to the VPGMVP for Unit 2 Initial Test Program (ITP) activities.

Figure 2.1-1 shows the organization from the executive vice president, power supply, down through the plant superintendent level. The company organization up through the chairman of the board is shown in Appendix A, Organization.



## 2.2 DIVISION OF RESPONSIBILITY

The GMVNOD is responsible for direct management of the plant, including direction of operation, industrial relations, planning, coordination, training, maintenance, refueling, and technical activities. He is responsible for compliance with the requirements of the operating license, technical specifications, and quality assurance program. In the GMVNOD's absence, the manager of unit operations (MUO) assumes this responsibility. The GMVNOD will designate in writing other qualified personnel to assume overall plant responsibility in his absence.

The GMVNOD reports to the vice president and general manager, Nuclear Operations (VPGMNO), in the Nuclear Operations Department, general office. The VPGMNO is responsible for the safe, reliable, and efficient operation of nuclear generating plants in the Georgia Power Company (GPC) system. The GMVNOD has access to the advice and services of technical specialists within GPC and outside expertise as necessary.

Reporting to the GMVNOD are the following positions:

- The MUO who, along with the GMVNOD, is responsible for the overall operation of the plant.
- The initial test manager (ITM) is responsible for directing the ITP effort and providing technical and maintenance support for plant operations.

Reporting to the MUO are the following positions:

- The superintendent of operations is responsible for safe and efficient plant operation, plant security, and buildings and grounds.
- The health physics superintendent is responsible for the radiation protection programs of the plant.
- The chemistry superintendent is responsible for the chemistry programs of the plant.
- The superintendent of regulatory compliance is responsible for advising plant management on matters concerning compliance with the Final Safety Analysis Report (FSAR), operating license, technical specifications, approved plant procedures, emergency plan, security plan, and other applicable federal, state, and local regulations. He is also responsible for the QC Group.
- The superintendent of administration is responsible for providing administrative support and services in the areas of human resources, office administration,



financial services, procedure coordination, and document control.

- The superintendent of nuclear training is responsible for the development and implementation of the training and retraining programs for the plant staff. He is also responsible for administering use of the training simulator.

Reporting to the ITM are the following positions:

- The superintendent of plant engineering and services is responsible for onsite engineering and technical support of the plant for generic and program engineering activities.
- The superintendent of engineering liaison is responsible for onsite engineering and technical support of the plant for plant systems.
- The superintendent of maintenance is responsible for performance of preventative maintenance and repairs on plant equipment and for providing necessary materials to support plant operations.

Detail responsibilities and duties for the GMVNOD are as follows:

- Review and approve plans and plant administrative and selected technical procedures that provide guidelines and directions for commercial operation.
- Review and approve work plans that identify the scope of plant and department responsibilities. Monitor and maintain plans as appropriate.
- Review and approve budgets based on work plans and reconcile variances.
- Maintain an adequate organization of qualified, productive, safety-minded employees and utilize them effectively in achieving plant goals.
- Ensure that necessary facilities, equipment, tools, consumables, spare parts, supplies, and services are provided during commercial operation and initial testing.

Detailed responsibilities and duties for the MUO are as follows:

- Review and approve plans and plant administrative and some technical procedures that provide guidelines and direction for commercial operation.
- Maintain an adequate organization of trained, productive, safety minded employees and use them effectively in achieving plant goals.
- Ensure that necessary facilities, equipment, tools, consumables, spare parts, supplies and services are provided during commercial operation.
- Provide supervision and technical direction to the plant staff through subordinate personnel to ensure that Nuclear Operations goals and objectives are met during commercial operation.
- Act for general manager in his absence.

A detailed discussion of the duties and responsibilities of the following superintendents are presented in the following modules:

<u>Module</u>	<u>Superintendent</u>
Module 2, Operations Training and Qualification	Superintendent of Nuclear Training
Module 7, Plant Operations and Support	Superintendents of Operations, Maintenance, Engineering, and Engineering Liaison
Module 9A, Radiological Protection	Health Physics Superintendent
Module 9B, Chemistry	Chemistry Superintendent

A detailed discussion of the duties and responsibilities of the superintendent of administration is presented in section 2.3.1.1 of this module.

A detailed discussion of the duties and responsibilities of superintendent of regulatory compliance is presented in section 2.3.2.1 of this module.

## 2.3 DEPARTMENTS

### 2.3.1 ADMINISTRATION DEPARTMENT

The VNO Administration Department provides administrative support and services for all Nuclear Operations personnel. The department is responsible for human resources functions which include employment, International Brotherhood of Electrical Workers (IBEW) interface, and the implementation of the fitness for duty program. Financial Services is responsible for capital and Operations and Maintenance (O&M) budgeting, man hour tracking, inquiries/bid process, invoice verification, and payroll. Office Administration is responsible for maintaining personnel files, benefits, stationary and supplies, and petty cash functions. Procedure Coordination is responsible for coordinating plant procedure preparation. Document Control is responsible for receipt, storage, and retrievability of plant records, documents, and drawings. Document Control is also responsible for the control and maintenance of the nuclear operating records management system (NORMS) and engineering satellite stations. The Administration Department is responsible for quality circles and providing work direction to the health and safety advisor. The organization of the department is shown in Figure 2.3-1.

#### 2.3.1.1 Superintendent of Administration

The Administration Department is headed by the superintendent of administration. His responsibilities include:

- Selection of department goals;
- Initiation of planned actions to reach the goals;
- Continuous review of department effectiveness;
- Document control;
- Fitness for duty program.

Reporting to the superintendent of administration are the human resources coordinator, document control supervisor, and senior procedure specialist.

#### 2.3.1.2 Human Resources Coordinator

The human resources coordinator supervises the employment process, the IBEW interface, and the fitness for duty program for Nuclear Operations. His responsibilities include:

- Supervise the professional employment process;
- Supervise the nonprofessional employment process;
- Supervise the fitness for duty program.

#### 2.3.1.3 Senior Procedure Specialist (Procedure Coordinator)

The procedure coordinator assists in the development, review, and control of plant operational phase procedures. His responsibilities include:

- Process, edit, and proofread procedures;
- Route procedures for review and approval;
- Maintain a procedures tracking log;
- Prepare a status report for management;
- Maintain approved procedures index.

#### 2.3.1.4 Document Control Supervisor

The document control supervisor supervises the maintenance of plant documents, records, and drawings. His responsibilities include:

- Maintain ITP and operating quality records and ensure retrievability of these records;
- Implement and direct activities for the distribution, control and maintenance of ITP procedures, operating procedures, design drawings, vendor drawings, vendor data and technical manuals;
- Provide micrographic support for NORMS;
- Maintain system turnover packages and equipment qualification packages;
- Control and maintain safeguards information;
- Control, maintain, and distribute project manuals, indexes, field change requests, and change orders;
- Perform audits of drawing and document control mechanisms for plant management;
- Implement NORMS;

- Operate and maintain two satellite document control stations.

### 2.3.2 REGULATORY COMPLIANCE DEPARTMENT

The Regulatory Compliance Department is responsible for supporting licensing activities for Vogtle Electric Generating Plant (VEGP) Units 1 and 2. The department keeps the plant staff informed on regulatory requirements and past operating plant experiences in correcting discrepancies. The department also provides the quality control function for plant operations activities.

The department organization is shown in Figure 2.3-2.

#### 2.3.2.1 Superintendent of Regulatory Compliance

The superintendent of regulatory compliance manages the department. His responsibilities include:

- Coordinate GPC FSAR and Technical Specifications activities;
- Develop and implement the technical specifications surveillance tracking program;
- Coordinate NRC question responses;
- Manage commitment tracking program;
- Manage Nuclear Operations quality control;
- Manage operations assessment program;
- Coordinate responses to Quality Assurance (QA) and NRC findings;
- Establish department goals;
- Develop and recommend budget;
- Serve as Plant Review Board chairman;
- Develop department procedures;
- Serve as Test Review Board chairman;
- Develop changes to plant administration procedures.

Reporting to the superintendent of regulatory compliance are the regulatory compliance supervisor, regulatory compliance

engineering supervisor, and the superintendent of quality control.

#### 2.3.2.2 Regulatory Compliance Engineering Supervisor

The regulatory compliance engineering supervisor provides direction for completing plant licensing activities to the regulatory compliance staff engineers. His responsibilities include:

- Interface with outside agencies related to the licensing process; i.e, NRC, Institute of Nuclear Operations (INPO), Southern Company Services, Inc. (SCS), etc.;
- Keep plant management informed of federal, state, and local regulations related to plant activities;
- Development of departmental procedures;
- Preparing changes to plant administrative procedures;
- Maintain the Licensee Event Report program and the Nuclear Plant Reliability Data (NPRD) system;
- Evaluate and trend deficiency reports;
- Coordinate GPC responsibilities for FSAR and Technical Specification development.

#### 2.3.2.3 Regulatory Compliance Supervisor

The regulatory compliance supervisor provides direction for the implementation of licensing activities to assist the plant staff in meeting its regulatory obligations. His responsibilities include:

- Identify licensing commitments and ensure their implementation;
- Administration of the Technical Specification surveillance program;
- Direct the development and implementation of the Operations Assessment Program;
- Coordination of responses to QA audits, NRC inspections, and INPO evaluations;
- Management of the several tracking data bases;
- Support of the Plant Review Board.

#### 2.3.2.4 Superintendent of Quality Control

The superintendent of quality control directs the activities of quality control personnel to ensure materials, structures, components, and systems meet appropriate engineering criteria. His responsibilities include:

- Inspection and verification of maintenance and modification activities on safety-related equipment, components, and structures;
- Direct verification of the materials receipt and inspection process;
- Perform nondestructive examination of structures and components;
- Monitor plant work activities as they relate to quality;
- Perform contractor surveillance to ensure quality of work performed;
- Inspection and verification of measuring and test equipment (M&TE);
- Monitor the document control and materials storage activities;
- Teach and maintain current inspector's qualification;
- Prepare QC budget and reconcile variances.

#### 2.3.2.5 Current QC Activities

As of June 28, 1985, the VEGP QC Department was engaged in the following activities:

- Maintenance Work Order (MWO) inspections;
- Receiving inspections;
- Development and implementation of work monitoring plans;
- Review of MWOs and assignment of hold points/inspection reviews/work verification;
- Field equipment change order (FECO) inspections;
- Nondestructive examinations procedure development;
- Provide eye exams for Nuclear Operations;

- Provide member of PRB;
- Develop QC procedures;
- Provide QC support for Construction Acceptance Tests (CAT) and Flushing activities;
- Provide assistance for section XI testing program.

### 2.3.3 HEALTH PHYSICS DEPARTMENT

The Health Physics Department is responsible for radiation protection programs for personnel who perform duties within radiation control areas. The department maintains the Emergency Plan for responding to emergency situations to minimize adverse effects for the general public and plant personnel. This department is described in Module 9A.

The superintendent of health physics manages the department. His responsibilities include:

- Establish department goals;
- Manage personal dosimetry program;
- Manage ALARA program;
- Direct respiratory protection and protective clothing program;
- Direct emergency preparedness.

### 2.3.4 CHEMISTRY DEPARTMENT

The Chemistry Department is responsible for plant water chemistry programs and maintains control on liquid and gaseous effluents. This department is described in Module 9B.

The chemistry superintendent manages the department. His responsibilities include:

- Establish department goals;
- Manage water chemistry program (corrosion protection program);
- Manage liquid and gaseous effluents program.



### 2.3.5 MAINTENANCE DEPARTMENT

The Maintenance Department is responsible for maintaining the material condition of the plant. Included in this responsibility is performance of technical specification surveillance, preventative and corrective maintenance, and providing materials and supplies for the plant. This department is described in Module 7.

The superintendent of maintenance manages the department and his responsibilities include:

- Direct activities of maintenance personnel to ensure unit availability for efficient and economical operation;
- Administer a maintenance budget to ensure adequate, economical, maintenance is performed;
- Manage activities to cover corrective maintenance, preventative maintenance, surveillance, and plant modifications;
- Coordinate, schedule, and plan maintenance work with other plant activities to reduce outage time and perform work efficiently;
- Maintain spare parts and consumables.

### 2.3.6 OPERATIONS DEPARTMENT

The Operations Department is responsible for the operation of the power plant and waste processing systems, plant security, and buildings and grounds maintenance. The department is described in Module 7.

The superintendent of operations is responsible for the overall management of the department. His responsibilities include:

- Establish department goals;
- Establish training standards for operations personnel;
- Administrative controls, procedures, and policies for the department;
- Safe and efficient operation of each unit;
- Maintain housekeeping.

### 2.3.7 ENGINEERING AND SERVICES DEPARTMENT

The Engineering and Services Department is responsible for performing onsite engineering and technical support for the plant. The organization is described in detail in Module 7.

#### 2.3.7.1 Superintendent of Plant Engineering and Services

The superintendent of plant engineering and services directs the engineering and technical staff. His responsibilities include:

- Technical support for Nuclear Operations;
- System specific engineering surveillance testing;
- Coordination of modifications to plant systems;
- Computer system support for Nuclear Operations;
- Cost and scheduling information for plant activities;
- Site procurement review group;
- Equipment qualification.

#### 2.3.7.2 Superintendent of Engineering Liaison

The superintendent of engineering liaison coordinates work between consultants and contractors with the plant staff when complex engineering problems require their assistance. During plant initial testing the incumbent functions as the preoperational test superintendent and his responsibilities are defined in Module 3A.

### 2.3.8 TRAINING DEPARTMENT

The Nuclear Operations Training Department develops and implements training programs which comply with NRC regulations to ensure nuclear power plant personnel have the training to operate and maintain the plant safely and efficiently. The training organization and programs are discussed in depth in Module 2.

The superintendent of nuclear training manages the department. His responsibilities include:

- Managing and assisting the training supervisors in preparing, scheduling and implementing training programs;

- Ensuring that proper training materials are made available to the instructors and that accurate records are kept;
- Administering the utilization of the control room simulator and ensuring that it is modified and maintained to provide quality training;
- Maintaining a senior reactor operator license or instructor certification.

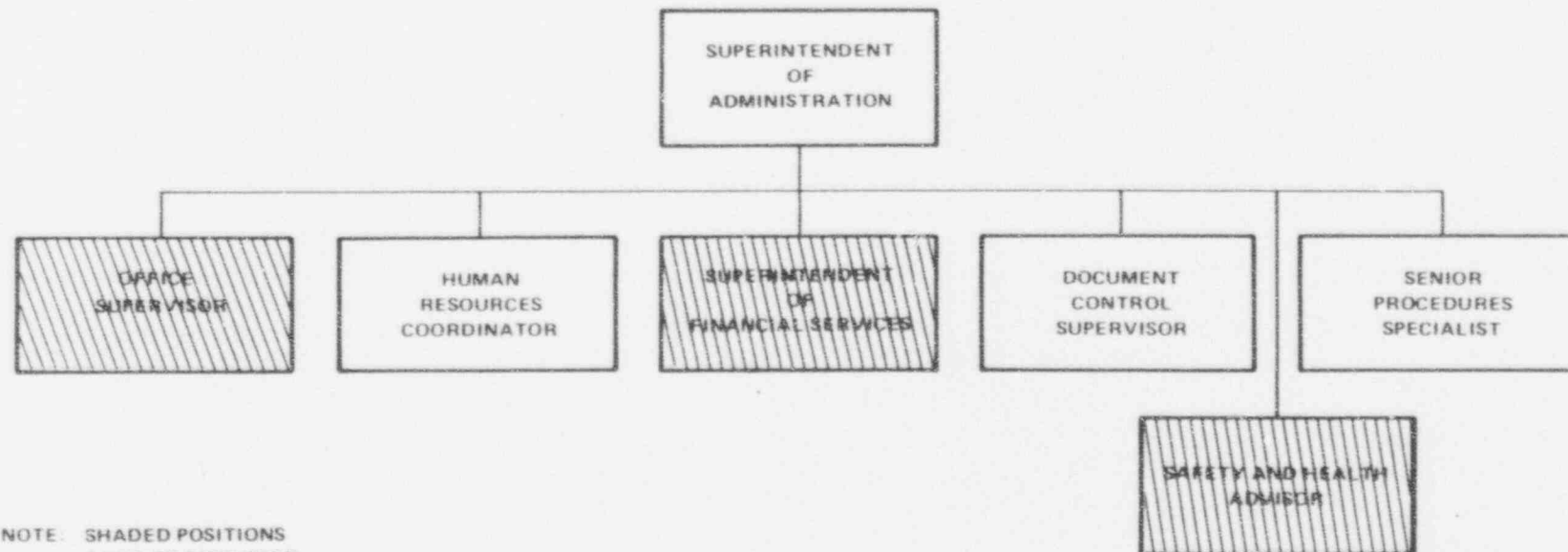


Figure 2.3-1 Administration Department

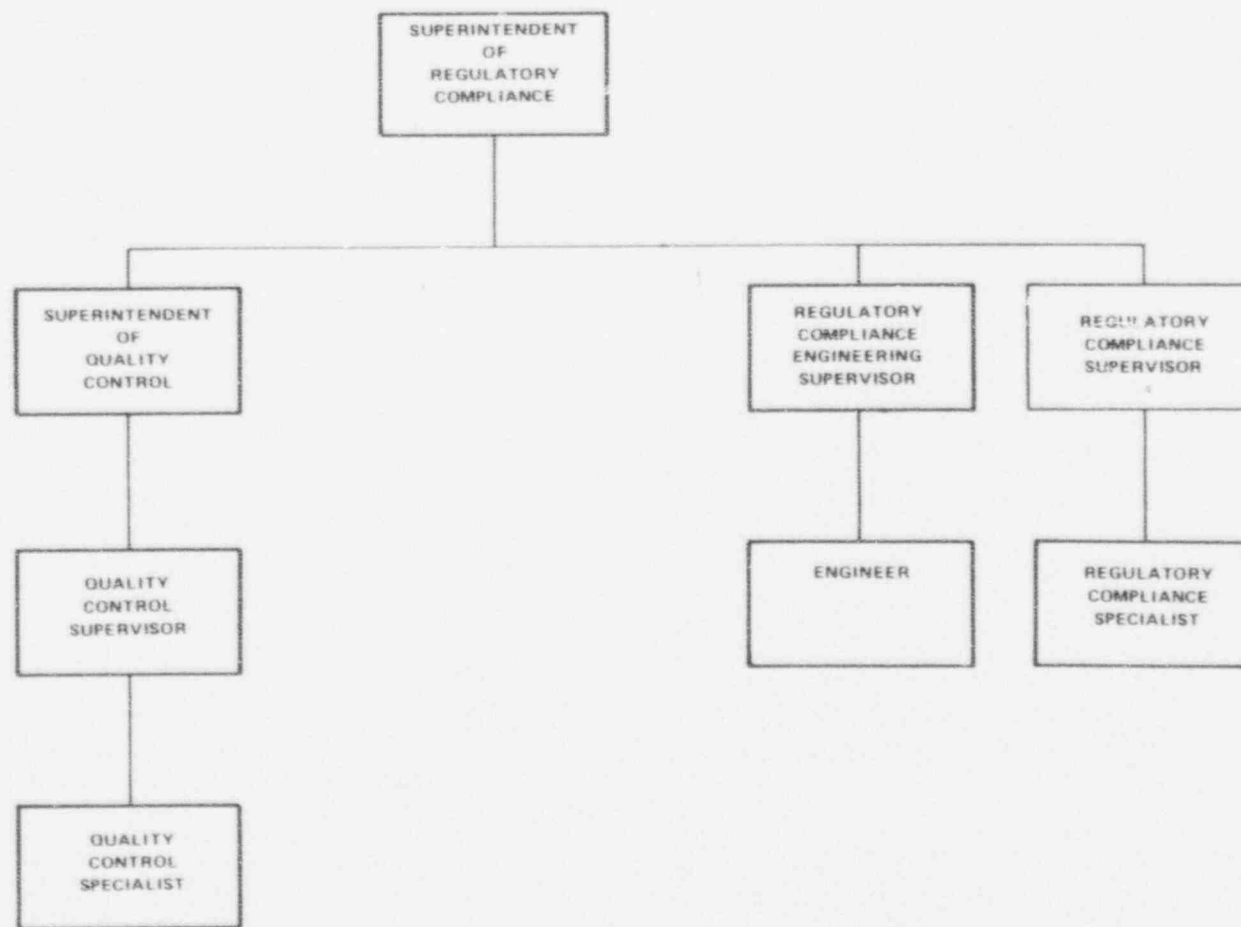


Figure 2.3-2 Nuclear Operations Regulatory Compliance Department Organization Chart

## 2.4 INTERFACES WITH OTHER ORGANIZATIONS

Communications and interfaces with offsite and/or outside organizations are carried out through established channels.

Nuclear Operations interfaces with the following organizations:

- Quality Assurance - General Office and site;
- Health Physics and Chemistry - General Office;
- Nuclear Engineering - General Office;
- Engineering and Construction Services - General Office;
- Southern Company Services, Inc. - Birmingham and site.

### 2.4.1 NUCLEAR OPERATIONS - QUALITY ASSURANCE (QA) DEPARTMENT

Nuclear Operations interfaces with the QA Department through the QA site manager for all plant level items. The duties and responsibilities of the Quality Assurance personnel are delineated in Appendix I.

Nuclear Operations makes available the required records necessary for QA to complete audit and surveillance checklists and provides access to work activities for QA personnel to monitor/assess in-the-field implementation of QA programs and policies. After an audit is complete, the audit report with any attached audit finding reports (AFRs) is forwarded to the GMVNOD from the site QA manager. Subsequently, Regulatory Compliance (RC) transmits AFRs to the responsible department for responses. Responses to QA items are transmitted from the superintendent, RC, to the site QA manager.

The control of audit findings and responses is addressed by Nuclear Operations in the implementation of procedure 00409-C, Response to NRC, QA, and INPO Audit Findings.

Surveillances are conducted by the QA personnel on day-to-day or routine events. Surveillance findings are discussed and issued to the responsible supervisors who are responsible for correcting the surveillance finding.

### 2.4.2 NUCLEAR OPERATIONS - NUCLEAR CHEMISTRY AND HEALTH PHYSICS (NCHP)

Nuclear Operations interfaces with NCHP through the manager NCHP and GMVNOD. NCHP, based in the general office, provides

technical support and corporate input to Plant Vogtle in the following four areas:

- Emergency preparedness programs;
- Radiological environmental programs;
- Nuclear chemistry;
- Radiation protection.

Emergency preparedness program responsibilities include:

- Emergency plan maintenance;
- Annual exercise management;
- Coordination of state and local interfaces;
- Support of plant implementation activities.

Radiological environmental responsibilities include:

- Management of offsite environmental monitoring and surveillance programs;
- Analysis and reporting of environmental data;
- Support of plant effluent and exposure analysis reporting.

In addition the NCHP Department provides technical support for nuclear chemistry and radiation protection programs. This support includes:

- Performance trending;
- Support of technical assessments;
- Support of regulatory interfaces;
- Other specific areas requested by plant and executive management.

#### 2.4.3 NUCLEAR OPERATIONS - NUCLEAR ENGINEERING DEPARTMENT

Nuclear Operations interfaces with the Nuclear Engineering Department through the chief nuclear engineer and GMVNOD. The chief nuclear engineer reports directly to the vice president and general manager, nuclear operations. As manager of the nuclear division, the chief nuclear engineer's responsibilities include:

- Providing regulatory and licensing support for Plant Vogtle;
- Documenting licensing contacts with the U. S. Nuclear Regulatory Commission and maintaining files of NRC correspondence;
- Interfacing with the appropriate companies and organizations, including SCS, in the areas of nuclear fuel management, procurement, and reprocessing;
- Evaluating amendments to the Plant Vogtle Operating License and FSAR;
- Maintaining Plant Vogtle security and emergency plans, including necessary agreements with state, federal, and local agencies;
- Addressing safety evaluations and unreviewed safety questions for design changes to Plant Vogtle;
- Preparing an annual report on the environmental impact of radiological releases from Plant Vogtle;
- Providing other technical, licensing, or nuclear expertise, or onsite technical assistance as requested by plant management.

#### 2.4.4 NUCLEAR OPERATIONS - ENGINEERING AND CONSTRUCTION SERVICES

Nuclear Operations interfaces with the Engineering and Construction Services Department through the manager of engineering and the GMVNOD and as detailed in procedure 50005-C, Requesting Engineering Assistance.

The primary function of the Engineering and Construction Services Department in support of the nuclear power organization includes:

- Providing engineering and technical support for the operation and maintenance of VEGP;
- Participation with SCS and other GPC departments in the planning, scheduling, budgeting, and performance of engineering and licensing work for GPC's new generating plants;
- Direct and indirect technical and/or licensing interface with various environmental and other governmental and regulatory agencies and concerned public groups.



#### 2.4.5 NUCLEAR OPERATIONS - SCS

Nuclear Operations interfaces with SCS through the Nuclear Plant Support Department - Vogtle (NPSD). Formal interface is between the GMVNOD and the manager NPSD - Vogtle, nuclear plant support. The NPSD-Vogtle is composed of two groups:

- NPSD - Vogtle Home Office (Birmingham);
- NPSD - Vogtle Field Office (Site).

The home office of NPSD - Vogtle is responsible for providing and/or coordinating the design and engineering support of the Vogtle Electric Generating Plant during commercial operations.

The field office of NPSD - Vogtle is responsible for providing field design support, liaison with the home office and design change implementation support.

Details of the organizational structure of these two groups is delineated in Module 7.

The field office of NPSD - Vogtle is directed by the project engineer, who reports to the (home office) manager NPSD - Vogtle for administrative and personnel matters and for technical direction. He reports to the superintendent of plant engineering and services (SPES), for direct functional control and work assignment purposes.

The home office of NPSD - Vogtle is directed by the manager NPSD - Vogtle. He in turn reports directly to the VP - project manager and nuclear plant support who, in turn reports to the executive vice president, engineering (SCS).

Formal interfaces, for other than policy matters, between Nuclear Operations and NPSD is through Nuclear Operations SPES to the project engineer, NPSD - Vogtle Field Office.

## 2.5 SIGNIFICANT ORGANIZATION CHANGES

The Nuclear Operations Department organization has evolved over a period of time. On February 12, 1982, an organization was formalized by issuing the first job authorization request which was approved by GPC management. Figure 2.5-1 shows this organization. Significant changes that have occurred since then and dates the changes occurred are shown in Table 2.5-1.

Table 2.5-1

## SIGNIFICANT CHANGES IN NUCLEAR OPERATIONS DEPARTMENT ORGANIZATION

<u>Description of Change</u>	<u>Period of Change</u>
Plant engineers added to Maintenance.	September 1983
Shift technical advisors moved from Engineering to Operations.	September 1983
Procedure specialist and technical writers moved from Engineering to Administration.	September 1983
Quality Control placed in Regulatory Compliance.	September 1983
Plant engineers added to Regulatory Compliance.	September 1983
Fire protection specialist position eliminated. (Job title)	December 1983
Safety advisor moved to Administration.	December 1983
HP and chemistry training supervisor added to training.	February 1984
Plant manager to general manager.	February 1984
Assistant plant manager to manager of unit operations.	June 1984
Shift foreman position eliminated in Operations. (Job title)	July 1984
Superintendent of engineering liaison added to Engineering.	July 1984
Plant engineers added to Health Physics.	July 1984
Health physics specialist added to Health Physics.	July 1984
Health physics/chemistry operations supervisor added to Health Physics.	July 1984
Human resources coordinator added to Administration.	July 1984
Initial test manager added to Engineering.	August 1984
Chemist added to Health Physics.	April 1985
Split of Health Physics and Chemistry.	June 1985



Figure 2.5-1 VEGP Organization Chart (As Of February 12, 1982)

### 3.0 COMMITMENTS

#### 3.1 INTRODUCTION

This section contains a listing of licensing and Nuclear Operations commitments and their corresponding implementing documents applicable to operations phase of plant activities. These commitments are presented in two matrices, the commitment matrix and the implementation matrix. A brief explanation of the development process for each matrix is included.

Differences, if any, between the commitments discussed in this section and the FSAR, are inadvertent and the FSAR takes precedence.

### 3.2 DEFINITIONS

Commitments are defined as project obligations to regulatory guides, industry standards, branch technical positions, and other licensing requirements, to the extent defined in the FSAR. An implementing document is a working level document, either program control or test procedure, that fulfills a Nuclear Operations commitment applied to a specific activity.

### 3.3 SOURCES

Commitments covered by this report are from the FSAR, including responses to NRC questions.

The FSAR is reviewed for commitments based upon guidelines developed from the definition.

### 3.4 COMMITMENT MATRIX

Once identified, the commitments are placed on the Commitment Matrix. The matrix includes:

- Commitment source;
- Source section and subject;
- Document/Feature;
- Modules (s).

Any relevant comments concerning the commitments or subject of a section are indicated in the remarks column.





Table 2.0-3 CONTINGENCIES FOR PLANT OPERATIONS

CONTINGENCIES FOR PLANT OPERATIONS ARE LISTED IN THE FOLLOWING TABLES. THE CONTINGENCIES ARE LISTED IN THE FOLLOWING TABLES. THE CONTINGENCIES ARE LISTED IN THE FOLLOWING TABLES.

CONTINGENCIES FOR PLANT OPERATIONS ARE LISTED IN THE FOLLOWING TABLES. THE CONTINGENCIES ARE LISTED IN THE FOLLOWING TABLES. THE CONTINGENCIES ARE LISTED IN THE FOLLOWING TABLES.

CONTINGENCY SOURCE	CONTINGENCY DESCRIPTION	CONTINGENCY EFFECT	CONTINGENCY EFFECT	CONTINGENCY EFFECT
ES-1	ES-1 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-1 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-1 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-1 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-2	ES-2 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-2 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-2 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-2 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-3	ES-3 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-3 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-3 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-3 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-4	ES-4 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-4 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-4 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-4 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-5	ES-5 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-5 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-5 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-5 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-6	ES-6 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-6 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-6 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-6 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT
ES-7	ES-7 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-7 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-7 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT	ES-7 FOR PLANT OPERATIONS, INCLUDING % PLANT OPERATIONS FOR PLANT



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84



TABLE 3.0-1. COMPLIMENTS FOR PLANT OVERSIGHTS  
ORGANIZATION AND INVESTIGATOR

| COMPLIMENT<br>SOURCE | COMPLIMENT<br>SECTION | COMPLIMENT<br>SUBJECT           | DESCRIPTION/FEATURE  | TITLE | NUMBER | REMARKS |
|----------------------|-----------------------|---------------------------------|--|-------|--------|---------|
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | ELLS ORANGE DATA<br>FOR ORANGES | ORANGE 07/22/11<br>11.1, 5.1/  |       | 05     |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | ESAB WILL REVIEW S/O<br>TEST PROCEDURE AND<br>COMPLY THERE TO<br>ENTER TO MANAGEMENT<br>RETURN   |       | 05, 05 |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | THE RESULTS OF S/O<br>AND PRELIM. TESTS ARE<br>REVIEWED BY TEST<br>SUPERVISOR AND THE<br>APPROPRIATE TEST<br>COORDINATOR.  |       | 05, 05 |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | ESAB WILL REVIEW S/O<br>TEST RESULTS PRIOR<br>TO MANAGEMENT<br>APPROVAL  |       | 05, 05 |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | THE MEMBERS OF THE<br>ESAB WILL REVIEW THE<br>S/O TEST RESULTS.<br>TEST RESULTS THAT<br>ARE NOT SATISFACTORY<br>WILL BE RESOLVED<br>UNDER THE DIRECTION<br>OF THE ESAB PRIOR TO<br>TEST ACCEPTANCE.                            |       | 05     |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | FOR S/O TEST, THE<br>TEST RESULTS WILL BE<br>SUBMITTED TO THE ESAB<br>OR THE ALLEGED<br>CRITERIA HAVE BEEN<br>MET OR EXCEEDED.   |       | 05, 05 |         |
| ESAB                 | 1.5, 2.1, 2.2, 2.3    | S/O TEST PROCEDURE              | ONCE ACCEPTANCE<br>CRITERIA HAVE BEEN<br>MET TO BOARD'S<br>SATISFACTION,<br>MEMBERS WILL<br>RECOMMEND PLANT<br>MANAGER OR DESIGNER<br>APPROVE TEST AS<br>COMPLETE. COMPLETE<br>TESTS WILL BECOME<br>PART OF PLANT<br>STANDARD. |       | 05     |         |

THE UNIVERSITY OF CHICAGO PRESS







[illegible]

TABLE 1. *Continued*

TABLE 1.0-1 CRITERIA FOR PLANT OPTIONS

CRITERIA FOR PLANT OPTIONS

| CATEGORY<br>SUBJECT | CATEGORY<br>SUBJECT | CATEGORY<br>SUBJECT             | DOCUMENT REFERENCE | TITLE   | TABLE | REMARKS |
|---------------------|---------------------|---------------------------------|--------------------|---|-------|---------|
| PS00                | 1.7. 2. 3           | DESIGN CHARGE<br>CONTROL        |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 3           | DESIGN CHARGE<br>CONTROL        |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 3           | DESIGN CHARGE<br>CONTROL        |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 4           | PROCUREMENT DOCUMENT<br>CONTROL |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 4           | PROCUREMENT DOCUMENT<br>CONTROL |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 4           | PROCUREMENT DOCUMENT<br>CONTROL |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |
| PS00                | 1.7. 2. 4           | PROCUREMENT DOCUMENT<br>CONTROL |                    | THE PROPOSED REVIEW<br>OF THE DESIGN OF THE<br>PLANT FACILITY AND<br>THE PROPOSED SAFETY<br>PROCEDURES ARE<br>CONTAINED IN THE<br>DESIGN CHARGE<br>CONTROL. | 05    |         |

TABLE 3.4-1. COMMENTS FOR EACH OF THE TOPS  
ORGANIZATION AND ADAPTATION

| CORPORATE SOURCE | CORPORATE SECTION | CORPORATE STRUCTURE | DOCUMENT/FEATURE  | TITLE | NUMBER | REMARKS |
|------------------|-------------------|---------------------|---|-------|--------|---------|
| ESAB             | 1. 2. 3           |                     | FOR THE DOCUMENT THE PERSON<br>TO THE WILL OF THE<br>INDIVIDUAL<br>INDIVIDUAL OF THE<br>FOR THE DOCUMENT<br>ORGANIZATION. |       | MS     |         |
| ESAB             | 1. 2. 4           |                     | FOR THE DOCUMENT THE PERSON<br>TO THE WILL OF THE<br>INDIVIDUAL OF THE<br>FOR THE DOCUMENT<br>ORGANIZATION.               |       | MS     |         |
| ESAB             | 1. 2. 4           |                     | FOR THE DOCUMENT THE PERSON<br>TO THE WILL OF THE<br>INDIVIDUAL OF THE<br>FOR THE DOCUMENT<br>ORGANIZATION.               |       | MS     |         |
| ESAB             | 1. 2. 4           |                     | FOR THE DOCUMENT THE PERSON<br>TO THE WILL OF THE<br>INDIVIDUAL OF THE<br>FOR THE DOCUMENT<br>ORGANIZATION.               |       | MS     |         |

TABLE 3.0-1 COMMITMENTS FOR PLANT OPERATIONS

ORGANIZATION AND ADMINISTRATION

| COMMITMENT SOURCE | COMMITMENT SECTION | COMMITMENT SUBSECTION        | COMMITMENT FEATURE  | TITLE | MODEL | REMARKS |
|-------------------|--------------------|------------------------------|---|-------|-------|---------|
| FSAR              | 17. 2. 4           | PROCUREMENT DOCUMENT CONTROL | PROCUREMENT DOCUMENTS CONTAIN THE REQUIREMENTS FOR THE RETENTION, CONTROL, AND MAINTENANCE OF VENDOR RECORDS.   |       | 05    |         |
| FSAR              | 17. 2. 4           | PROCUREMENT DOCUMENT CONTROL | PROCUREMENT DOCUMENTS CONTAIN THE PROCURING AGENCY'S RIGHT OF ACCESS TO VENDOR'S FACILITIES AND RECORDS FOR SOURCE INSPECTION AND AUDIT.                          |       | 05    |         |
| FSAR              | 17. 2. 4           | PROCUREMENT DOCUMENT CONTROL | CHANGES AND/OR REVISIONS TO PROCUREMENT DOCUMENTS ARE SUBJECT TO THE SAME REVIEW AND APPROVAL REQUIREMENTS AS THE ORIGINAL DOCUMENTS.                             |       | 05    |         |
| FSAR              | 17. 2. 4           | PROCUREMENT DOCUMENT CONTROL | PROCUREMENT DOCUMENTS CONTAIN REVIEWS, WHICH IDENTIFY DOC. TO BE PREPARED, MAINTAINED, SUBMITTED, AND MADE AVAILABLE TO THE DM - N.D. FOR REVIEW AND/OR APPROVAL. |       | 05    |         |
| FSAR              | 17. 2. 4           | PROCUREMENT DOCUMENT CONTROL | THE REVIEW IS TO DETERMINE SIMILARITY, COMPATIBILITY, AND IDENTIFICATION OF EQUIPMENT REQUIREMENTS AND ACCEPTANCE CRITERIA OF THE ORIGINAL ITEM.                  |       | 05    |         |

TABLE A-4-1 CORRELATIONS FOR FLIGHT OPERATIONS  
ORGANIZATION AND APPROPRIATION

| CORRELATION SOURCE | CORRELATION SECTION | CORRELATION SUBJECT                     | DESCRIPTION OF FEATURE  | TITLE | THROW | REMARKS |
|--------------------|---------------------|---|---|-------|-------|---------|
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | DELETED<br>ADMINISTRATIVE<br>PROCEDURES WILL<br>REMAIN FROM<br>CURRENT OF<br>INSTRUMENTS SUCH AS<br>TELEGRAPHY PROCEDURE<br>CHANGES AND STANDARD<br>WORKS.  | 05    |       |         |
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | INSTRUMENT FLARE,<br>FLARE, CARTRIDGES,<br>SPECIAL PROCEDURES,<br>PAINTING, etc.,<br>PROCEDURES,<br>REPAIR PROCEDURES,<br>AND CHANGES WILL BE<br>REVIEWED AND<br>CORRECTED WITH BY A<br>PERSON RESPONSIBLE<br>IN OR NEARBY. | 05    |       |         |
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | NO. 1, 30 8/11/72   | 05    |       |         |
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | CORRELATION MAP SHALL<br>BE REVIEWED AND<br>APPROVED IN<br>ACCORDANCE WITH ORAL   | 05    |       |         |
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | CERTAIN PROCEDURES<br>APPROPRIATE TO SAFETY<br>SHALL BE REVIEWED BY<br>THE FID. FID. DEPT.<br>STAFF BY A PERSON<br>OR FLIGHT MANAGER.   | 05    |       |         |
| F506               | 1, 2, 5             | INSTRUMENTS, PROCEDURES, AND DEVIATIONS | FLIGHT DEVIATIONS<br>CHANGES WILL BE AS A<br>RESULT OF DESIGN<br>CHANGES OR AS-OUTLIES<br>WHICH WILL BE<br>CORRECTED BY<br>WRITTEN PROCEDURES.  | 05    |       |         |

TABLE 5.2.1. REQUIREMENTS FOR PLANN. OPERATIONS  
ORGANIZATION AND ADMINISTRATION

| CORPORATE<br>SUBJECT | CORPORATE<br>SECTION | REQUIREMENT TO BE<br>CONTROLLED | FORWARD TO/RECEIVE   | TITLE  | NUMBER | REMARKS |
|----------------------|----------------------|---------------------------------|--|--|--------|---------|
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |
| FSAR                 | 17. 2. 6             | REQUIREMENT TO BE<br>CONTROLLED | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | RECEIVED FROM/RECEIVED<br>FOR/RECEIVED FOR<br>SUBMITTALS, SYSTEMS,<br>OR COMPONENTS, | 05     |         |





[illegible]

TABLE 1. *Continued*



$$1.2311 \pm 0.0013 \text{ A} = 1.0011111111111111 \times 10^0 \text{ A} = 1.0011111111111111 \text{ A}$$

TABLE 5.0-1 COMMITMENTS FOR PLANT OPERATIONS

ORGANIZATION AND ADMINISTRATION

| COMMITMENT<br>SOURCE | COMMITMENT<br>SECTION | COMMITMENT<br>SUBJECT   | DOCUMENT/TITLE  | TITLE | MODULE | REMARKS |
|----------------------|-----------------------|---|---|-------|--------|---------|
| FSAR                 | 17. 2. 7              | CONTROL OF MATERIALS<br>AND COMPONENTS WITH<br>PARTS AND COMPONENTS | DRAWINGS, PARTS,<br>AND COMPONENTS WITH<br>IDENTIFIED AND<br>CONTROLLED TO<br>PREVENT USE OF<br>INCORRECT OR<br>DEFECTIVE ITEMS.<br>LOCATION AND METHOD<br>OF IDENTIFICATION<br>SHALL NOT EFFECT<br>QUALITY OR FUNCTION<br>OF ITEM. |       | 05     |         |
| FSAR                 | 17. 2. 9              | CONTROL OF SPECIAL<br>PROCESSES                                     | R.G. 1.30 11/72   |       | 05     |         |
| FSAR                 | 17. 2. 9              | CONTROL OF SPECIAL<br>PROCESSES                                     | R. G. 1.37 3/73   |       | 05     |         |
| FSAR                 | 17. 2. 9              | CONTROL OF SPECIAL<br>PROCESSES                                     | PROCEDURES SHALL BE<br>DEVELOPED WHICH<br>DETERMINE THE<br>REQUIREMENTS FOR<br>SPECIAL PROCESSES.   |       | 05     |         |
| FSAR                 | 17. 2. 10             | INSPECTION  | R.G. 1.30 11/72   |       | 05     |         |
| FSAR                 | 17. 2. 10             | INSPECTION  | R.G. 1.116 REV. 0-R   |       | 05     |         |
| FSAR                 | 17. 2. 10             | INSPECTION  | INSPECTION AT VENT<br>WILL BE PERFORMED IN<br>ACCORDANCE WITH<br>WRITTEN APPROVED<br>PROCEDURES<br>INSTRUCTIONS, OR<br>CHECKLISTS.  |       | 05     |         |
| FSAR                 | 17. 2. 10             | INSPECTION  | PLANT PROCEDURES<br>REQUIRES, APPROVED<br>CALIBRATED TEST<br>EQUIPMENT AND<br>ACCURACY<br>REQUIREMENT.  |       | 05     |         |

Table 3.0-1. CRITERIA FOR FLIGHT OPERATIONS  
OF THE AIRCRAFT AND COMBINATION

| CRITERION<br>SOURCE | CRITERION<br>SECTION | CRITERION<br>SUBJECT               | DESCRIPTION/FEATURE   | TITLE | NUMBER | REMARKS |
|---------------------|----------------------|------------------------------------|---|-------|--------|---------|
| FSOR                | 1.1, 2, 10           | DEFLECTION                         | REVIEW PROCEDURES<br>INCLUDES DEFLECTION<br>TESTS OF<br>CORRECTED FLIGHT<br>FORM IN ORDER TO<br>PERFORMANCE OF THE<br>WORK.   | 05    |        |         |
| FSOR                | 1.1, 2, 10           | DEFLECTION                         | OR, FEATHERING AND<br>DEFLECTION OF<br>THOSE PERFORMED WILL<br>BE CORRECTED THROUGH<br>REVIEW<br>EXAMINATIONS,<br>FROM THE VERY TESTERS,<br>OR ORG. EXAMINATION.  | 05    |        |         |
| FSOR                | 1.1, 2, 10           | DEFLECTION                         | IF SPECIFIED<br>DEFLECTION WITHIN<br>LIMITS, INCLUDING<br>WITHIN THE 10<br>DEFLECTION OF THE<br>WITHIN THE 15, 100 TO<br>FORCED WITHIN<br>DEFLECTION OF THE<br>AND DEFLECTION,<br>DEFLECTED TO THE POINTS<br>WILL BE IN THE<br>PROCESS. | 05    |        |         |
| FSOR                | 1.1, 2, 11           | TEST PROCEDURES<br>(SHELL DEFLECT) | TEST PROCEDURES<br>SHELL INCLUDE TEST<br>PROCEDURES.  | 05.05 |        |         |
| FSOR                | 1.1, 2, 11           | TEST CORRECTION                    | P.O. 1, 30 11/2   | 05.05 |        |         |
| FSOR                | 1.1, 2, 11           | TEST CORRECTION                    | P.O. 1, 116 REV.<br>P.O.  | 05.05 |        |         |

TABLE 5.0-3 CONTINUED FOR PLANT OPERATIONS  
ORGANIZATION AND APPROPRIATION

| ACQUISITION<br>SUBJECT | COMMITMENT<br>SECTION | COMMITMENT<br>SUBJECT            | DOCUMENT FEATURE   | TITLE  | MOORE | FEDERALS |
|------------------------|-----------------------|----------------------------------|--|--|-------|----------|
| FS006                  | 17, 25, 11            | TEST PROCEDURES<br>SHALL INCLUDE | TEST PROCEDURES<br>SHALL INCLUDE THE<br>CORRELATION OF<br>ALL TESTABLE LIMITS IN<br>APPLICABLE<br>PROCEDURES<br>INSTRUCTIONS | TEST PROCEDURES<br>SHALL INCLUDE THE<br>CORRELATION OF<br>ALL TESTABLE LIMITS IN<br>APPLICABLE<br>PROCEDURES<br>INSTRUCTIONS | 05.05 | 05.05    |
| FS007                  | 17, 25, 11            | TEST PROCEDURES<br>SHALL INCLUDE | TEST PROCEDURES<br>SHALL INCLUDE THE<br>CORRELATION OF<br>ALL TESTABLE LIMITS IN<br>APPLICABLE<br>PROCEDURES<br>INSTRUCTIONS | TEST PROCEDURES<br>SHALL INCLUDE THE<br>CORRELATION OF<br>ALL TESTABLE LIMITS IN<br>APPLICABLE<br>PROCEDURES<br>INSTRUCTIONS | 05.05 | 05.05    |
| FS008                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN A<br>DESCRIPTION OF THE<br>TYPE OF OBSERVATION   | TEST RECORDS SHALL<br>CONTAIN A<br>DESCRIPTION OF THE<br>TYPE OF OBSERVATION   | 05.05 | 05.05    |
| FS009                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN EVIDENCE OF<br>CORRELATION AND<br>VELOCITY FOR THE TEST<br>OBSERVATION                         | TEST RECORDS SHALL<br>CONTAIN EVIDENCE OF<br>CORRELATION AND<br>VELOCITY FOR THE TEST<br>OBSERVATION                         | 05.05 | 05.05    |
| FS010                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN THE DATE AND<br>RESULTS OF THE TEST  | TEST RECORDS SHALL<br>CONTAIN THE DATE AND<br>RESULTS OF THE TEST  | 05.05 | 05.05    |
| FS011                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN ALL TEST DATA<br>TO BE USED FOR<br>DISPOSITION TESTS   | TEST RECORDS SHALL<br>CONTAIN ALL TEST DATA<br>TO BE USED FOR<br>DISPOSITION TESTS   | 05.05 | 05.05    |
| FS012                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN THE OBSERVATION<br>RELATED TO<br>THE OBSERVATION   | TEST RECORDS SHALL<br>CONTAIN THE OBSERVATION<br>RELATED TO<br>THE OBSERVATION   | 05.05 | 05.05    |
| FS013                  | 17, 25, 11            | TEST RECORDS SHALL<br>CONTAIN    | TEST RECORDS SHALL<br>CONTAIN THE OBSERVATION<br>RELATED TO<br>THE OBSERVATION   | TEST RECORDS SHALL<br>CONTAIN THE OBSERVATION<br>RELATED TO<br>THE OBSERVATION   | 05.05 | 05.05    |





Table 3.6-1 COMMENTS FOR PLANT OPERATIONS  
ORGANIZATION AND MODIFICATION

| CURRENT<br>SUBJECT | CURRENT<br>SECTION | CURRENT<br>SUBJECT                            | DESCRIPTION OF FEATURE   | DATE | REMARKS |
|--------------------|--------------------|---|--|------|---------|
| FSAR               | 17. 2. 12          | CONTROL OF + ASSEMBLING<br>AND TEST EQUIPMENT | CONTROL OF + ASSEMBLING<br>AND TEST EQUIPMENT<br>WILL HAVE<br>ONE FORM OF<br>THE FORMS OF THE<br>TESTING LOGS, A<br>GENERAL ORIENTATION<br>WILL BE OBTAIN, WHEN<br>LIMITED BY THE STATE<br>OF THE GEL. | 05   |         |
| FSAR               | 17. 2. 12          | CONTROL OF MEASURING<br>AND TEST EQUIPMENT    | CONTROL OF MEASURING<br>AND TEST EQUIPMENT<br>WILL HAVE<br>ONE FORM OF<br>THE FORMS OF THE<br>TESTING LOGS, A<br>GENERAL ORIENTATION<br>WILL BE OBTAIN, WHEN<br>LIMITED BY THE STATE<br>OF THE GEL.    | 05   |         |
| FSAR               | 17. 2. 12          | CONTROL OF MEASURING<br>AND TEST EQUIPMENT    | CONTROL OF MEASURING<br>AND TEST EQUIPMENT<br>WILL HAVE<br>ONE FORM OF<br>THE FORMS OF THE<br>TESTING LOGS, A<br>GENERAL ORIENTATION<br>WILL BE OBTAIN, WHEN<br>LIMITED BY THE STATE<br>OF THE GEL.    | 05   |         |
| FSAR               | 17. 2. 12          | CONTROL OF MEASURING<br>AND TEST EQUIPMENT    | CONTROL OF MEASURING<br>AND TEST EQUIPMENT<br>WILL HAVE<br>ONE FORM OF<br>THE FORMS OF THE<br>TESTING LOGS, A<br>GENERAL ORIENTATION<br>WILL BE OBTAIN, WHEN<br>LIMITED BY THE STATE<br>OF THE GEL.    | 05   |         |

Table 3.0-1 CORRELATIONS FOR FLIGHT OPERATIONS  
OPERATIONAL AND CORRELATION

| CORRELATION<br>SOURCE | VERIFICATION<br>SYMBOL | CORRELATION<br>SYMBOL | DOCUMENT/FEATURE   | FILE | PROBE | REMARKS |
|-----------------------|------------------------|-----------------------|--|------|-------|---------|
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |
| FS046                 | 1/1, 2/1, 3/1          | 1/1, 2/1, 3/1         | CORRELATION OF MEASURING RECORDS WILL BE<br>AND TEST EQUIPMENT<br>TO DATE OF<br>COMPLETE STATUS OF<br>ALL LINES UNDER THE<br>OPERATION SYSTEM. | 05   | 05    |         |

TABLE A-4. REQUIREMENTS FOR PLANT OFFSHORE  
REGULATORY AND NOTIFICATION

| COMMITTEE<br>SUBJECT | COMMITTEE<br>SUBJECT                          | DOCUMENT/REFERENCE   | TITLE | PROPERTY | REMARKS |
|----------------------|---|--|-------|----------|---------|
| 1. 2. 3. 4.          | COMMITTEE OF REGULATORY<br>AND TEST EQUIPMENT | FOR USE FOR<br>GATE, SENSITIVE AND<br>ONE CIRCULAR TEST<br>SMALL PROVIDER OR<br>LITERATURE, THAT IS<br>SUFFICIENTLY<br>CORRELATED TO ALLOW<br>PROPOSING DES. TO BE<br>EVALUATED AND GATE,<br>TO ITS FID,<br>RELEVANCE. | W5    |          |         |
| 1. 2. 3. 4.          | REQUIREMENTS, STORAGE,<br>AND SHIPING         | DEFINITION OF TERMS<br>BY OR AND MATERIAL<br>PROVISION WILL BE<br>MADE FOR THE USE OF<br>THE PLANT SITE, AND<br>FOR THE SHIPING,<br>WILL BE MADE FOR THE<br>STORAGE.   | W5    |          |         |
| 1. 2. 3. 4.          | REQUIREMENTS, STORAGE,<br>AND SHIPING         | FOR CULTURE,<br>SENSITIVE,<br>FERTILIZER, OR HIGH<br>VOLUME TERMS,<br>SPECIFIC OFFSHORE<br>FUNCTIONS FOR<br>REQUIREMENTS, STORAGE,<br>AND SHIPING, AND<br>USE.   | W5    |          |         |
| 1. 2. 3. 4.          | REQUIREMENTS, STORAGE,<br>AND SHIPING         | SPECIAL, BARRIERS,<br>TOOLS AND EQUIPMENT<br>ARE IDENTIFIED AND<br>TESTED IN accordance<br>WITH OFFSHORE<br>FUNCTIONS TO VERIFY<br>THAT THEY ARE<br>ADEQUATELY<br>FUNCTIONING.   | W5    |          |         |

[illegible]

TABLE 1. TUNING RANGES FOR CLONING OF P450 CYP15

Figure 1. The effect of the concentration of the polymer solution on the apparent viscosity of the polymer solution. The apparent viscosity of the polymer solution increases with increasing the concentration of the polymer solution.



王明賢、李國平：《中國會計學發展史》，上海：立信會計出版社，1987年。



TABLE 3.0-1 CORRECTIVES FOR FLAW IDENTIFIERS  
ORGANIZATION AND ADMINISTRATION

| CORRECTIVE<br>SOURCE | CORRECTIVE<br>ACTION | CORRECTIVE<br>ACTION         | DOCUMENT/FEATURE  | TITLE | PROBLE | REMARKS |
|----------------------|----------------------|------------------------------|---|-------|--------|---------|
| FSAR                 | 17, 2, 16            | CORRECTIVE ACTION            | SUPPL. RES. CORR. IS<br>REQUIRED FOR<br>REPAIRS OF DEFECTIVE<br>REPAIRS FOR ADVERSE<br>EFFECTS. IDENTIFIED<br>DEFECTS ARE REPAIR<br>TO THE DEFECT.  |       | 05     |         |
| FSAR                 | 17, 2, 16            | CORRECTIVE ACTION            | CORRECT. ACTION IS<br>INITIATED FOLLOWING<br>DETERM. OF CORRECT.<br>ADVERSE TO QUALITY,<br>FAILURE, PROTECT.<br>DEFECT, DEFECT, AND<br>EFFECT. AND<br>REPAIR OR, OR<br>SAFETY-RELATED SYS.<br>ARE GROUP. IS<br>ACTION, TRACKED. |       | 05     |         |
| FSAR                 | 17, 2, 16            | CORRECTIVE ACTION            | R.B. 1.33 REV. 2  |       | 05     |         |
| FSAR                 | 17, 2, 17            | QUALITY ASSURANCE<br>RECORDS | THE PRINTED RECORDS<br>TO BE CORRECTED AND<br>REPAIRED ARE<br>DESCRIBED IN THE<br>SPEC. DETECTED TO<br>RECORD REVISION  |       | 05     |         |
| FSAR                 | 17, 2, 17            | QUALITY ASSURANCE<br>RECORDS | R.B. 1.33 REV. 2  |       | 05     |         |
| FSAR                 | 17, 2, 17            | QUALITY ASSURANCE<br>RECORDS | R.B. 1.33 REV. 2  |       | 05     |         |



[illegible]

TABLE 5.W-1 COMMITMENTS FOR PLANT OPERATIONS  
ORGANIZATION AND ADMINISTRATION

| COMMITMENT<br>SOURCE        | COMMITMENT<br>SECTION | COMMITMENT<br>SUBJECT                 | DOCUMENT/FEATURE  | TITLE | MODULE | REMARKS |
|-----------------------------|-----------------------|---------------------------------------|---|-------|--------|---------|
| NRC QUEST, U/30,<br>CORRES. | 1                     | PP-W AND ROD CONTROL<br>SYSTEM REVIEW | REVIEW OF THE MAIN<br>FEEDWATER CONTROL<br>SYSTEM AND AUTOMATIC<br>ROD CONTROL SYSTEM<br>IS UNDERWAY, AND<br>RESULTS WILL BE<br>INCLUDED IN<br>SUBSECTIONS 15.2.7<br>AND 15.4.1,<br>RESPECTIVELY. |       | MS     |         |

TABLE 5.0-1 COMMITMENTS FOR PLANT OPERATIONS

ORGANIZATION AND ADMINISTRATION

| COMMITMENT<br>SOURCE | COMMITMENT<br>SECTION | COMMITMENT<br>SUBJECT | DOCUMENT FEATURE | TITLE | MODULE | REMARKS |
|----------------------|-----------------------|-----------------------|------------------|-------|--------|---------|
|----------------------|-----------------------|-----------------------|------------------|-------|--------|---------|

This page intentionally left blank

TABLE 3.0-1 CURRIBRENTS FOR FLIGHT OPERATIONS

ORGANIZATION AND ADMINISTRATION

| CURRIBRENT<br>SOURCE | CURRIBRENT<br>SUBJECT | CURRIBRENT<br>SUBJECT | DOCUMENT/FEATURE | TITLE | MODUL | REMARKS |
|----------------------|-----------------------|-----------------------|------------------|-------|-------|---------|
|----------------------|-----------------------|-----------------------|------------------|-------|-------|---------|

This page intentionally left blank

Table 3.0-1 COMMITTEES FOR FLIGHT OPERATIONS  
ORGANIZATION AND RESPONSIBILITY

| COMMITTEE SOURCE | COMMITTEE LEADER | COMMITTEE SUBJECT | ORGANIZATION | RESPONSIBILITY |
|------------------|------------------|-------------------|--------------|----------------|
| OSCE             | OSCE             | OSCE              | OSCE         | OSCE           |
| TECH. SPEC.      | OSCE             | TECH. SPEC.       | TECH. SPEC.  | TECH. SPEC.    |
| TECH. SPEC.      | OSCE             | TECH. SPEC.       | TECH. SPEC.  | TECH. SPEC.    |
| TECH. SPEC.      | OSCE             | TECH. SPEC.       | TECH. SPEC.  | TECH. SPEC.    |

TABLE 3.0-1 COMPLIANCE FOR PLANT OPERATIONS  
OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

| COMPLIANCE<br>SOURCE | COMPLIANCE<br>SECTION | CORRESPONDING<br>SUBJECT         | DESCRIPTION/REFERENCE  | TITLE | FIGURE   | REMARKS |
|----------------------|-----------------------|----------------------------------|--|-------|----------|---------|
| TECH.<br>SPEC.       | 6. 1.0                | CONDUCT OF<br>OPERATIONS         | SAFETY LIMIT<br>VIOLATION REPORT<br>SHALL BE NOTIFIED AS<br>SOON AS POSSIBLE<br>WITHIN THE WORK<br>SCHEDULED AND 300<br>SHALL BE NOTIFIED<br>WITHIN 24 HOURS.  |       | 05.07.05 |         |
| TECH.<br>SPEC.       | 6. 1.0                | SAFETY LIMIT<br>VIOLATION REPORT | SAFETY LIMIT<br>VIOLATION REPORT IS<br>REVIEWED BY THE URB.<br>IT CONTAINS APPLIC.<br>GROUP, PRECEDING<br>VIOLATION, EFFECTS<br>OF VIOLATION ON<br>COMPONENTS, SYSTEMS,<br>STRUCTURE, CORRECT.<br>ACTION GIVEN TO<br>PREVENT RECURRENCE. |       | 05       |         |
| TECH.<br>SPEC.       | 6. 1.0                | SAFETY LIMIT<br>VIOLATION REPORT | THE SAFETY LIMIT<br>VIOLATION REPORT<br>SHALL BE SUBMITTED<br>TO THE URB. 300 AND<br>VICE PRESIDENT &<br>GEN. MGR. MCL. OPS.<br>WITHIN 14 DAYS OF<br>THE VIOLATION.  |       | 05       |         |
| TECH.<br>SPEC.       | 6. 1.0                | CONDUCT OF<br>OPERATIONS         | SAFETY LIMIT<br>VIOLATION - LATENT<br>OPERATION OF THE<br>URB. SHALL NOT BE<br>RESUMED UNTIL<br>AUTHORIZED BY THE<br>COMMISSION.   |       | 05.07.06 |         |



Table 3.0-1 CHALLENGES FOR FLAM OVERTAKERS  
DROUGHT FOR ADD. CHALLENGES FOR FLAM

| CHALLENGE<br>SOURCE | CHALLENGE<br>SITUATION | CHALLENGE<br>SITUATION       | CHALLENGE<br>SITUATION       | CHALLENGE<br>SITUATION       | CHALLENGE<br>SITUATION       | CHALLENGE<br>SITUATION       |
|---------------------|------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| TECH.<br>SPEC.      | 5. 6. 1                | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS |
| TECH.<br>SPEC.      | 6. 7. 1, 6             | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS | TECHNICALS AND<br>TECHNICALS |

TABLE 1.0-1 CORRELATIONS FOR FLIGHT OBSERVATIONS  
ORIGINATOR (100) AND OBSERVER (100)

REMARKS

PHASE

TITLE

DOCUMENT REFERENCE

CORRELATION  
SUBJECT

COMPLETION  
SECTION

CORRELATION  
SOURCE

FROM  
SPEC.

1. 2.

SECTION REFERENCE

SECTION REFERENCE  
FOR THE CORRELATION  
IN THE REF. REFERENCE  
ORIGINATOR WITHIN  
THE TIME PERIOD  
SPECIFIED FOR EACH  
REFERENCE.

MS

### 3.5 IMPLEMENTATION MATRIX

Procedures for implementing commitments listed in the matrixes typically are contained in:

- Startup Manual procedures;
- Quality Assurance Department procedures;
- Procurement Policy Manual;
- Regulatory Compliance procedures;
- Plant Administrative procedures;
- Quality Control procedures.

Many plant procedures that will contain commitments are not yet developed or approved. Draft plant procedures are listed in the draft document column of the matrix and have not been verified to contain the listed commitments. These documents were identified for implementation based on initial procedure drafts and intent by the appropriate procedure writing group to include this commitment in the listed procedure. The commitment tracking system will be used to ascertain whether a commitment is included in the implementing document.

Commitments may be implemented in documents other than those listed in the implementation matrix. When this occurs, the commitment tracking system will determine whether implementation has been made and identify the actual implementing document. For more detailed information on the commitment tracking system, see section 4.9.1.

Several commitments in Table 3.0-2 are noted as having no procedure in progress, with commitments being tracked by Regulatory Compliance. For commitments in FSAR sections 1.9.37 and 17.2.11, these procedures are not needed until after fuel load. ITP activities, however, meet these commitments and are being conducted under the SUM and FSAR section 17.1.

For the commitment in FSAR section 17.2.2 concerning turnover of records from the NSSS vendor and A/E to GPC (Table 3.0-2), the following status exists:

- The turnover procedure is in draft form;
- The turnover submittal plan for QA records maintained by construction is developed;
- A document turnover matrix is developed and addresses format, media, and quality.

For commitments in FSAR section 17.2.13 concerning special handling tools and equipment, procedures have been written and approved for the polar crane, spent fuel cask crane, and other special handling equipment. To ensure that procedures are developed for other, as yet unidentified special handling equipment, this commitment is being tracked by the commitment tracking program.



古田生 3, 第 2 頁の「上田博士は、この問題について、1957 年 12 月 10 日、

作者地址：3, 4, 5 日本山口県宇布岐町 1-1-1 日本郵政 750-0195

Figure 1. The effect of the initial concentration of the monomer on the polymerization of  $\alpha$ -methylstyrene initiated by  $\text{BuLi}$  in THF at  $-78^\circ\text{C}$ . The polymerization was carried out in the presence of  $1.0 \times 10^{-2}$  mole/l. of  $\text{BuLi}$  in THF at  $-78^\circ\text{C}$ . The polymerization was terminated by the addition of methanol. The polymerization was carried out in the presence of  $1.0 \times 10^{-2}$  mole/l. of  $\text{BuLi}$  in THF at  $-78^\circ\text{C}$ . The polymerization was terminated by the addition of methanol.

[illegible]





[illegible][illegible]



TABLE 1.0-2 REPRESENTING DOCUMENTS FOR OFFICIALS

OFFICIALS REPRESENTING DOCUMENTS FOR OFFICIALS

| UNIT/ITEM<br>SUBJECT | COMMITTEE<br>SECTION | DOCUMENT/FEATURE  | REPORTING/SECTION | APPROVED DOCUMENT<br>REV DATE SECTION | OFFICIAL<br>DOCUMENT |
|----------------------|----------------------|---|-------------------|---------------------------------------|----------------------|
| FSAR                 | 1.1, 1.2, 2          | SAFETY RELATED MECH.<br>EQUIP. AND<br>SWITCHING EQUIP. IN<br>CONTROL BUILDING,<br>ADS, THERMAL<br>EQUIPMENT AND OTHER<br>EQUIP. OF PLANT WILL<br>BE SUBMITTED DURING<br>SAD TO DETERMINE<br>OF OUR HOUSE LEVEL. | REPORTING/SECTION | 000002-C 2 04-27-05 2.1               | 000000-C             |
| FSAR                 | 1.1, 1.2             | ADS WILL BE<br>CONCLUDED WITHIN THE<br>SYSTEM OF PLANT<br>PROTECTORS ARE<br>REVIEWED BY THE FRS.  | REPORTING/SECTION | 04-05-01 1.2 05-07-05                 | 000000-C             |
| FSAR                 | 1.1, 1.2             | DEFERRED ADDITS<br>WILL BE FORWARDED BY<br>THE OR DEFERRED BY<br>AS DELIVERED IN<br>ADMINISTRATIVE<br>FUNCTIONS (SEE<br>SECTION 1.1.2)  | REPORTING/SECTION | 04-05-01 1.2 05-07-05                 | 000000-C             |
| FSAR                 | 1.1, 1.2             | TO VERIFY THAT THE<br>OVERALL PROTECTION<br>PROTECTION PROGRAM<br>IS FULFILLING<br>PROPERLY, THE FRS<br>WILL REVIEW THE<br>WHICH REFERS TO<br>ADDS OF THE ADS<br>PROGRAM.                                       | REPORTING/SECTION | 04-22-05                              | 000000-C             |
| FSAR                 | 1.1, 1.2             | ADDS IS OF UNDESIR-<br>OR EXCESSIVE<br>CAPACITY OR CROSS-<br>ADDS IS WILL BE<br>REPORTED TO THE FRS<br>AS REQUIRED BY FRS,<br>OTHER 1.1.2.  | REPORTING/SECTION | 000000-C                              | 000000-C             |

TABLE 3.0-2 IMPULSIONS FOR DIFFERENT TYPES OF...

(f)  $\{x_0, x_1, \dots, x_{n-1}\} = \{y_0, y_1, \dots, y_{n-1}\}$

TABLE 5.4.2 THE ELEMENTS DOCUMENTS FOR OFFICIALS

NOTE: THE ELEMENTS DOCUMENTS FOR OFFICIALS ARE THE SAME AS THE ELEMENTS DOCUMENTS FOR OFFICIALS IN THE OTHER COUNTRIES.

THE ELEMENTS DOCUMENTS FOR OFFICIALS ARE THE SAME AS THE ELEMENTS DOCUMENTS FOR OFFICIALS IN THE OTHER COUNTRIES.

| ELEMENTS<br>SUBJECT | CURRENT<br>SECTION | DOCUMENT/FEATURE  | REMARKS/DESCRIPTION | REVISIONS |      | DATE     | SECTION | PAGE |
|---------------------|--------------------|---|---------------------|-----------|------|----------|---------|------|
|                     |                    |   |                     | NUMBER    | DATE |          |         |      |
| ESAR                | 12, 5, 1, 2        | PROCEDURES HAVE BEEN DEVELOPED FOR CONTROL OF TENSION OF CHARGES TO THE VUL PRODUCTION.   |                     | 000000-0  | 0    | 03-15-85 |         |      |
| ESAR                | 13, 5, 1, 2, 3     | 000000-07/57 ITEM 11.1.1.1.1  |                     | 000000-0  | 0    | 10-31-84 |         |      |
| ESAR                | 13, 5, 1, 2, 3     | FOR DATA REVIEW AND TEST PROCEDURE AND CHARGE DATA TO VUL PRODUCTION APPROVAL.  |                     | 000000-0  | 2    | 04-27-85 | 2.1.1   |      |
| ESAR                | 14, 5, 2, 4        | FOR ACCEPTANCE LETTERS HAVE BEEN PREPARED FOR THE PRODUCTION. THE PRODUCTION WILL BE COMPLETED. THE PRODUCTION WILL BE COMPLETED. THE PRODUCTION WILL BE COMPLETED. |                     | 000000-0  | 2    | 04-27-85 | 2.1.1.1 |      |
| ESAR                | 14, 5, 2, 4        | THE RESULTS OF S/D AND FROF. TESTS ARE REVIEWED BY TEST SUPERVISOR AND THE APPROPRIATE TEST CORRECTIONS.  |                     | 000000-0  | 6    | 05-18-85 | 6.5.1   |      |
| ESAR                | 14, 5, 2, 4        | FOR DATA REVIEW AND TEST PROCEDURE AND CHARGE DATA TO VUL PRODUCTION APPROVAL.  |                     | 000000-0  | 2    | 04-27-85 | 2.1.1   |      |

TABLE 3.A.2: PUBLISHED DOCUMENTS FOR ORIGINATORS  
ORGANIZATION AND ADMINISTRATION

| COMMITTEE<br>SOURCE | COMMITTEE<br>OFFICE | DOCUMENT TITLE   | PERSONS/ORGANIZATION | REFERENCE<br>NUMBER | DATE       | SECTION                      | DEPT<br>DOCUMENT |
|---------------------|---------------------|--|----------------------|---------------------|------------|------------------------------|------------------|
| FSAR                | 14. 2. 3            | THE PROCEEDINGS OF THE<br>FED WILL REVIEW THE<br>S/D TEST RESULTS.<br>THE RESULTS THAT<br>ARE NOT SATISFACTORY<br>WILL BE RESOLVED<br>UNDER THE OPERATION<br>OF THE FED PRIOR TO<br>TEST ACCEPTANCE. | PERSONS/ORGANIZATION | 00002-C             | 2 04-27-85 | 2.1.C                        |                  |
| FSAR                | 14. 2. 4            | FOR S/D TEST, THE<br>TEST RESULTS WILL BE<br>SUBMITTED TO THE FED<br>UNDER THE ACCEPTANCE<br>CRITERIA HAVE BEEN<br>MET OR EXCEEDED.  | PERSONS/ORGANIZATION | 00002-C             | 2 04-27-85 | 2.1.C                        |                  |
| FSAR                | 14. 2. 4            | VARIOUS DOC. WILL BE<br>REVIEWED ON A<br>CONTIN. BASIS TO<br>DETERM. IF THERE IS<br>ANY INFO THAT SHOULD<br>BE INCLUDED IN<br>SECT 5.11.   | PERSONS/ORGANIZATION | 00014-C             | 0 03-06-84 | 2.1.C<br>2.1.d<br>2.2<br>2.4 |                  |
| FSAR                | 14. 2. 4            | THESE DOCUMENTS<br>WILL BE USED FOR<br>ANALYSIS, NOTICES<br>AND CAPTURES.<br>SEE 5.11.11.11.11.<br>REMARKS AND DATA<br>LETTERS AND<br>TECHNICAL CORRECTIONS  | PERSONS/ORGANIZATION | 00014-C             | 0 03-06-84 | 2.1.C<br>2.1.d<br>2.2<br>2.4 |                  |
| FSAR                | 15. 2. 7. 1         | ANALYSIS OF THE<br>SECONDARY LINE FOR<br>ACCIDENT WILL BE<br>REAPPLIED ASSUMING<br>THE CONTROL AND<br>PROTECTION GRADE<br>SYSTEM INTERACTION.  | PERSONS/ORGANIZATION | 00009-C             | 1 05-22-85 |                              |                  |

SEE FSAR SECT. 0420.4, APPEND. 13





[illegible]



[illegible]

TABLE 3.0 - THE FOLLOWING DOCUMENTS FOR IDENTIFICATION  
ORGANIZATION AND APPLICABLE FOR

| APPROPRIATE SOURCE | COMMITTEE SECTION | DOCUMENT/FEATURE | REFERENCE NUMBER | APPROVED DATE | SECTION | DEPT 1 DOCUMENT |
|--------------------|-------------------|------------------|------------------|---------------|---------|-----------------|
|--------------------|-------------------|------------------|------------------|---------------|---------|-----------------|

ESAB 17, 2, 3 000000-0 2 00-27-05 2.1.1.2

IDENTIFIED SAFETY  
FEATURES AND THE  
SAFETY EVALUATION  
OF DESIGN CHANGES  
AND FEATURES  
CHANGES FOR SAFETY  
RELATED SYSTEMS  
SHALL BE REVIEWED BY  
THE SAFETY REVIEW  
BOARD.

ESAB 17, 2, 3 000000-0 004000-0

IN ADDITION,  
FEATURES WITH  
IDENTIFY THE  
VERIFICATION  
REQUIREMENTS. IN  
THE AREA OF THE  
ALTIMETER, THE  
FEATURES  
CONSTRUCTION TO BE  
REMOVED, AND THE  
EXTENT OF  
CORRECTION.

ESAB 17, 2, 3 000000-0 05-00-00 2.1.1.1

THE FOLLOWING REVIEW  
ALL PROPOSED MOD. TO  
SAFETY RELATED SYS.  
TO IDENTIFY ANY  
UNDESIRABLE SAFETY  
FEATURES  
(100-17-05, 09)

ESAB 17, 2, 3 000000-0 1.9, 6.3 00 000000-0

ESAB 1.64, REV. 2

ESAB 17, 2, 3 000000-0 004000-0

DESIGN CHANGES ARE  
REVIEWED TO ENSURE  
THAT DESIGN UNITS ARE  
IDENTIFIED AND  
IDENTIFIED & TEST  
UNITS ARE  
IDENTIFIED.



TABLE 5.4-2. IMPLEMENTING DECISIONS FOR ORGANOLOGS

[illegible]







TABLE 5.0 2. INSTALLATION REQUIREMENTS FOR INSTALLATIONS  
DESIGNED FOR THE AND APPROVED FOR

| COMPONENT<br>SOURCE | COMPONENT<br>SECTION | FUNCTION/FEATURE   | FUNCTION/SECTION | GROUP              | DATE                                   | REVISION |
|---------------------|----------------------|--|------------------|--------------------|--|----------|
| FSAR                | 17, 2, 5             | FROM SAFETY<br>ANALYSIS REPORT,<br>EMERGENCY PLAN,<br>SAFETY PLAN,<br>ENVIRONMENTAL<br>REPORTS, RECORDS,<br>SPECIFICATIONS, AND<br>OFFICIALS' LITERS<br>STATE ENVIRONMENTAL<br>REPORT. |                  | 00100-C<br>00100-C | 1 11-22-84<br>0 03-10-85               | 2.0      |
| FSAR                | 17, 2, 5             | QUALITY ASSURANCE<br>AND QUALITY CONTROL<br>PROGRAMS.  |                  | 00100-C            | 1 11-22-84                             |          |
| FSAR                | 17, 2, 5             | LABOR CONTRACTS,<br>OR STATE,<br>REGISTRATION, AND<br>REGULATION<br>DEPARTMENTS FOR<br>SAFETY RELATED<br>SYSTEMS, SYSTEMS,<br>OR CURRENTS.   |                  | 00100-C<br>00100-C | 1 11-22-84<br>0 03-10-85               |          |
| FSAR                | 17, 2, 5             | AS-BUILT DOCUMENTS   |                  | 00100-C            | 1 05-10-85                             |          |
| FSAR                | 17, 2, 5             | INSTRUMENTS AND<br>PROCEDURES FOR SUCH<br>ACTIVITIES AS<br>FABRICATION AND<br>INSTALLATION.  |                  | 00100-C<br>00100-C | 1 11-22-84<br>0 03-10-85               |          |
| FSAR                | 17, 2, 5             | INSPECTION AND TEST<br>PROCEDURES FOR<br>SAFETY RELATED<br>SYSTEMS, SYSTEMS,<br>OR CURRENTS.   |                  | 00100-C<br>00100-C | 2 07-29-84<br>0 03-10-85<br>1 11-22-84 |          |

TABLE I.  $\beta_{\text{eff}}$  and  $\beta_{\text{eff}}^{\text{eff}}$  for the different cases.
$$P(\mathbf{H} = \mathbf{h} | \mathbf{Y} = \mathbf{y}) = \frac{1}{Z(\mathbf{y})} \prod_{i=1}^n \frac{1}{\sigma_i} \exp \left( -\frac{1}{\sigma_i} \left( \frac{y_i}{\sigma_i} + \frac{1}{\sigma_i} \right) \right) \quad (11)$$

GOAL 5.02: THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

| COMPONENT<br>SECTION | COMPONENT<br>SECTION | COMPONENT<br>SECTION | COMPONENT<br>SECTION | COMPONENT<br>SECTION |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1.0, 2.0, 3.0        | 1.0, 2.0, 3.0        | 1.0, 2.0, 3.0        | 1.0, 2.0, 3.0        | 1.0, 2.0, 3.0        |

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN

THE LITERATURE DOCUMENTS FOR CHILDREN





Table No. 2 IMPLEMENTING DOCUMENTS FOR CRITERIA

ORGANIZATION AND ADMINISTRATION

| CURRENT SOURCE | CURRENT SECTION | DOCUMENT/FEATURE  | REFERENCE/SECTION | PIPER REV                     | DATE        | SECTION                          | DEPT                    |
|----------------|-----------------|---|-------------------|-------------------------------|-------------|----------------------------------|-------------------------|
| FS06           | 1.1, 2.1, 7.1   | WORKING ITEMS ARE IDENTIFIED, CONTROLLED AND SERIALIZED WITH FEEDBACK DISPOSITION TO Plant.   |                   | 00050-C<br>05307-C<br>00116   | 2<br>2<br>1 | 03-17-85<br>02-21-85<br>5.1.2    | 10.1<br>4.2.4<br>5.1.2  |
| FS06           | 1.1, 2.1, 7.1   | 1.1.1, 1.2.1, REV. 2  |                   |                               |             |                                  |                         |
| FS06           | 1.1, 2.1, 7.1   | 1.1.1, 1.2.1, REV. 2  |                   |                               |             |                                  |                         |
| FS06           | 1.1, 2.1, 7.1   | PROCEDURES SHALL PROVIDE VERIFICATION FOR THE ITEMS RECEIVED AND PROPERLY IDENTIFIED AND CAN BE ISSUED.   |                   | 00050-C<br>00051-C<br>05307-C | 2<br>0<br>2 | 03-17-85<br>08-14-84<br>02-21-85 | 0.3.1<br>0.3.1<br>2.2   |
| FS06           | 1.1, 2.1, 7.1   | PROCEDURES WILL PROVIDE VERIFICATION OF ITEM IDENTIFICATION, CONSISTENT WITH THE INVENTORY CONTROL SYSTEM.  |                   | 00050-C<br>05307-C            | 2<br>2      | 03-17-85<br>02-21-85             | 0.3.1<br>0.3.1          |
| FS06           | 1.1, 2.1, 7.1   | PLANT ADMIN. PROCEDURES SHALL DESIGNATE PLANT STAFF ACTIVITIES AND RESPONSIBILITIES FOR THE PLANT AND CONTROL THIS FUNCTION.  |                   | 00050-C<br>00051-C<br>05307-C | 2<br>0<br>2 | 03-17-85<br>08-14-84<br>02-21-85 | 0.3.1<br>0.3.1<br>0.3.1 |
| FS06           | 1.1, 2.1, 7.1   | DEFECTS, FAILURES AND CORRECTED SHALL BE IDENTIFIED AND CONTROLLED TO PREVENT OR PROTECT OF DEFECTIVE ITEMS, LOCATION AND METHOD OF IDENTIFICATION SHALL NOT EFFECT OURITY OR FUNCTION OF ITEM. |                   | 00050-C<br>05307-C            | 2<br>2      | 03-17-85<br>02-21-85             | 4.2.3<br>4.2.2<br>4.2.2 |

SEE SECTION 1.9.33 OF MATRIX

SEE SECTION 1.9.33 OF MATRIX

TABLE 2.40. 2. THE CHINESE DOCUMENTS FOR CALCULATIONS





TABLE 5.0-2 PHOTOGRAPHING PROCEDURES FOR ORIGINATIONS  
ORGANIZATION AND MODIFICATION

| COMPLETION<br>SPRINT | COMPLETION<br>DATE | DESCRIPTION/FLAVOR  | REMARKS/SUBJECT  | APPROVED<br>DATE                | APPROVED<br>DATE | DEPT<br>DOCUMENT |
|----------------------|--------------------|---|--|---------------------------------|------------------|------------------|
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. | SEE SECTION 1.2, 3.0 OF PART 1. |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |
| FSAR                 | 10. 2. 11          | TEST RECORDS SHOULD<br>BEAT THE DATE<br>ORIGINATOR'S FOR<br>TESTING THE TEST. | NO PROCEEDURES IN PROGRESS,<br>COMPLETION BEING TRACKED BY<br>REGULATORY COMPLIANCE. |                                 |                  |                  |

Table 5.0-2 DELETED DOCUMENTS FOR ORIGINATORS

ORIGINATOR AND SUBSECTION

| ORIGINATOR | ORIGINATOR SECTION | DELETED DOCUMENT | REMARKS/ SUBSECTION | DATE | SECTION | ORIGINATOR |
|------------|--------------------|------------------|---------------------|------|---------|------------|
|------------|--------------------|------------------|---------------------|------|---------|------------|

1. 11

TEST RECORDS SHALL  
BE MAINTAINED FOR  
DEFENSE, IF  
APPLICABLE.

THE PROCEEDINGS IN PROGRESS,  
ORIGINATOR RECORDS, BY  
REGULATORY COUNCIL.

1. 12

ORIGINATOR SHALL  
BE MAINTAINED FOR  
DEFENSE, IF  
APPLICABLE.

000000-C 0 00 14 04 4.2.2

1. 12

PROCEEDINGS ARE  
ESTABLISHED TO  
PRESERVE THAT  
PROCEEDINGS FOR  
WITH THE FORM TO  
BE USED OF  
ORIGINATOR WILL BE  
ESTABLISHED TO  
DETERMINE THE NEED  
FOR PROTECTION.

000000-C 0 00 14 04 4.2.2

1. 12

ORIGINATOR SHALL  
BE MAINTAINED FOR  
DEFENSE, IF  
APPLICABLE.

000000-C 0 00 14 04 4.2.2



TABLE A-2. DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

DISCREPANCY DISCREPANCY FOR OPERATIONS

TABLE 1.0.2. ELEMENTS DESCRIBED FOR THE PURPOSES  
OF THE 1975-1976 ANNUAL REPORT

| CORRELATION<br>NUMBER | CORRELATION<br>SECTION | DESCRIPTION/FEATURE   | REFERENCE/SECTION | APPROVED<br>DATE | REMARKS |
|-----------------------|------------------------|---|-------------------|------------------|---------|
| 1.0.2.1               | 1.0.2.1                | THE FOLLOWING TABLE<br>LISTS THE ELEMENTS<br>DESCRIBED FOR THE<br>PURPOSES OF THE<br>1975-1976 ANNUAL<br>REPORT, TO BE USED IN<br>THE 1975-1976 ANNUAL<br>REPORT OF THE<br>COMMISSIONERS, STUDENTS &<br>STAFF | 1.0.2.1           | 1975-1976        | 1.0.2.1 |
| 1.0.2.2               | 1.0.2.2                | THE FOLLOWING TABLE<br>LISTS THE ELEMENTS<br>DESCRIBED FOR THE<br>PURPOSES OF THE<br>1975-1976 ANNUAL<br>REPORT, TO BE USED IN<br>THE 1975-1976 ANNUAL<br>REPORT OF THE<br>COMMISSIONERS, STUDENTS &<br>STAFF | 1.0.2.2           | 1975-1976        | 1.0.2.2 |
| 1.0.2.3               | 1.0.2.3                | THE FOLLOWING TABLE<br>LISTS THE ELEMENTS<br>DESCRIBED FOR THE<br>PURPOSES OF THE<br>1975-1976 ANNUAL<br>REPORT, TO BE USED IN<br>THE 1975-1976 ANNUAL<br>REPORT OF THE<br>COMMISSIONERS, STUDENTS &<br>STAFF | 1.0.2.3           | 1975-1976        | 1.0.2.3 |
| 1.0.2.4               | 1.0.2.4                | THE FOLLOWING TABLE<br>LISTS THE ELEMENTS<br>DESCRIBED FOR THE<br>PURPOSES OF THE<br>1975-1976 ANNUAL<br>REPORT, TO BE USED IN<br>THE 1975-1976 ANNUAL<br>REPORT OF THE<br>COMMISSIONERS, STUDENTS &<br>STAFF | 1.0.2.4           | 1975-1976        | 1.0.2.4 |



[illegible]

TABLE 1.4.2: DEFECTS/REWORKS FOR OPENING  
DEFECTS/REWORKS FOR OPENING

| CERTIFICATE<br>SOURCE | DEFECT/REWORK | DEFECT/REWORK  | DEFECT/REWORK  | DEFECT/REWORK  | DEFECT/REWORK  | DEFECT/REWORK  |
|-----------------------|---------------|--|--|--|--|--|
|                       |               |  |  |  |  |  |
| 1500                  | 1. 2. 15      | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING |
| 1500                  | 1. 2. 15      | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING |
| 1500                  | 1. 2. 15      | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING |
| 1500                  | 1. 2. 15      | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING |
| 1500                  | 1. 2. 15      | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING | DEFECTS/REWORKS FOR OPENING<br>DEFECTS/REWORKS FOR OPENING |

SEE SECTION 1.5, 30 OF DRAWING











TABLE 3.0-2 THE CLIPPING DOCUMENTS FOR OPERATIONS  
ORGANIZATION AND ADMINISTRATION

| COPYRIGHT<br>SOURCE | COPYRIGHT<br>SECTION | DOCUMENT/FEATURE | CLIPPING/SUBSECTION | NUMBER | REVISED DATE | SECTION | DRAWN<br>BY |
|---------------------|----------------------|------------------|---------------------|--------|--------------|---------|-------------|
|---------------------|----------------------|------------------|---------------------|--------|--------------|---------|-------------|

DOC. QUEST. 0430, 5  
CORRES.

0003500-C 0 03-19-85

ALPHABETICALLY  
PROCESSES WILL BE  
UTILIZED TO CONTROL  
THE RESOLUTION OF  
CLIPPING UPON  
COMPLETION OF  
REPAIRS OR  
MAINTENANCE.

DOC. QUEST. 0450, 0  
CORRES.

0003500-C 0 03-19-85

RESOLUTION OF DIS-  
CONTINUITY 450, 0  
LATER WILL BE  
ADDRESSING AS FOR A  
SUBJECT OF FOR PRO-  
CESSING AND RESOLVED  
OR PROPOSED  
EVALUATING CAPABILITY  
OF ATRIAL PRO-  
CESSING IS CAPABLE  
FOR ALL, FOR.

DOC. QUEST. 0450, 1  
CORRES.

0003500-C 0 03-19-85

LEVEL OF THE DATA  
FEEDBACK CONTROL  
SYSTEM AND AUTOMATIC  
FOR CONTROL SYSTEM  
IS ORDERED, AND  
RESULTS WILL BE  
INCLUDED IN  
SUBSECTION 15.4.1,  
AND 15.4.1,  
RESPECTIVELY.

SEE FORMS SECT. 0420, 4, FOR HD. 15 FOR  
REPLACES

0003500-C 0 03-19-85

DOC. E. 3.0-2 IMPLEMENTING DOCUMENTS FOR OPERATIONS  
ORGANIZATION AND ADMINISTRATION

| COMPONENT<br>SOURCE | COMPONENT<br>SECTION | DOCUMENT / FEATURE | SUB-SECTION | APPROVED DOCUMENT |      | DOC. E. |
|---------------------|----------------------|--------------------|-------------|-------------------|------|---------|
|                     |                      |                    |             | NUMBER            | DATE |         |

This page intentionally left blank

TABLE 3.0.2 PRECEDING DOCUMENTS FOR OPERATIONS  
ORGANIZATION 640 ADMINISTRATION

| COPYRIGHT<br>SOURCE | AUTHORITY<br>SECTION | DOCUMENT / FEATURE | REPORTS / SUBSECTION | REPORT<br>NUMBER | APPROVED DOCUMENT<br>DATE | SECTION | DDO<br>DOCUMENT |
|---------------------|----------------------|--------------------|----------------------|------------------|---------------------------|---------|-----------------|
|---------------------|----------------------|--------------------|----------------------|------------------|---------------------------|---------|-----------------|

This page intentionally left blank

Table 3.0-2 IDENTIFYING DOCUMENTS FOR OPERATIONS  
ORGANIZATION AND ADMINISTRATION

| DOCUMENT SOURCE | COMPONENT SECTION | DOCUMENT/FEATURE | REPORT S/SUBSECTION | NUMBER | REV | DATE | SECTION | DOCUMENT |
|-----------------|-------------------|------------------|---------------------|--------|-----|------|---------|----------|
|-----------------|-------------------|------------------|---------------------|--------|-----|------|---------|----------|

NO PROCEDURE IN PROGRESS SUPPLEMENT  
BEING TRACKED BY REGULAR  
SUPPLEMENT.

STATE THE END OF  
THE VARIOUS LETTERS  
OF THE FORMS IN  
PROGRESS  
ORIGINATING FROM  
FOR REVIEW AND  
APPROVAL TO THE

OF THE TO THE



[illegible]

THE UNIVERSITY OF CHICAGO LIBRARY

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

1994年12月24日，上海市长江大桥（即南浦大桥）落成，全长1172米，主跨423米，是当时世界上跨度最大的双塔双索斜拉桥。

Public Health and Safety, and the Department of Health and Human Services.

1.  $\frac{1}{2} \log \frac{1}{2}$

[illegible]

FELLS, SPEC.

STATION, CHINA;  
SIGNAL DE SCOUTS  
IN THE AIR, IN THE  
OCEAN SURFACE, AND  
THE TIME TAKES  
TO CLIMB, FOR EACH  
CLIMB.

#### 4.0 PROGRAM DESCRIPTION

The plans for the Vogtle Nuclear Operations Administrative Controls are in the process of being implemented and will be fully implemented at least 90 days before fuel load. Administrative controls are phased in as operating plant procedures are written and approved to support preparations for operations.

Nuclear Operations personnel have been with the Vogtle project since formation of the project in 1976. The plant organization was approved by GPC management in February 1982. Since that time the positions have been filled to support preparations for operations and the initial test program (Module 3A).

This section of the module addresses the GPC organization for plant operation and how the organization implements the OQAP. In addition it discusses the implementation of licensing commitments. It describes responsibility, authority, and measures for the control and accomplishment of activities affecting the quality of safety-related structures, systems, and components of VEGP.

The format of section 4.1 is such that a subsection addresses each of the 18 criteria of 10 CFR 50, Appendix B, and the program to implement these criteria. Additional sections (4.2 through 4.10) address other administrative controls which are in place to ensure safe and reliable plant operation.

## 4.1 IMPLEMENTATION OF 10 CFR 50 APPENDIX B

### 4.1.1 ORGANIZATION

The organizational structure for VEGP is described in detail in section 2 of this module. The following description amplifies section 2 with regard to establishment and execution of the OQAP.

The OQAP organization is shown schematically in Figure 4.1-1. The principle organizational entities implementing the program are as follows:

- Corporate management;
- Safety Review Board;
- Nuclear Operations Organization;
- Quality Assurance Department;
- Engineering and Construction Services Department;
- Plant Review Board;
- Southern Company Services.

#### 4.1.1.1 Corporate Management Responsibility

The executive vice president, power supply is the final management authority responsible for the development, implementation, and review of the OQAP. He regularly assesses the scope, adequacy, and compliance of the program to 10 CFR 50, Appendix B, through frequent meetings with the vice president and general manager, quality assurance, review of Safety Review Board activities, and assessment of quality assurance audits. Also, an annual assessment of the program is conducted by the vice president and general manager, quality assurance, and the results are reported to the Quality Assurance Committee (QAC). The QAC has been organized using senior management of GPC and SCS, and acts as the advisory group to the GPC executive vice president, power supply. The primary purposes of this committee are to gage the effectiveness of the VEGP QA program and to recommend corrective measures to the GPC executive vice president, power supply, where necessary.

#### 4.1.1.2 Safety Review Board

The Safety Review Board (SRB) provides independent review of operating activities. The board is composed of a minimum of seven persons who, as a group, provide the expertise to review

and audit the operation of VEGP and advise the executive vice president, power supply, on matters related to safety. The chairman, vice chairman, and members are appointed by the executive vice president, power supply, or his designee. The composition of the board meets the requirements specified in section 6 of the VEGP draft Technical Specifications. The SRB for Plant Hatch is functioning and the VEGP SRB will function in a similar manner.

The board will meet at least once per calendar quarter during the initial year of the operation following fuel loading and at least once per 6 months thereafter.

The SRB will review those items delineated in section 6 of the VEGP draft Technical Specifications.

#### 4.1.1.3 Nuclear Operations Organization Responsibility

The GMVNOD is responsible to the VPGMNO for the safe, reliable, and efficient operation of VEGP, including implementation of the OQAP requirements with the exception of responsibilities assigned to the QA Department.

The plant staff performs safety-related activities in accordance with written, approved procedures. Quality requirements are included in detailed plant procedures. The superintendents and supervisors in the operations organization are responsible for implementation of the OQAP for activities under their purview. Procedure 00001-C, Plant organization and Managerial Staff Responsibilities and Authority, revision 0, is scheduled for approval by July 15, 1985. It covers the responsibilities of upper levels of plant management.

#### 4.1.1.4 Plant Review Board

The PRB serves as a review and advisory board for the GMVNOD. The PRB's responsibilities include review of the following:

- Procedures which implement the QA program;
- Procedures for changing plant operating modes;
- Emergency and abnormal operating procedures;
- Procedure for effluent releases;
- Fuel handling procedures;
- Programs required by VEGP draft Technical Specification 6.8.4.

Board members are appointed by the GMVNOD. They are all full time VEGP staff members and normally hold a supervisory or higher management position and provide technical advice for their departmental area. As a minimum, board members education and experience are equal to the staff supervisory positions they represent.

Procedure 0002-C, Plant Review Board - Duties and Responsibilities, establishes a PRB, defines its responsibilities, and provides instructions for performing its duties.

#### 4.1.1.5 Quality Assurance Department

The vice president and general manger, quality assurance, is responsible to the executive vice president, power supply, for assessing implementation of the OQAP and for managing activities of the QA Department at VEGP.

Specific duties and responsibilities of the vice president and general manger, quality assurance, include:

- Manages the GPC Quality Assurance Department;
- Develops the Quality Assurance Department portions of OQAP to conform to approved policies;
- Approves the GPC VEGP Quality Assurance Manual and charges thereto;
- Maintains close liaison with the GMVNOD to ensure that program policies and procedures are being implemented and enforced;
- Keeps the executive vice president, power supply, informed on quality matters;
- Informs GPC management of quality assurance activities through distribution of audit reports, quarterly presentation to quality assurance committee, and other relevant correspondence.

The VEGP quality assurance manager, who reports to the vice president and general manager of quality assurance, is responsible for ensuring that approved quality assurance programs are implemented by the VEGP plant staff and support organizations.

Located at the plant site and reporting to the VEGP quality assurance manager, the quality assurance site manager manages the quality assurance field group. Specific duties and responsibilities of the quality assurance field group include:

- Prepares annual schedule and performs planned audits of organizations and activities (GPC and contractors);
- Provides the VEGP quality assurance manager with activity reports;
- Maintains open items list from NRC inspections and quality assurance field group audits; follows up until resolved and closed out;
- Participates in the review process for plant procedures.

Further information and details of Operations QA organization activities and commitments are included in Appendix I.

#### 4.1.1.6 Engineering and Construction Services

The GPC Engineering and Construction Services Department, under the direction of the vice president, engineering and construction services, is responsible for providing engineering, technical, and human resources support to the various power supply organizations. During the operation of VEGP, the department is responsible for providing technical support as requested by plant management.

#### 4.1.1.7 Southern Company Services, Inc.

SCS is the architect/engineer for VEGP during operational phase of the plant. The work scope includes activities such as plant modifications and related development of purchase specifications for equipment and materials, administration of purchase orders, and supplier surveillance functions. SCS works to their quality procedures in providing operations engineering support to VEGP. These procedures comply with the OQAP requirements in FSAR Chapter 17.2.

#### 4.1.2 OPERATIONS QUALITY ASSURANCE PROGRAM

OQAP is a total quality program to establish and maintain standards of quality covering the engineering, design, procurement, manufacturing, construction, testing, maintenance, repair, refueling, and modifications of applicable structures, components, and systems for VEGP.

The OQAP requirements and controls are established to comply with the requirements of 10 CFR 50, Appendix B. The VEGP QA Manual, which ensures that the OQAP meets the criteria of 10 CFR 50, Appendix B, will be updated and the key implementing procedures will be issued and/or become effective at least 90 days prior to fuel load. The policies, goals, and objectives of



the OQAP are addressed in Appendix I and are covered in section 17.2 of the FSAR.

Table 4.1-1 is a list of certain plant procedures that implement the OQAP.

#### 4.1.3 DESIGN CHANGE CONTROL

Design activities associated with modifications of the operating plant are controlled, approved, and implemented by the Vogtle plant management. The administrative controls for requesting, developing, approving, and implementing design modifications are delineated by plant administrative procedures.

The design of plant modifications requested by Nuclear Operations that affect the operations of safety-related systems is the responsibility of SCS which has written procedures established to carry out design activities in a planned, controlled, and orderly manner. Procedure controls ensure that regulatory requirements for design criteria are properly translated into specifications, drawings, and procedures. SCS has access to pertinent background information and has an understanding of the requirements of the original design.

Completed design changes are reviewed by appropriate plant personnel for adequacy of design and by the Plant Review Board for approval. Any errors or deficiencies found in the design or design process are documented and corrective action is initiated by SCS and reviewed for potential reportability. Approved design documents and their revisions are controlled and distributed by Document Control.

Procedure 00400-C, Plant Modifications, scheduled for approval July 1985, addresses the following:

- Routing of the design change request through the Nuclear Operations organization;
- Evaluation of the design change request by the engineering, regulatory compliance, fire protection, and safety departments;
- Dispositioning of the design change request by the PRB;
- Assigning of the design change request to SCS for design and verification if required;
- Implementing the design modification package with a maintenance work order;
- Coordination of procedures, drawing, and document changes required as a result of the design modification;

- Notification to operating personnel of how the design change will effect operation of the plant, systems, or equipment.

Module 7 will present in detail the design change process, controls over the process, and review and implementation of the design change.

#### 4.1.4 PROCUREMENT DOCUMENT REVIEW

Procurement document review is accomplished by procedures that delineate the criteria and process by which procurement documents are reviewed for technical adequacy and quality requirements. Also, methods are defined and requirements established for the preparation and approval of requisitions for procurement.

Procurement of items for which specifications exist are initiated in accordance with procedure 00800-C, Requisition of Materials and Services. When the original replacement part is no longer available the procurement review section-site (PRS-site) of the Plant Engineering Department performs an equivalency determination of the replacement items as described in procedure 50002-C, Engineering Reviews. Procurement of items for which specifications do not exist requires a Request for Engineering Assistance (REA), which is written to request an engineering evaluation and approval, as defined in procedure 50005-C, Requesting Engineering Assistance. Procedure 00203-C, Requisition Review for Technical and Quality Requirements, delineates the responsibility of quality control to review requisitions (except for supplies not used in the operation, maintenance, or modification of the plant) to determine if the requested item is safety-related. If the requisition contains safety-related items, the PRS-site, reviews the requisition for:

- Technical adequacy;
- Safety designations;
- Environmental qualifications per 10 CFR 50.49;
- Appropriate procurement level designation;
- Adequate specification of requirements;
- Proper consideration of quality requirements;
- Vendor qualification.

The materials supervisor is responsible for:

- Assignment of requisition number;

- Typing supply requisitions;
- Maintaining procurement document working files;
- Distribution of procurement documents to appropriate personnel.

The document control supervisor maintains and controls procurement document records which are forwarded to him.

Module 7 will present a detail discussion of the site procurement review section and the materials group.

#### 4.1.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Activities affecting quality are controlled by documented instruction, procedures, and drawings. The GMVNOD is responsible for ensuring that procedures are prepared and followed and that personnel are trained on the use of procedures.

Procedure 00101-C, Drawing Control, delineates the method for receiving, processing, and issuing for use, the latest approved drawings and drawing changes. Procedure 00103-C, Document Distribution and Control, provides the methods used to distribute, maintain, and update documents to ensure current information is available for use. Procedure 00050-C, Procedures Writers' Guide, details the requirements procedures are to have incorporated, explains the procedure numbering system, and shows the general format a procedure is to follow. Procedure 00051-C, Procedures Review and Approval, details the cycle a new procedure must clear before approval and also the cycle of renewal an existing procedure will follow before approval.

Procedure 00054-C, Rules for Performing Procedures, outlines rules which must be followed by all VEGP personnel when performing activities in accordance with procedures.

#### 4.1.6 DOCUMENT CONTROL

The Nuclear Operations' Document Control Section is responsible for receiving, processing, issuing, maintaining and updating drawings, documents, and vendor manuals with the most current information. Document Control activities include:

- Receiving approved drawings and Design Change Notices (DCNs) directly from the originating organization;
- Filing and making available for distribution all new drawings and DCNs;

- Receiving plant documents directly from originators and issuing this information to all appropriate controlled manuals;
- Receiving vendor manuals and responsible for controlling and distributing of these manuals.

Document Control distribution is by the use of document transmittal forms with receipt acknowledgement required.

Information may be obtained from the main Document Control station or from satellite stations. Satellite stations are established for the Engineering, Maintenance, Operations, and Training Departments. The Engineering satellite stations are maintained by Document Control personnel; the other satellite stations are maintained by their own department personnel. The same controls are established for these stations as are in effect for the main Document Control station.

Controlled drawings represent the most recent information and are issued to individuals approved to receive them. These documents are to be used by personnel performing work on a plant system. Uncontrolled drawings are for information purposes only and are not to be used to perform work.

The document control supervisor is responsible for the receiving, file maintenance, and distribution of documents. These duties are covered by procedure 00101-C, Drawing Control; procedure 00103-C, Document Distribution and Control; and procedure 00108-C, Control, Approval, and Use of Vendor Manuals and Revisions.

The general procedures for assuring the quality of documents are contained in procedure 00100-C, Quality Assurance Records Administration. This procedure is written, specifically, for QA records; but it is applicable to other documents. It specifies the approval process of documents and assures that the documents are approved by authorized personnel.

General Appendix D, describes in detail the project document control program.

#### 4.1.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

Spare and replacement parts of safety-related structures, systems, and components are subject to technical requirements and to quality assurance program controls. The Procurement Review Section-General Office (PRS-GO) and the PRS-site work in conjunction to assure supplier qualification, supplier evaluation process, and receiving inspections are performed.

The PRS-GO is responsible for the selection, evaluation, and qualification of suppliers for the Qualified Supplier List

(QSL). Vogtle Nuclear Operations personnel, who determine the need to have a supplier qualified, initiate a request for qualification to the PRS-GO. The PRS-GO schedules, performs, and documents the audit of a supplier. Engineering may request an in-shop surveillance audit of supplier activities. The PRS-site ensures that major component replacements that had in-shop surveillance requirements on the original order are reordered with the same requirements.

The materials supervisor is responsible for the receipt of items delivered to the Vogtle site. He is responsible for implementation of procedure 00850-C, Material Receiving and Inspection, which provides instructions and responsibilities for the receiving and inspection of equipment, materials, and supplies. Materials determined to be safety-related by the PRS-site are inspected by the QC section to verify conformance to quality requirements in accordance with procedure 85307-C, Quality Control Receipt Inspection.

Module 7 will contain detail descriptions of the PRS-site and materials group activities.

#### 4.1.8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

Identification and control of materials is maintained either on the item or on records traceable to the item to preclude use of incorrect or defective items. Safety-related material is positively identified or marked to allow traceability to the purchase order. Items of size, shape, or consistency which preclude marking are tagged or otherwise suitably marked to ensure cross-referencing the item to the purchase order. Documentation is filed in the purchase order file maintained by the material section until the equipment material documentation field representative (EMDFR) has approved the acceptability of the documentation.

Material withdrawals from the warehouse are processed by materials section personnel when a completed request form is submitted. The identity of materials, components, and parts is verified at the time of issue to ensure traceability of the items to the procurement document. The material is located by use of the inventory control system. Material returned to the warehouse is submitted with a stock material return form. QC is notified for an inspection of safety-related stock material returns.

Transactions affecting the stock inventory level are tracked by the inventory control system. When stock levels are reduced to the minimum quantity levels the inventory control system identifies the items to the material section so a reorder of material can be initiated.



Material and equipment having identified deficiencies may be released for installation on a conditional release basis. The justification must be evaluated and approved by PRS-site and QC. A log is maintained by QC for tracking purposes, and a QC hold tag remains attached to the equipment until the deficiency is resolved.

Procedure 00850-C, Material Receiving and Inspection, and Procedure 00853-C, Material Identification, Control, and Issue, are plant administrative procedures that implement identification and control of materials, parts, and components.

#### 4.1.9 CONTROL OF SPECIAL PROCESSES

Special processes are those processes where direct inspection may not be practical, such as welding, heat treating, nondestructive testing, brazing, chemical cleaning, electroplating, and protective coatings. Special processes conform to written requirements and documentation to ensure that these processes are conducted by qualified personnel using qualified procedures.

Responsibilities for special process activities are divided between work performed by GPC personnel and work performed by a GPC contractor. The superintendent of the responsible department reviews and qualifies the procedures for special processes, the personnel performing special processes, and the special process operations as required. Qualified plant personnel perform special processes only within their individual performance qualifications. The job specification identifies that work considered to be special process activities.

The contractor is responsible for furnishing qualified personnel to perform special process activities. The superintendent of plant engineering and services ensures the contractor meets the requirements for special process procedures and personnel. Through the use of procedure 00801-C, Control of Onsite Contractors, the superintendent of QC ensures:

- Adequacy of contractor personnel qualification, for special procedures, inspections, and tests including criteria of ANSI N45.2.6, ASME Code SNT-TC-1A, and ANSI N18.1, as applicable to the task;
- Contractor work procedures have been reviewed and approved by VEGP personnel;
- Adequacy of transfer of contractor-generated QA records;
- Adequacy of contractor planned inspections and tests including acceptable acceptance criteria;

- The establishment of QC inspections and/or work monitoring programs to verify conformance with contractor purchase order, compliance with contractor supplied procedures, VEGP procedures, and compliance of contractor activities with the quality related requirements of Maintenance Work Orders and work packages.

Procedure 00204-C, Control of Special Processes, provides administrative controls for special processes. The purpose of procedure 00204-C is to ensure that special process activities are conducted by qualified personnel using qualified procedures. The procedure not only controls work activities by GPC personnel but also work activities performed by qualified contractors.

#### 4.1.10 INSPECTIONS

The Quality Control Inspection Program verifies conformance of activities affecting quality for safety-related work activities. QC inspections for safety-related items are performed to ensure adherence to quality requirements, and for nonsafety-related items are performed to aid in assuring that plant reliability is enhanced and maintained. QC inspection personnel are trained and qualified according to approved plant procedures and records are established and maintained for these QC personnel.

The superintendent of QC is responsible to the superintendent of regulatory compliance for administration and implementation of an effective QC inspection program. QC specialists perform inspections to verify conformance of activities affecting quality (safety-related) and reliability of nonsafety-related activities. Activities are performed using calibrated test equipment (see section 4.1.12, Control of M&TE).

Procedure 00201-C, QC Inspection Program, establishes measures to assure that activities affecting quality are inspected by QC personnel. Procedure 85100-C establishes the method for preparing, implementing, and reviewing QC inspection plans and inspection reports which are used by QC to prescribe and document inspections. Training and qualification procedures are procedure 85001-C, QC Department Training, and procedure 85003-C, Training and Qualification of QC Nondestructive Testing Personnel. Engineering involvement is accomplished through the use of engineers/technical personnel to write plant procedures requiring the use of hold points. In addition, engineering provides acceptance criteria for procedures.

#### 4.1.10.1 Development of Inspection Plans (IP)

Procedure 85100-C, Quality Control Inspection Plans, Reports, and Documentation, details the development and documentation of inspection plans. These plans are developed for use during the life of the plant and can be of a generic or specific nature. The plans include:

- Identification of characteristics and activities to be inspected such as name, tag number, etc;
- Description of the method of inspection, visual inspection, measurement, etc;
- Acceptance criteria;
- Identification of any required procedures, drawings, or specifications;
- Provisions for signing and dating each completed step of the plan;
- Provisions for documenting satisfactory or unsatisfactory conditions and inspection results;
- Provisions for identification of calibrated M&TE used;
- Provision for entering associated or controlling document identification, such as Maintenance Work Order, Design Change Request Number, etc.

#### 4.1.11 TEST CONTROL

Tests by VEGP operations personnel to ensure satisfactory performance of structures, systems, and components are conducted by qualified personnel using written, approved procedures. Plant management, responsible for conduct and control of plant tests, ensures qualified personnel adhere to the appropriate procedures. Test procedures include requirements and acceptance limits contained in procurement documents, instructions for performing the test, and test prerequisites, such as, appropriate equipment, qualified personnel, acceptance and rejection criteria, and methods of recording test data and results (see section 4.1.10, Inspections).

VEGP operations maintains test controls by performing the following procedures: Administrative procedure 00415-C, Conduct of Surveillance Testing, is written as a control procedure for engineering, maintenance, and operations procedures that cover testing of specific plant systems or equipment. Procedure 00404-C, Surveillance Test Tracking Program, provides instructions for the identification, assignment, scheduling, data base management, trending of overdue test, and tracking of



surveillance test. An additional procedure(s) delineating requirements to be included in operational phase test procedures will be written. The commitments are being tracked by the commitment tracking program.

#### 4.1.12 CONTROL OF MEASURING AND TEST EQUIPMENT

Control of M&TE applies to devices or systems used on safety-related systems and components or on systems that affect plant performance or reliability. Its purpose is to establish compliance with pre-established acceptance criteria.

The GMVNOD is responsible for establishing and implementing the control of the M&TE program used in activities related to quality and plant and personnel safety. The program of identification, storage, issuance, use, and calibration maintains equipment accuracy within limits specified by pre-established requirements. Each department is responsible for the physical control of equipment assigned to its respective department, which includes a master list of such equipment (reference Module 9 and Module 7). The superintendent of regulatory compliance is responsible for the inspection and surveillance program to verify the M&TE are controlled, calibration discrepancies are resolved, and that identification and segregation prevents using out-of-calibration equipment and also manages the control and monitoring program for measuring and test equipment assigned to the Regulatory Compliance Department. The superintendent of quality control ensures through inspections that the appropriate M&TE is used to carry out the work process. The superintendent of administration is responsible for the proper processing and storage of measuring and test equipment records.

Procedure 00208-C, Control of Measuring and Test Equipment, describes departmental responsibilities and guidelines for the calibration and control of measuring and test equipment. The QC Department, responsible for monitoring the control of M&TE for compliance to procedure 00208-C, accomplishes this monitoring during inspections of work activities.

#### 4.1.13 HANDLING, STORAGE, AND SHIPPING

The material supervisor is responsible for the physical receipt of material and equipment upon arrival at the plant site. He has the equipment unloaded and performs an inspection to verify that packaging and shipping requirements have been maintained. Items identified as requiring special handling are handled in accordance with instructions provided. Items not requiring specific handling procedures are handled in accordance with sound material handling practices. All items maintained in storage are divided into four levels in accordance with procedure 00851-C, Storage, Handling, and Shipping Requirements,

with respect to the protective measures required to prevent damage, deterioration, or contamination of the items. Once classified, items are restricted to that level or higher for packaging, shipping, receiving, storage, and handling operations, unless otherwise approved by the Engineering Department. Access to the storage area is controlled and limited to personnel designated by the material supervisor.

Periodic inspections are performed to ensure that material and equipment are being maintained in accordance with specified storage requirements. Periodic inspections include marking and identification, protective covers and seals, cleanliness, physical damage, and shelf life.

Material shipped from the plant site is processed by the materials section. The department which is shipping the material ensures that the contents are packaged, labeled, and addressed correctly.

Procedure 00851-C provides administrative controls for materials storage, handling, and shipping.

#### 4.1.14 INSPECTION, TESTING, AND OPERATING STATUS

Controls are established to provide for the identification of items which have satisfactorily passed required inspections and tests, and preclude the inadvertent bypassing of such inspections and tests. These controls indicate the operating status of structures, systems, and components to prevent inadvertent operation during the inspection or test. The operating status of safety-related structures, systems, and components under inspection, test, or that are found inoperable are indicated by such means as tagging valves or switches to prevent inadvertent operation.

Inspection, testing, and operating status controls are met by implementation of procedure 10005-C, Operability Status Indication for Plant Safety System; procedure 10001-C, Log Keeping; procedure 00305-C, Record of Pulled Annunciator Card; procedure 00304-C, Equipment Clearance and Tagging; procedure 00306-C, Temporary Jumper and Lifted Wire Control; and procedure 00307-C, Temporary Modifications. Module 7 will describe further the controls of plant operations.

#### 4.1.15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

Materials, parts, or components, which do not conform to prescribed requirements, are controlled to prevent their inadvertent use or installation. VEGP operations and its contractors follow written requirements to identify, document, segregate, disposition, and report to the affected organization any nonconformance, deviation, or other condition adversely

affecting quality. When items are found to be questionable, the QC inspector places a QC hold tag on the item, which indicates the item is on hold for evaluation and cannot be released for issue, and contacts the Engineering Department Procurement Review Section for evaluation. A Deficiency Report (DR) may be issued if certain conditions are met. Once the deficiency is resolved the item may be released for normal handling.

Administrative controls are established by procedure 00850-C, Material Receiving and Inspection; procedure 85307-C, QC Receipt Inspection; and procedure 00150-C, Deficiency Reports (scheduled for approval September, 1985).

#### 4.1.16 CORRECTIVE ACTION

Corrective action is the steps taken to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective materials and equipment, and nonconformances on safety-related systems are promptly identified, documented, and corrected. Situations requiring corrective action are documented by DRs, QA audit reports, and NRC inspection reports.

The superintendent of regulatory compliance is responsible for coordinating the investigation of problems, determining causes, analyzing DRs for adverse trends, and tracking the corrective action.

When situations requiring corrective action are identified, VEGP procedure 00409-C, Response to NRC, QA, and INPO Audit Findings, and procedure 80007-C, Tracking, Trending, and Response to NRC, QA, and INPO Audit Findings, are implemented by the Regulatory Compliance Department. VEGP procedure 00850-C, Materials Receiving and Inspection, covers DRs for defective materials and equipment received at the plant site. The handling of DRs is covered by VEGP procedure 00150-C, Deficiency Reports (scheduled for approval September 1985), and procedure 80013-C, Handling of Deficiency Reports. Items, discovered during a QC Work Monitoring Program (procedure 00202-C), requiring prompt evaluation and correction are handled with a Deficiency Report.

Startup Manual (SUM) 18, Operations Deficiency Report, is used to control the disposition of nonconforming items until procedure 00150-C, Deficiency Reports, is approved and implemented.

#### 4.1.17 QA RECORDS

Quality assurance records are completed documents, stamped, initialed, signed, or otherwise authenticated and dated by personnel authorized by procedure or organizational position

which provide evidence of the quality of specific activities, equipment, or material.

The GMVNOD is responsible for the implementing and proper operation of the QA records program. The superintendent of administration, assures compliance with applicable codes, standards, and regulations related to collection, storage, and retention of QA records. The superintendent of administration responsibilities include managing the implementation of QA records administration program and evaluating program functions to ensure records are controlled. The document control supervisor is responsible for the day-to-day direction of Document Control activities.

Procedure 00100-C, Quality Assurance Records Administration, provides administrative controls for QA records.

#### 4.1.18 AUDITS

The QA audit program is described in General Appendix I.

Table 4.1-1 (Sheet 1 of 10)  
Implementating Procedures to the OQAP

|         |  | 10 CFR 50 APPENDIX B 10 CRITERIA |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           |
|---------|--|----------------------------------|---------------------------|----------------|------------------------------|--------------------------------------|------------------|---|--|------------------------------|------------|--------------|---|-------------------------------|--------------------------------------|---|-------------------|---------------------------|--------|--------|--|--------------------------|-----------------------|------------------------|----------------|-----------|
|         |  | I                                | II                        | III            | IV                           | V                                    | VI               | VII   | VIII   | IX                           | X          | XI           | XII                                     | XIII                          | XIV                                  | XV  | XVI               | XVII                      | XVIII  | MODULE |  | 2                        | 5                     | 7                      | 9A             | 9B        |
|         |  | ORGANIZATION                     | QUALITY ASSURANCE PROGRAM | DESIGN CONTROL | PROCUREMENT DOCUMENT CONTROL | INSTRUCTIONS PROCEDURES AND DRAWINGS | DOCUMENT CONTROL | CONTROL OF PURCHASED MATERIAL EQUIP. & SERVICES | IDENT. AND CONTROL OF MATERIAL PARTS AND COMP. | CONTROL OF SPECIAL PROCESSES | INSPECTION | TEST CONTROL | CONTROL OF MEASURING AND TEST EQUIPMENT | HANDLING STORAGE AND SHIPPING | INSPECTION TEST AND OPERATING STATUS | NONCONFORMING MATERIAL PARTS AND COMPONENTS | CORRECTIVE ACTION | QUALITY ASSURANCE RECORDS | AUDITS |        |  | TRAINING & QUALIFICATION | ORGANIZATION & ADMIN. | OPERATIONS AND SUPPORT | HEALTH PHYSICS | CHEMISTRY |
| 00001-C | PLANT ORGANIZATION AND MANAGERIAL STAFF RESPONSIBILITIES AND AUTHORITY | x                                | x                         |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  | x                        | x                     | x                      |                |           |
| 00002-C | PLANT REVIEW BOARD – DUTIES AND RESPONSIBILITIES                       |                                  | x                         | x              |                              |                                      |                  |   |  |                              |            | x            |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     |                        |                |           |
| 00003-C | SHIFT RELIEF   |                                  | x                         |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          |                       |                        | x              |           |
| 00050-C | PROCEDURES WRITERS' GUIDE  |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  | x                        | x                     | x                      |                |           |
| 00051-C | PROCEDURE DEVELOPMENT, REVIEW AND APPROVAL                             |                                  |                           |                |                              | x                                    |                  |   |  | x                            |            |              |   |                               | x                                    |   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00052-C | TEMPORARY CHANGES TO PROCEDURES  |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00053-C | ONE TIME ONLY PROCEDURES   |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00054-C | RULES FOR PERFORMING PROCEDURES  |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00055-C | DELIBERATE MALPRACTICE   |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     |                        |                |           |
| 00056-C | UNREVIEWED SAFETY QUESTION DETERMINATION (USQD)                        |                                  |                           |                |                              | x                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     |                        |                |           |
| 00100-C | QUALITY ASSURANCE RECORDS ADMINISTRATION                               |                                  | x                         |                |                              |                                      | x                |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     | x                      |                |           |
| 00101-C | DRAWING CONTROL  |                                  | x                         |                |                              |                                      | x                |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00103-C | DOCUMENT DISTRIBUTION AND CONTROL                                      |                                  | x                         |                |                              |                                      | x                |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     | x                      |                |           |
| 00106-C | SAFEGUARD DOCUMENT CONTROL & DISTRIBUTION                              |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     |                        |                |           |
| 00106-C | RECORDS MANAGEMENT SYSTEM  |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     |                        |                |           |
| 00108-C | CONTROL, APPROVAL AND USE OF VENDOR MANUALS AND REVISIONS              |                                  |                           |                |                              |                                      | x                |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |        |  |                          | x                     |                        |                |           |
| 00150-C | DEFICIENCY REPORTS   |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      | x   |                   |                           |        |        |  |                          | x                     | x                      |                |           |
| 00152-C | REPORTABLE OCCURRENCE REPORTS  |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      | x   |                   | x                         |        |        |  |                          | x                     | x                      |                |           |
| 00153-C | PERSONNEL RADIATION EXPOSURE REPORTS                                   |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     | x                      |                |           |
| 00156-C | NRC MONTHLY OPERATING REPORT   |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     |                        |                |           |
| 00157-C | ANNUAL REPORTS   |                                  |                           |                |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   | x                         |        |        |  |                          | x                     |                        |                |           |

Table 4.1-1 (Sheet 2 of 10)  
Implementing Procedures to the OQAP

[illegible]



Table 4.1-1 (Sheet 3 of 10)  
Implementating Procedures to the OQAP

[illegible]

Table 4.1-1 (Sheet 4 of 10)  
Implementating Procedures to the OQAP

[illegible]



Table 4.1-1 (Sheet 5 of 10)  
Implementating Procedures to the OQAP

|         |  | 10 CFR 50 APPENDIX B 18 CRITERIA |                           |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           |   |    |    |
|---------|--|----------------------------------|---------------------------|----------------|------------------------------|--------------------------------------|------------------|--|--|------------------------------|------------|--------------|---|--------------------------------|--------------------------------------|---|-------------------|---------------------------|--------|--------|--|--------------------------|-----------------------|------------------------|----------------|-----------|---|----|----|
|         |  | I                                | II                        | III            | IV                           | V                                    | VI               | VII  | VIII   | IX                           | X          | XI           | XII                                     | XIII                           | XIV                                  | XV  | XVI               | XVII                      | XVIII  | MODULE |  | 2                        | 3                     | 4                      | 5              | 6         | 7 | 8A | 9B |
|         |  | ORGANIZATION                     | QUALITY ASSURANCE PROGRAM | DESIGN CONTROL | PROCUREMENT DOCUMENT CONTROL | INSTRUCTIONS PROCEDURES AND DRAWINGS | DOCUMENT CONTROL | CONTROL OF PURCHASED MATERIAL EQUIP & SERVICES | IDENT. AND CONTROL OF MATERIAL PARTS AND COMP. | CONTROL OF SPECIAL PROCESSES | INSPECTION | TEST CONTROL | CONTROL OF MEASURING AND TEST EQUIPMENT | HANDLING, STORAGE AND SHIPPING | INSPECTION TEST AND OPERATING STATUS | NONCONFORMING MATERIAL PARTS AND COMPONENTS | CORRECTIVE ACTION | QUALITY ASSURANCE RECORDS | AUDITS |        |  | TRAINING & QUALIFICATION | ORGANIZATION & ADMIN. | OPERATIONS AND SUPPORT | HEALTH PHYSICS | CHEMISTRY |   |    |    |
| 00855-C | MATERIAL AND EQUIPMENT PASS  |                                  |                           |                |                              |                                      |                  |  |  |                              |            |              | X                                       |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           |   |    |    |
| 00900-C | RADIATION WORK PERMIT  |                                  |                           |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         | X |    |    |
| 00910-C | RADIATION PROTECTION ORIENTATION   |                                  |                           |                | X                            |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           | X |    |    |
| 00930-C | PERSONNEL RADIATION EXPOSURE REPORTS AND OVEREXPOSURE AND EXCESSIVE LEVELS OF RADIATION INCIDENT REPORTING |                                  |                           |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   | X                         |        |        |  |                          |                       |                        |                |           | X |    |    |
| 00940-C | PERSONNEL CONTAMINATION SURVEY TECHNIQUES  |                                  |                           |                | X                            |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           | X |    |    |
| 00950-C | GENERAL EMPLOYEE GUIDELINES FOR OBTAINING PERSONNEL DOSEMETRY  |                                  |                           |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                |           | X |    |    |
| 10000-C | CONDUCT OF OPERATIONS  | X                                | X                         |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10001-C | LOGKEEPING   |                                  |                           |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   | X                         |        |        |  |                          |                       | X                      | X              |           |   |    |    |
| 10002-C | PLANT OPERATING ORDERS   | X                                | X                         |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10003-C | MANNING THE SHIFT  | X                                | X                         |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10004-C | SHIFT RELIEF   | X                                | X                         |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10005-C | OPERABILITY STATUS INDICATION FOR PLANT SAFETY SYSTEMS   |                                  | X                         |                |                              |                                      |                  |  |  |                              |            |              |   |                                | X                                    |   |                   |                           |        |        |  |                          |                       | X                      | X              |           |   |    |    |
| 10006-C | REACTOR TRIP REVIEW  |                                  | X                         |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       | X                      | X              |           |   |    |    |
| 10007-C | RESET OF LOCK-OUT RELAYS AND RELAY TARGETS   |                                  |                           |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10008-C | LIMITING CONDITIONS FOR OPERATION AND CUMULATIVE DOWNTIME  |                                  | X                         |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10010-C | OPERATOR QUALIFICATION PROGRAM   | X                                | X                         |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   | X                         |        |        |  | X                        |                       |                        |                |           |   |    |    |
| 10011-C | OPERATIONS PROCEDURE PREPARATION AND REVIEW GUIDELINES   |                                  | X                         |                |                              | X                                    | X                |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10012-C | EOP AND AOP WRITER'S GUIDE   |                                  |                           |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10013-C | WRITING EOPs FROM WESTINGHOUSE OWNERS GROUP EMERGENCY RESPONSE GUIDELINES                                  |                                  |                           |                |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10014-C | VERIFICATION OF EMERGENCY OPERATING PROCEDURES   |                                  | X                         |                |                              | X                                    | X                |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |        |  |                          |                       |                        |                | X         |   |    |    |
| 10015-C | HOT PARTICIPATION EXPERIENCE PROGRAM   | X                                | X                         |                |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   | X                         |        |        |  | X                        |                       |                        |                |           |   |    |    |

Table 4.1-1 (Sheet 6 of 10)  
Implementating Procedures to the OQAP

| 10 CFR 50 APPENDIX B 18 CRITERIA |  |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
|----------------------------------|--|--------------------------|---------------------------|------------------------|------------------------------|--------------------------------------|------------------|--|--|------------------------------|------------|--------------|---|--------------------------------|--------------------------------------|---|-------------------|---------------------------|--------|
|                                  |  | I                        | II                        | III                    | IV                           | V                                    | VI               | VII  | VIII   | IX                           | X          | XI           | XII                                     | XIII                           | XIV                                  | XV  | XVI               | XVII                      | XVIII  |
|                                  |  | ORGANIZATION             | QUALITY ASSURANCE PROGRAM | DESIGN CONTROL         | PROCUREMENT DOCUMENT CONTROL | INSTRUCTIONS PROCEDURES AND DRAWINGS | DOCUMENT CONTROL | CONTROL OF PURCHASED MATERIAL EQUIP & SERVICES | IDENT AND CONTROL OF MATERIAL PARTS AND COMP | CONTROL OF SPECIAL PROCESSES | INSPECTION | TEST CONTROL | CONTROL OF MEASURING AND TEST EQUIPMENT | HANDLING, STORAGE AND SHIPPING | INSPECTION TEST AND OPERATING STATUS | NONCONFORMING MATERIAL PARTS AND COMPONENTS | CORRECTIVE ACTION | QUALITY ASSURANCE RECORDS | AUDITS |
|                                  |  | MODULE                   |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
|                                  |  | 2                        | 3                         | 4                      | 5                            | 6                                    | 7                | 8A   | 8B   | 9A                           | 9B         | 10A          | 10B                                     | 10C                            | 10D                                  | 10E   | 10F               | 10G                       | 10H    |
|                                  |  | TRAINING & QUALIFICATION | ORGANIZATION & ADMIN      | OPERATIONS AND SUPPORT | HEALTH PHYSICS               | CHEMISTRY                            |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 10016-C                          | EQUIPMENT LABELING GUIDELINES  |                          |                           |                        |                              | X                                    |                  |  |  |                              |            |              |   |                                | X                                    |   |                   |                           |        |
| 11000                            | THESE OPERATIONS PROCEDURES COVER CRITERIA NUMBERS II, V, X, XI, XIV & XVII        |                          | X                         |                        | X                            |                                      |                  |  |  |                              | X          | X            |   |                                | X                                    |   | X                 |                           |        |
| 19225                            |  | X                        | X                         |                        | X                            |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20006-C                          | MAINTENANCE DEPARTMENT ORGANIZATION AND RESPONSIBILITIES                           |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20006-C                          | TRANSFER OF MATERIALS BETWEEN OPERATIONS AND CONSTRUCTION WAREHOUSE                |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20010-C                          | SELECTION OF MAINTENANCE EMPLOYEES (ANSI 2.1 REQUIREMENTS)                         |                          | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20015-C                          | PLANNED MAINTENANCE  |                          | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20020-C                          | SHIFT RELIEF AND TURNOVER FOR MAINTENANCE CONTROL                                  |                          | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20200-C                          | GENERAL I&C OPERATIONS   | X                        | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20230-C                          | CONTROL OF INSTRUMENT SHOP MEASURING & TEST EQUIPMENT                              |                          |                           |                        |                              | X                                    |                  |  |  |                              |            |              | X                                       |                                |                                      |   |                   |                           |        |
| 20406-C                          | CONTROL OF MAINT. SHOP MEASURING AND TEST EQUIPMENT                                |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   | X                              |                                      |   |                   |                           |        |
| 20406-C                          | CONTROL OF WELDING MATERIAL  |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20410-C                          | PLANT MACHINERY HISTORY  |                          | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   | X                 |                           |        |
| 20415-C                          | LUBRICATION AND LUBE OIL SAMPLE PROGRAM  |                          | X                         |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20425-C                          | CONTROL OF LIFTING AND RIGGING EQUIPMENT   |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 20427-C                          | MAINTENANCE CLEANLINESS AND HOUSEKEEPING   |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 22006                            | THESE PROCEDURES COVER MAINTENANCE CRITERIA NOS. II, V, VIII, IX, X, XI, XII & XIV |                          | X                         |                        |                              | X                                    |                  |  | X  | X                            | X          | X            | X                                       |                                | X                                    |   |                   |                           |        |
| 28014                            |  |                          |                           |                        |                              |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 30000-C                          | BULK CHEMICAL & ION EXCHANGE RESIN SPECIFICATIONS                                  |                          |                           |                        | X                            |                                      |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 30003-C                          | CHEMISTRY DOCUMENT CONTROL   |                          | X                         |                        |                              |                                      | X                |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 30007-C                          | CONTROL OF SAMPLES   |                          |                           |                        |                              |                                      |                  |  |  |                              |            | X            |   |                                |                                      |   |                   |                           |        |
| 30011-C                          | WATER CHEMISTRY SPECIFICATIONS   |                          |                           |                        |                              | X                                    |                  |  |  |                              |            |              |   |                                |                                      |   |                   |                           |        |
| 30012-C                          | GENERIC ANALYTICAL PROCEDURES  |                          |                           |                        |                              | X                                    |                  |  |  |                              |            | X            |   |                                |                                      |   |                   |                           |        |

Table 4.1-1 (Sheet 7 of 10)  
Implementating Procedures to the OQAP

|                    |  | 10 CFR 50 APPENDIX B-18 CRITERIA |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
|--------------------|--|----------------------------------|---------------------------|----------------|------------------------------|--------------------------------------|------------------|---|---|------------------------------|------------|--------------|---|-------------------------------|--------------------------------------|---|-------------------|---------------------------|--------|--------|--------------------------|-----------------------|------------------------|----------------|-----------|-----|
|                    |  | I.                               | II.                       | III.           | IV.                          | V.                                   | VI.              | VII.  | VIII.   | IX.                          | X.         | XI.          | XII.                                    | XIII.                         | XIV.                                 | XV.   | XVI.              | XVII.                     | XVIII. | MODULE |                          | 2.                    | 5.                     | 7.             | 9A.       | 9B. |
|                    |  | ORGANIZATION                     | QUALITY ASSURANCE PROGRAM | DESIGN CONTROL | PROCUREMENT DOCUMENT CONTROL | INSTRUCTIONS PROCEDURES AND DRAWINGS | DOCUMENT CONTROL | CONTROL OF PURCHASED MATERIAL EQUIP. & SERVICES | IDEN. AND CONTROL OF MATERIAL PARTS AND COMP. | CONTROL OF SPECIAL PROCESSES | INSPECTION | TEST CONTROL | CONTROL OF MEASURING AND TEST EQUIPMENT | HANDLING STORAGE AND SHIPPING | INSPECTION TEST AND OPERATING STATUS | NONCONFORMING MATERIAL PARTS AND COMPONENTS | CORRECTIVE ACTION | QUALITY ASSURANCE RECORDS | AUDITS |        | TRAINING & QUALIFICATION | ORGANIZATION & ADMIN. | OPERATIONS AND SUPPORT | HEALTH PHYSICS | CHEMISTRY |     |
| 30013-C            | LABORATORY QUALITY CONTROL   |                                  | X                         |                |                              |                                      |                  |   |   |                              | X          |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 32000<br>To        | THESE LABORATORY PROCEDURES COVER CRITERIA NOS. V, XI &                      |                                  |                           |                |                              | X                                    |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 36004<br>40000-C   | XII CONDUCT OF OPERATIONS-HEALTH PHYSICS DEPARTMENT                          |                                  | X                         |                |                              |                                      |                  |   |   |                              |            | X            | X                                       |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40001-C            | ALARA  |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40003-C            | H.P. DEPARTMENT QUALIFICATION  |                                  | X                         |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   | X                         |        |        | X                        | X                     |                        |                |           |     |
| 40006-C            | HEALTH PHYSICS LOGBOOKS AND RECORDS  |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   | X                         |        |        |                          |                       |                        | X              | X         |     |
| 40007-C            | HEALTH PHYSICS SHIFT TURNOVER ACTIVITIES                                     |                                  | X                         |                |                              | X                                    |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40008-C            | WORK SCHEDULE AND SURVEY FREQUENCY   |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40009-C            | LOCKED HIGH RADIATION AREA ENTRANCE CONTROL                                  |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40011-C            | PROCESSING OF RADIATION WORK PERMITS   |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40013-C            | DELINEATION OF RADIATION WORK CONTROL ZONES                                  |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 40014-C            | CONTAMINATED RECORDS   |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              | X         |     |
| 42000-C<br>To      | THESE HP PROCEDURES COVER CRITERIA NOS. V, VII, XII &                        |                                  |                           |                |                              | X                                    |                  | X   |   |                              |            |              | X                                       | X                             |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 47005-C<br>50000-C | XIII CONDUCT OF OPERATIONS OF ENGINEERING GROUP                              |                                  | X                         |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 50001-C            | ENGINEERING STUDIES  |                                  | X                         | X              |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        | X              |           |     |
| 50002-C            | ENGINEERING REVIEWS  |                                  | X                         |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 5000R-C            | REQUESTING ENG. ASSISTANCE (FROM GPC POWER SUPPLY, ENGINEERING AND SERVICES) |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          | X                     |                        |                |           |     |
| 50011-C            | PROCESSING OF NONCONFORMANCE ITEMS   |                                  | X                         |                |                              |                                      |                  | X   |   |                              |            |              |   |                               |                                      | X   |                   |                           |        |        |                          | X                     |                        |                |           |     |
| 51000<br>To        | THESE ENGINEERING PROCEDURES COVER CRITERIA NOS. II, IV, V, VII, X, XI,      |                                  | X                         |                | X                            | X                                    |                  | X   |   |                              | X          | X            | X                                       | X                             |                                      |   |                   | X                         |        |        |                          |                       |                        | X              |           |     |
| 56031              | XII, XIII & XVII   |                                  |                           |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          |                       |                        |                |           |     |
| 60001-C            | EXAM ADMINISTRATION POLICY   |                                  | X                         |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          | X                     |                        |                |           |     |
| 60002-C            | TRAINING ADMINISTRATIVE POLICIES AND PROCEDURES                              |                                  | X                         |                |                              |                                      |                  |   |   |                              |            |              |   |                               |                                      |   |                   |                           |        |        |                          | X                     |                        |                |           |     |

Table 4.1-1 (Sheet 8 of 10)  
Implementing Procedures to the OQAP

| 10 CFR 50 APPENDIX B 18 CRITERIA |   |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
|----------------------------------|---|--------------------------|---------------------------|------------------------|------------------------------|--------------------------------------|------------------|---|--|------------------------------|------------|--------------|---|-------------------------------|--------------------------------------|---|-------------------|---------------------------|--------|
|                                  |   | I                        | II                        | III                    | IV                           | V                                    | VI               | VII   | VIII   | IX                           | X          | XI           | XII                                     | XIII                          | XIV                                  | XV  | XVI               | XVII                      | XVIII  |
|                                  |   | ORGANIZATION             | QUALITY ASSURANCE PROGRAM | DESIGN CONTROL         | PROCUREMENT DOCUMENT CONTROL | INSTRUCTIONS PROCEDURES AND DRAWINGS | DOCUMENT CONTROL | CONTROL OF PURCHASED MATERIAL EQUIP. & SERVICES | IDEN. AND CONTROL OF MATERIAL PARTS, AND COMP. | CONTROL OF SPECIAL PROCESSES | INSPECTION | TEST CONTROL | CONTROL OF MEASURING AND TEST EQUIPMENT | HANDLING STORAGE AND SHIPPING | INSPECTION TEST AND OPERATING STATUS | NONCONFORMING MATERIAL PARTS AND COMPONENTS | CORRECTIVE ACTION | QUALITY ASSURANCE RECORDS | AUDITS |
|                                  |   | 1                        | 2                         | 3                      | 4                            | 5                                    | 6                | 7   | 8  | 9                            | 10         | 11           | 12                                      | 13                            | 14                                   | 15  | 16                | 17                        | 18     |
|                                  |   | MODULE                   |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
|                                  |   | 2                        | 3                         | 4                      | 5                            | 6                                    | 7                | 8   | 9  | 10                           | 11         | 12           | 13                                      | 14                            | 15                                   | 16  | 17                | 18                        | 19     |
|                                  |   | TRAINING & QUALIFICATION | ORGANIZATION & ADMIN      | OPERATIONS AND SUPPORT | HEALTH PHYSICS               | CHEMISTRY                            |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80003-C                          | PROCEDURE FOR CONDUCTING AUDIT EXAMINATION FOR LICENSE CANDIDATES                     |                          |                           |                        |                              | X                                    |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80100-C                          | TRAINING DEPARTMENT QUALIFICATION CHECKLISTS  |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80200-C                          | SIMULATOR MAINTENANCE PROGRAM   |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80201-C                          | SIMULATOR LOG-KEEPING PROCEDURE   |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80001-C                          | GUIDELINES FOR COMMITMENT IDENTIFICATION AND COMMITMENT TRACKING PROGRAM COORDINATION |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80004-C                          | FILING OF ROUTINE REPORTS TO THE NRC  |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   | X                 |                           |        |
| 80005-C                          | PREPARATION, APPROVAL, AND TRANSMITTAL OF LER's                                       |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80006-C                          | LICENSING DOCUMENT COORDINATION   |                          | X                         |                        |                              |                                      | X                |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80007-C                          | TRACKING, TRENDING, AND RESPONSE TO NRC, QA, AND INPO AUDIT FINDINGS                  |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   | X                 |                           |        |
| 80008-C                          | REVIEWING AND REPORTING OF POTENTIAL DEFECTS AND NONCOMPLIANCES                       |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80009-C                          | (OPERATIONAL PHASE) OPERATIONS ASSESSMENT PROGRAM -- COORDINATION                     |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   |                           |        |
| 80012-C                          | TECHNICAL SPECIFICATION SURVEILLANCE TRACKING PROGRAM COORDINATION                    |                          | X                         |                        |                              |                                      |                  |   |  |                              |            | X            |   |                               |                                      |   |                   |                           |        |
| 80013-C                          | HANDLING OF DEFICIENCY REPORTS  |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   | X                 |                           |        |
| 80100-C                          | TRAINING AND QUALIFICATION OF REGULATORY COMPLIANCE EMPLOYEES                         |                          |                           |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   | X                 |                           |        |
| 85000-C                          | QUALITY CONTROL ORGANIZATION, RESPONSIBILITIES AND CONDUCT OF OPERATION               | X                        | X                         |                        |                              |                                      |                  |   | X  | X                            |            |              |   | X                             |                                      |   |                   | X                         |        |
| 85001-C                          | QUALIFICATION OF QUALITY CONTROL PERSONNEL  |                          | X                         |                        |                              |                                      |                  |   | X  |                              |            |              |   | X                             |                                      |   | X                 | X                         |        |
| 85002-C                          | QUALITY CONTROL DEPARTMENTAL TRAINING   |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   |                   | X                         |        |
| 85003-C                          | TRAINING AND QUALIFICATION OF QUALITY CONTROL NON-DESTRUCTIVE TESTING PERSONNEL       |                          | X                         |                        |                              |                                      |                  |   |  |                              |            |              |   |                               |                                      |   | X                 | X                         |        |
| 85100-C                          | INSPECTION PLANS  |                          | X                         |                        |                              |                                      |                  |   |  |                              | X          |              |   |                               |                                      |   |                   |                           | X      |
| 85200-C                          | WORK MONITORING PLANS   |                          |                           |                        |                              |                                      |                  |   |  |                              | X          |              |   |                               |                                      |   |                   |                           |        |
| 85300-C                          | NON-CONFORMANCE CONTROL   |                          |                           |                        |                              |                                      |                  | X   |  |                              |            |              |   |                               |                                      | X   |                   |                           |        |

Table 4.1-1 (Sheet 9 of 10)  
Implementing Procedures to the OQAP

[illegible]

Table 4.1-1 (Sheet 10 of 10)  
Implementating Procedures to the OQAP

[illegible]

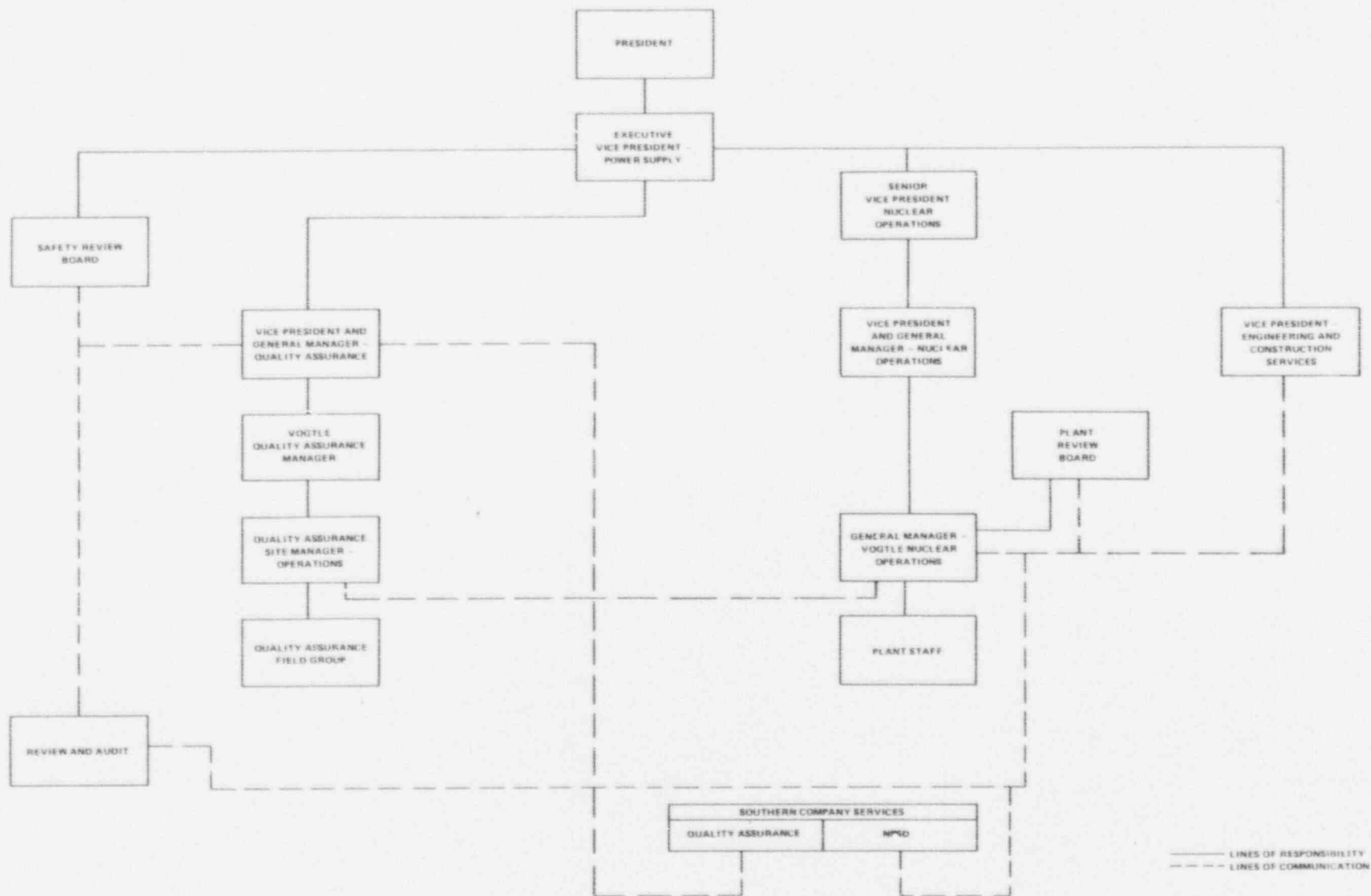


Figure 4.1-1 Organizational Chart For Quality Assurance During Plant Operations



#### 4.2 TRANSITION FROM THE ITP TO THE OPERATIONAL PHASE OF VEGP

Control of the transition from the ITP to the operational phase of VEGP is accomplished through the combined use of the Startup Manual (SUM) procedures and approved operational phase plant procedures. After the preoperational test procedure results are approved (SUM-13, Preoperation Test Procedure Test Preparation, Review, and Approval), systems are released for operations department by SUM-14, Release to Operations Department.

When the system is released for operations, the shift supervisor assumes primary control of the system and associated equipment from the test supervisor. This control by the shift supervisor is maintained through the use of operational phase procedures to ensure the safety of personnel and integrity of plant equipment.

Maintenance and operations are performed under controls in the Startup manual prior to release for operation, system, and component testing. When a system is released for operation, the OQAP becomes effective for that system. With regard to individual systems, therefore, the OQAP is phased in over a period of time and will be fully implemented at least 90 days prior to fuel load for Unit 1. However in some instances, ITP activities must continue beyond the release for operation. In these circumstances, certain ITP procedures will still apply. When this time comes, ITP management will notify plant personnel of the ITP procedures that are still in effect beyond release for operations.

The VEGP Procurement Department will continue to operate under the guidelines of the Procurement Procedures Manual. The Nuclear Procurement Program Implementation Committee is established to cover the procurement transition from the ITP phase to the commercial operation of the plant. This committee is in the process of revising the Procurement Procedures Manual to address the change from construction to operations.

ASME section XI, Rules for Inservice Inspection of Nuclear Power Plant Components, inspections are conducted under applicable Nuclear Operations (NO) procedures and the OQAP. Prior to system release for operation to NO, any repair work required as a result of section XI inspections is performed by construction under applicable construction procedures and QA program. After release for operation any repair work is done under applicable NO procedures with assistance from construction as needed (reference Module 7 for details). Nuclear Operations section XI repair and modification program is under development and will be controlled by procedure 00350-C, Maintenance Program, and procedure 00351-C, Maintenance Work Orders.



#### 4.3 NUCLEAR UTILITY MANAGEMENT AND HUMAN RESOURCES COMMITTEE (NUMARC)

NUMARC is an industry wide organization composed of senior level people in management for enhancing the nuclear industry. GPC has been active in NUMARC since its inception. The GPC president is chairman of the steering committee for NUMARC. GPC actively supports NUMARC and the development of NUMARC programs.

NUMARC has developed specific programs and presented them to the NRC on behalf of the nuclear utility industry. VEGP is implementing these NUMARC programs.

#### 4.4 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

The ISEG will function to examine unit operating characteristics, NRC issuances, industry advisories, licensee event reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for enhancing plant safety.

The ISEG will be composed of at least five, dedicated, full-time engineers located onsite.

The ISEG is responsible for maintaining surveillance of plant activities to provide independent verification (not responsible for signoff function) that these activities are performed correctly and that human errors are reduced as much as practical.

The ISEG makes detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities, or other means of improving unit safety to the manager, nuclear operations analysis, in the corporate office.

Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the GMVNOD. The VEGP ISEG has not yet been formed. It will be activated at least 90 days before fuel load on Unit 1.

#### 4.5 REPORTS TO NRC

##### 4.5.1 SAFETY LIMIT VIOLATION

Draft Technical Specification paragraph 6.7 requires that certain actions be taken in the event a safety limit is violated. This event is to be reported to the NRC.

VEGP meets these requirements with procedure 00152-C, Reportable Occurrence Reports. This procedure is scheduled for approval by October 15, 1985.

##### 4.5.2 REPORTABLE EVENTS

Draft Technical Specifications, paragraph 6.6.1, requires that the holder of an operating license for a nuclear power plant submit a Licensee Event Report (LER) for any event of the type which is described in 10 CFR 50.73.

VEGP meets the requirements on reportable events, including LERs, through the use of procedure 00152-C.

The need for special reports is determined on an individual basis for each unit.

Special reports are covered under procedure 00152-C. A list of special reports is included in an attached table to this procedure. Special reports include reports such as a report on contaminated packages or a report on the theft of contaminated materials. The table lists the NRC office which is to receive the report, the schedule for submitting the report, and the expected contents of the report.

##### 4.5.3 REPORTING OF OPERATING INFORMATION

Section 6 of the draft Technical Specifications requires that certain reports be submitted to the NRC. VEGP submits the following reports:

- Reportable Occurrence Reports;
- Safety limit violation;
- Personnel Radiation Exposure Reports;
- Reportable events;
- NRC Monthly Operating Report;
- Special reports;

- Annual Reports;
- Radioactive Effluent Release Reports;
- Nuclear Plant Reliability Data Reports.

VEGP's reporting program is outlined by the following procedures:

- 00152-C, Reportable Occurrence Reports

The present schedule calls for the procedure to be approved by October 15, 1985.

- 00153-C, Personnel Radiation Exposure Reports

The present schedule calls for the procedure to be approved by September 15, 1985.

- 00156-C, NRC Monthly Operating Report

This report is a compilation of VEGP operating statistics, shutdown experience, and descriptions of challenges to power operated relief valves and safety valves. This report is submitted to the NRC by the fifteenth of the month following the calendar month covered by the report. This report is prepared under the supervision of the superintendent of plant engineering and services. It is reviewed by the superintendent of regulatory compliance and approved by the plant general manager.

- 00157-C, Annual Reports

There are three routine annual reports which are covered under this procedure.

- The Annual Report of Changes, Tests, and Experiments covers those changes which constitute a change in the plant or procedures as described in the FSAR and those tests and experiments which are not described in the FSAR and effect plant safety.
- The Annual Report of Exposures Greater Than 100 MREM/year is a tabulation on an annual basis of the number of personnel receiving exposures greater than 100 MREM/year.
- The Annual Radiological Environmental Surveillance Report is a report of summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period.

- The Annual Report of Changes is prepared under the supervision of the superintendent of plant engineering and services and reviewed by the superintendent of regulatory compliance. It is approved by the GMVNOD and submitted to the NRC by March 1 each year.
  - The Annual Radiological Report is prepared under the supervision of environmental affairs division. It is reviewed and approved by the environmental affairs divisions and transmitted to the NRC by May 1 each year.
  - The Annual Report of Exposures is prepared under the direction of the superintendent, health physics. It is reviewed and approved by the superintendent of health physics and is submitted by the GMVNOD to the NRC by March 1 each year.
- 00158-C, Radioactive Effluent Release Report  
The present schedule calls for the procedure to be approved by November 15, 1985.
  - 00159-C, NPRD Report  
The present schedule calls for the procedure to be approved by November 15, 1985.

#### 4.6 ADMINISTRATION DEPARTMENT PROGRAMS

##### 4.6.1 FITNESS FOR DUTY PROGRAM

The Georgia Power Company Fitness For Duty program is to screen personnel given unescorted access to the plant. Nuclear Operations personnel at VEGP have been screened according to the program requirements since April 20, 1984 and includes all contractor personnel who have reported to Nuclear Operations.

The screening program consists of the following items:

- Background Investigation (BI) consists of a verification of previous work experience, education, criminal conviction records check, credit check, and character reference check (two provided, two developed). This investigation is conducted by the Security Department. They status the results of BI (cleared, not cleared) and provide this information to the human resources coordinator. A security file is maintained for all employees and contractors.
- Psychological Evaluation. The Minnesota Multiphasic Personality Inventory (MMPI) is used to evaluate personality traits, such as reliability and trustworthiness. The MMPI is evaluated by a licensed psychologist. If the MMPI results are not within a certain level of acceptability as determined by the psychologist, a clinical interview may be necessary in order to explore the areas of concern. The psychologist will determine whether or not the individual is cleared. A written report is prepared and sent to the superintendent of administration who maintains copies of this information in a confidential file.
- Drug Screening. All employees must take and successfully pass a drug screening test. This test is usually conducted by a physician who sends the specimen to a professional laboratory for analysis and evaluation. The results of the test are returned to the doctor who forwards them to the human resources coordinator. A copy of the drug screening test is maintained in the individual's personnel file.
- Continued Supervisory Observation. All supervisory personnel are scheduled for aberrant behavior training in order to recognize unusual behavior traits or patterns in the employee's job performance, such as attendance problems, changes in employee's attitude toward work and/or towards fellow employees, etc. Afterwards, supervisors will periodically evaluate personnel under their supervision.

#### 4.6.2 DOCUMENT CONTROL

See section 4.1.6 for a discussion of the VEGP Document Control Program.

0075e

#### 4.7 OVERTIME CONTROLS

A program to control the use of overtime is developed within the Nuclear Operations organization to prevent situations where job-influenced fatigue could reduce the ability of plant personnel to operate the plant in a safe condition.

The controls apply to the plant staff and contractors responsible for performing safety-related functions. Examples of such personnel include:

- Licensed senior reactor operators;
- Chem/Rad technicians;
- Auxiliary operators;
- Key maintenance personnel.

When overtime is required, the following guidelines as outlined by procedure 00005-C, Overtime Authorization, are followed:

- An individual should not be permitted to work more than 16 hours straight (not including shift turnover time).
- An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7 day period (all excluding shift turnover time).
- A break of at least 8 hours should be allowed between work periods (including shift turnover time).
- Use of overtime should be considered on an individual basis, except during extended shutdown periods, and not for the entire staff on a shift.
- The GMVNOD shall review overtime assigned to individuals each month to assure that times in excess of the guidelines described herein has not been assigned.
- If circumstances arise which require use of overtime in excess of the guidelines established, authorization shall be provided by the MUO, the superintendent of operations, or higher levels of management.

Other applicable information is provided in Module 7.



#### 4.8 PROCEDURE CONTROL

The Nuclear Operations organization uses procedures to communicate rules, instructions, policies, practices, and guidelines for the plant staff to follow to ensure safe and reliable plant operation. Procedures give instruction for activities, such as integrated plant operations, plant maintenance, chemistry and radiochemistry laboratory practices, health physics practices, plant engineering, training policies and practices, technical specification surveillance tests, administrative controls, regulatory compliance and quality control, and security, emergency, fire protection, and refueling plans.

Certain administrative controls exist for the preparation, review, approval, and issue of plant procedures so that they remain current with the plant operations philosophy. New or revised procedures are issued by the Document Control section to ensure that only the most current procedures are used.

When a new or revised procedure is written it must receive approval before being issued for use. A procedure review request form is completed and routed along with the procedure to the originator's supervisor for review. If no corrections are required the supervisor forwards it to the plant procedures coordinator. He has the procedure typed and then sent back to the supervisor who assigns an individual other than the originator to review it for quality and then assigns an individual other than the originator to review it for unreviewed safety determination. If no corrections are required the procedure is then forwarded to the responsible department head. If the respective department head is the approving manager, he may approve the procedure. Some procedures require review by other department heads and/or PRB prior to forwarding to the appropriate manager for signature (in the case of plant administrative procedures all department heads review). After approval, procedures are sent to the procedures coordinator for processing. The entire process is flow charted in greater detail in Figure 4.8-1.

Prior to the second anniversary of the latest approval date of a procedure it is reviewed by the responsible department to determine if any changes are needed.

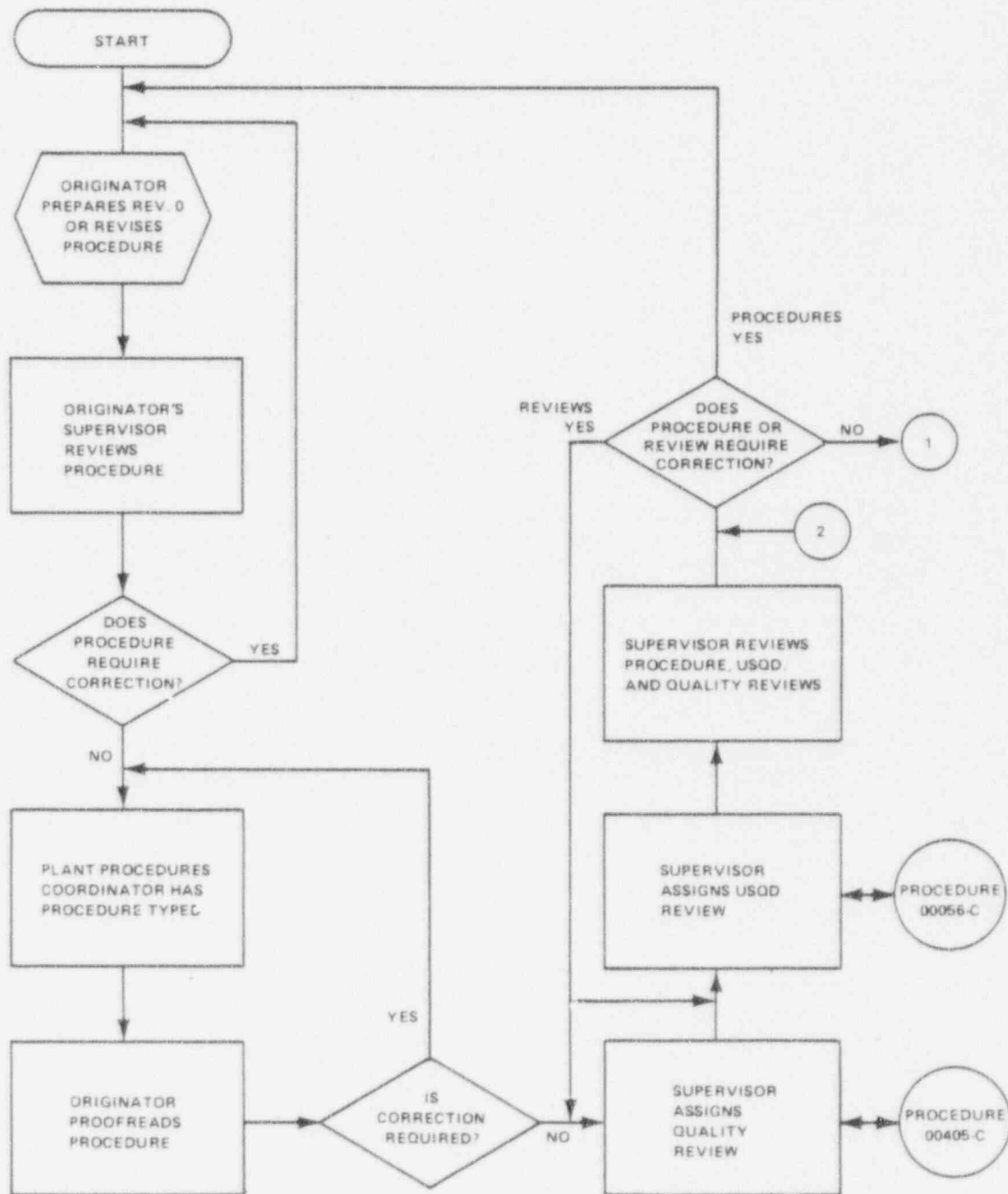


Figure 4.8-1 Procedure Approval Process (Sheet 1 of 3)

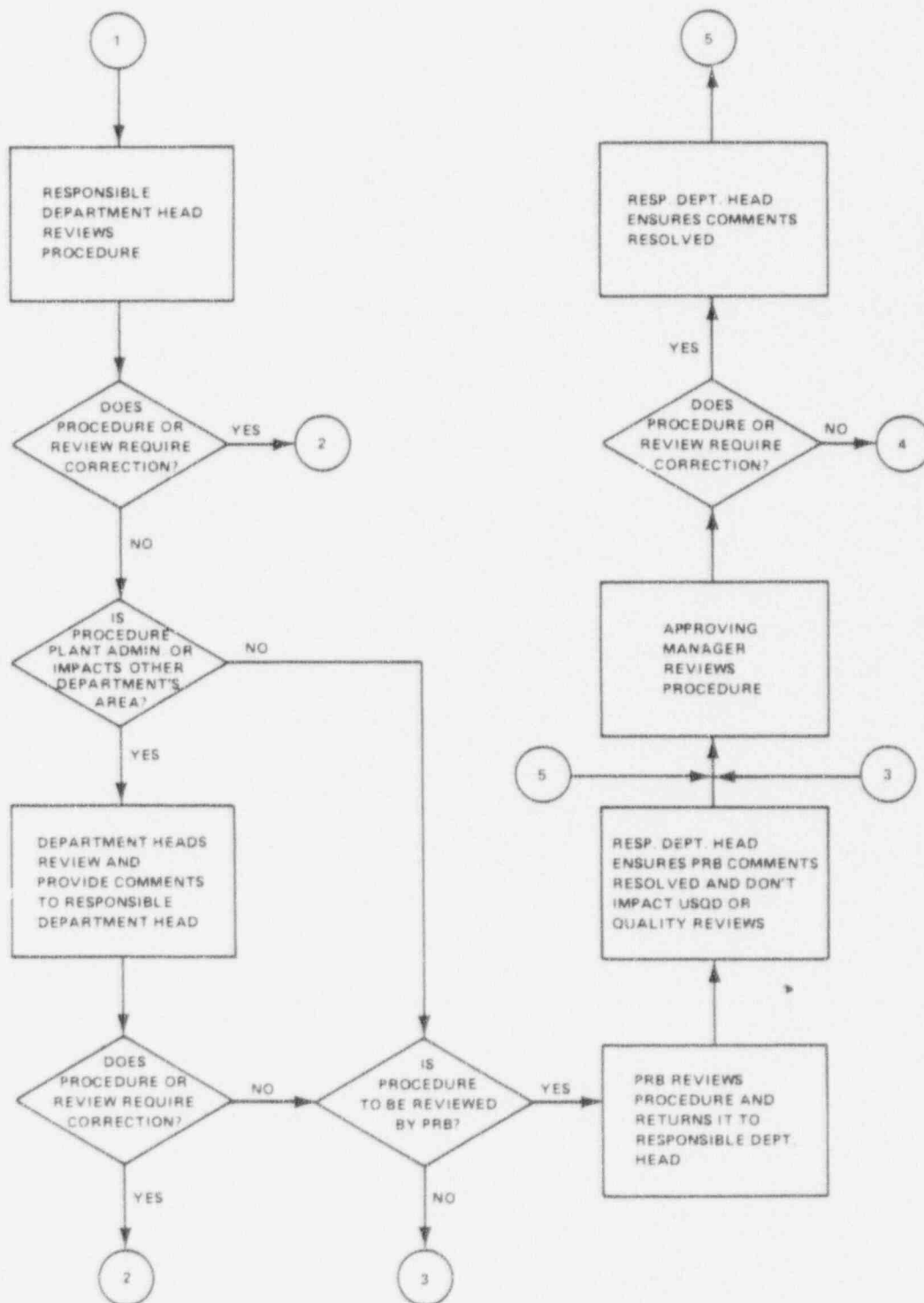


Figure 4.8-1 Procedure Approval Process (Sheet 2 of 3)

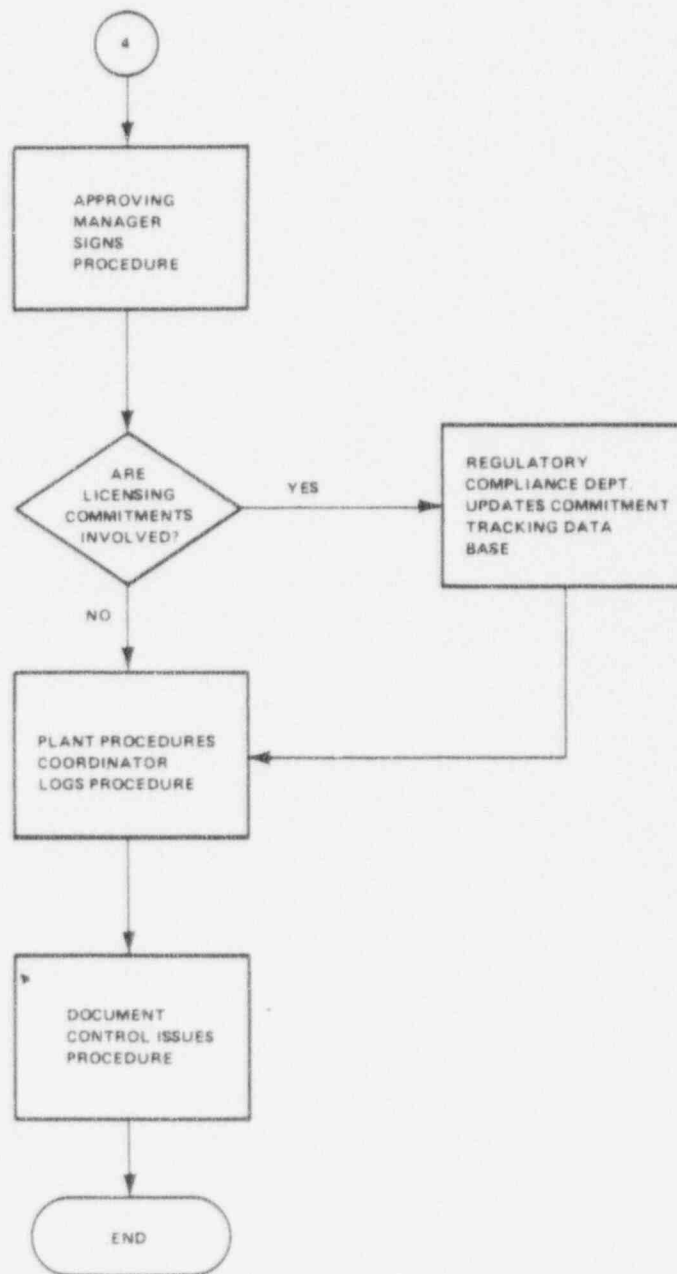


Figure 4.8-1 Procedure Approval Process (Sheet 3 of 3)

#### 4.9 REGULATORY COMPLIANCE DEPARTMENT PROGRAMS

The Regulatory Compliance Department has developed several programs to aid VEGP operations personnel in fulfilling their responsibilities. The programs are:

- Commitment Tracking;
- Permits and Licenses Monitoring;
- Surveillance Test Tracking Program;
- Operations Assessment.

##### 4.9.1 COMMITMENT TRACKING PROGRAM

The objective of the Commitment Tracking Program is to ensure that commitments, requirements, and regulations directly specified in commitment source documents (FSAR, NRC Correspondence, etc.) regarding the operation and testing of VEGP by GPC Nuclear Operations are identified and implemented in plant procedures, programs, or documents.

Source documents are continually reviewed by assigned individuals in the Regulatory Compliance Department to assure new commitments are identified and addressed in appropriate plant documents. Source documents are also reviewed to identify a revision which may modify commitments. The reviewer completes a Commitment Tracking form, whether for a new commitment or a modification of an existing one, and transmits the tracking form to the commitment tracking coordinator (CTC).

The CTC reviews the commitment, enters it into the comtrac database (commitment tracking program), and transmits the commitment to the applicable superintendent. An individual assigned by the applicable department superintendent, reviews the commitment to determine the appropriate method of implementation and initiates implementation actions. Actions include additions or revisions to implementing documents. Implementing documents include procedures, design change notices, plans (security, emergency, etc.), and program changes.

The CTC updates the database and RC personnel verify that the implementation, such as a revision to existing procedures or addition of new procedures, is complete. The comtrac database uses an update and a record tape as a safeguard that no information is lost when changes are made to the database. Also the CTC maintains a hard copy file of completed Commitment Tracking forms. The CTC also reviews commitments within the database and provides plant management and applicable department

superintendents with a monthly list of nonroutine commitments due within the following 6 months.

Figure 4.9-1 flow charts the process of identifying the commitments and tracking them.

#### 4.9.2 PERMITS AND LICENSES MONITORING

A program has been developed to ensure that permits and licenses are obtained and that requirements of said documents are implemented.

Departments within the Georgia Power Company (Environmental Affairs, Nuclear Engineering, Transmission, System Operations, and Land) were requested to supply the following information:

- What permits or licenses are needed at VEGP:
- When will each license or permit be needed;
- What organization and department is responsible for obtaining each license or permit;
- What organization and department is responsible for maintaining each license or permit;
- What are the deadlines for submitting each license or permit application.

These departments also noted the government agency issuing each permit or license identified. Based on the information supplied, Regulatory Compliance has generated a master list of permits and licenses. Any new permit or license identified as needed will be added to this list.

Regulatory Compliance will obtain a copy of each permit required for plant site operation along with its latest modification and will maintain a copy of each in Document Control. Retained originals are maintained by the department responsible for obtaining them from the appropriate government agency.

Regulatory Compliance will track permits necessary for the operation of the plant and its facilities.

Regulatory Compliance will identify the requirements of each permit and inform the appropriate departments of their responsibilities in fulfilling the requirements of each permit. Requirements identified in permits are tracked as part of the Commitment Tracking program.

Regulatory Compliance will notify each responsible department of upcoming permit requirements in sufficient time for completion

before the specified date. Confirmation that such permit requirements are performed is sent to RC.

Permit expiration dates will also be tracked as part of the Commitment Tracking program and Regulatory Compliance will notify the appropriate GPC organization responsible for permit renewal.

A flow chart showing the process of identifying permits and licenses and how they are implemented is represented in Figure 4.9-2.

#### 4.9.3 OPERATIONS ASSESSMENT PROGRAM

In conformance with NUREG-0737, Section I.C.5, the overall objective of the Operations Assessment Program is to ensure that significant operating experiences are purposefully evaluated and lessons learned are translated into appropriate corrective actions and control programs for enhancement of plant safety and reliability.

Incoming documents are screened and evaluated by the coordinator of the OAP for impact on Nuclear Operations activities and programs. Documents requiring action must have a written response with a corrective action plan. If a department determines no action plan is needed then it shall provide justification.

Written responses are reviewed by the OAP coordinator in accordance with procedure 00414-C, Operations Assessment Program. Further actions are tracked as commitments and verified upon completion.

Documents are screened by comparing them to criteria listed in procedure 00414-C. If the items do not meet the criteria, they are distributed to the appropriate department for "Information Only". Items classed as "Information Only" require no action from the appropriate department.

A flow chart representing the operations assessment process is shown in Figure 4.9-3

#### 4.9.4 SURVEILLANCE TEST TRACKING PROGRAM

The surveillance test tracking program (STTP) is designed to provide scheduling and tracking, of the Technical Specifications required surveillance tests. A surveillance test is any scheduled or event-related test, inspection, or observation that is performed periodically.

Scheduled surveillance requirements of the Technical Specifications are identified by regulatory compliance

personnel. The requirement is entered into the surveillance test tracking program in accordance with procedure 00404-C, "Surveillance Test Tracking Program." Certain surveillance tests are not part of STTP. Only those with a frequency equal to or greater than 72 hours are entered. Those less frequent than 72 hours are implemented by the superintendent of operations.

After a surveillance test is performed, the results of the test is recorded on the "Surveillance Test Program Tracking Sheet" (Figure 1 of procedure 00404-C). In order to complete the tracking sheet, the tested component must either be declared satisfactory or deficient. A deficiency report must be issued if there is a deficiency.

Upon the completion of a surveillance test, the documentation of the test is transmitted to document control by the Regulatory Compliance Department.



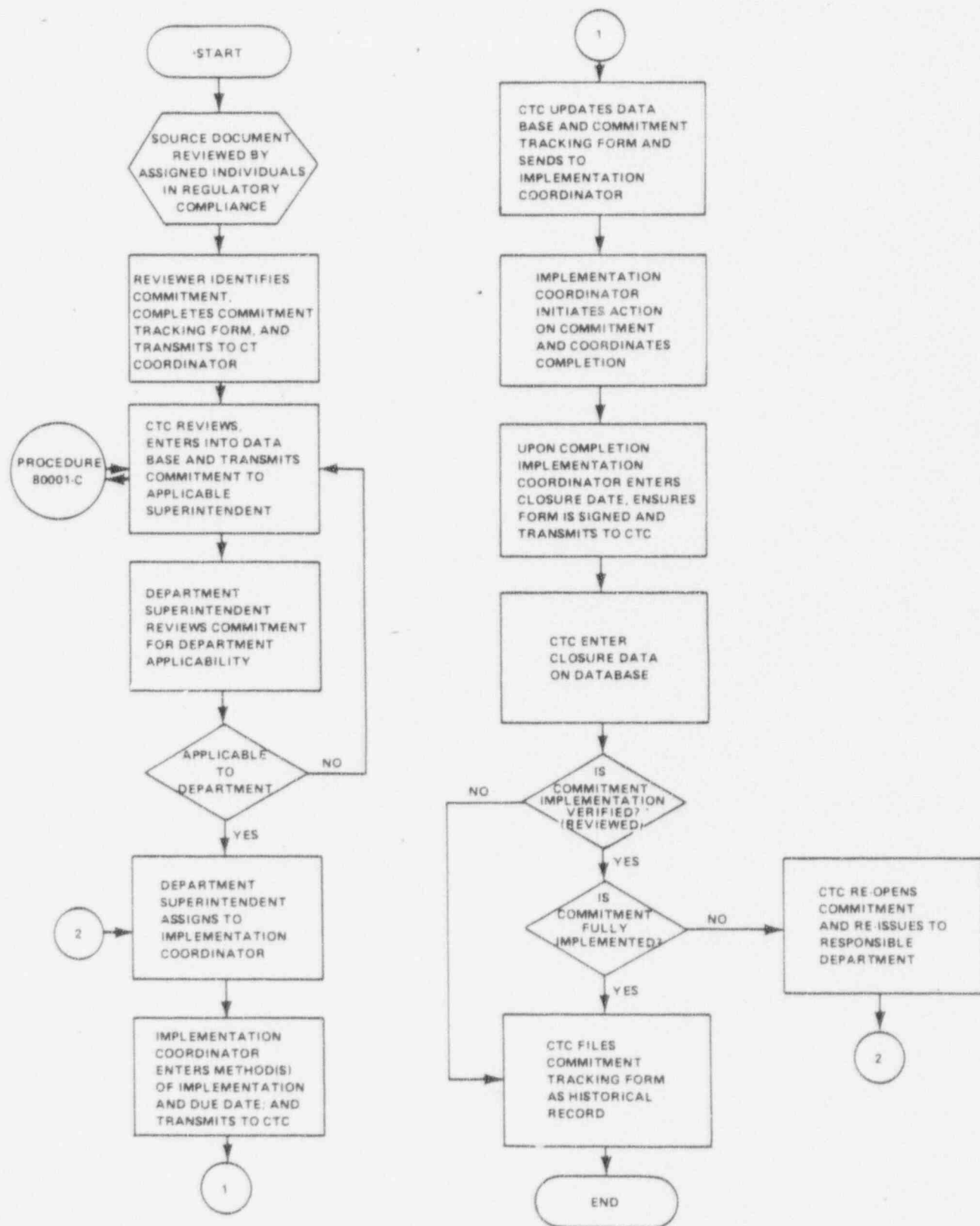


Figure 4.9-1 Commitment Tracking Program Flow Chart

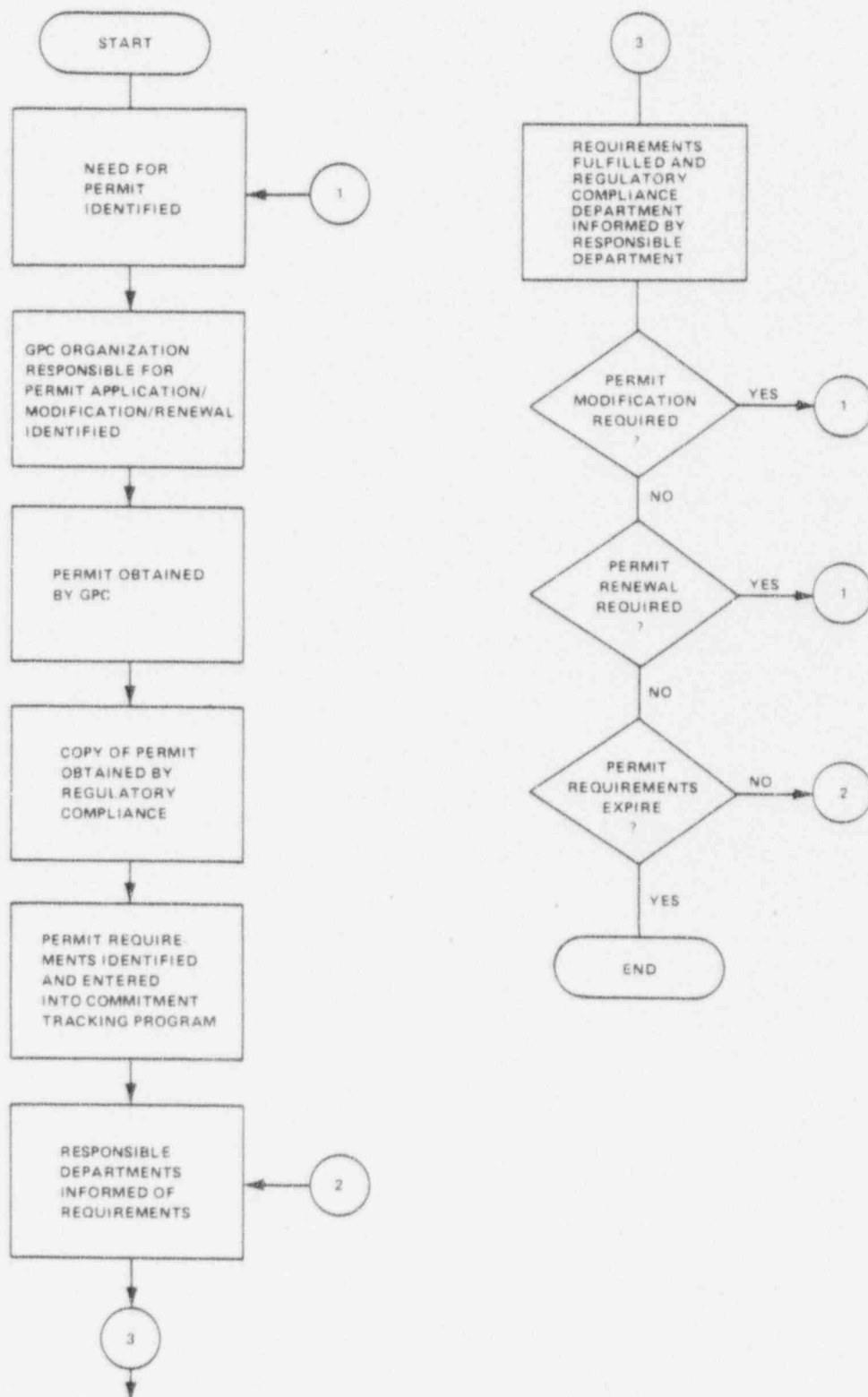


Figure 4.9-2 Permits and Licensing Program Flow Chart

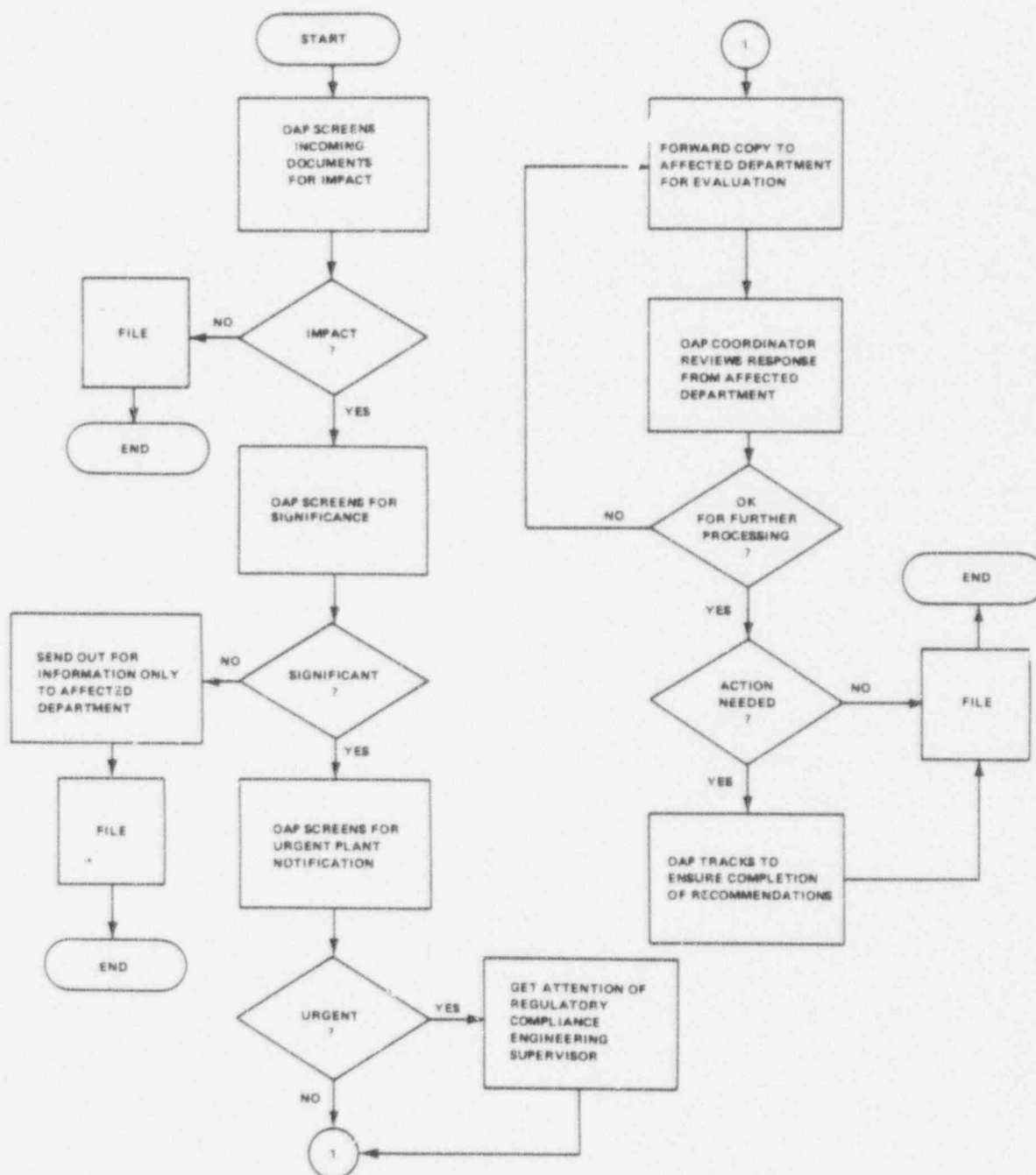


Figure 4.9-3 Operations Assessment Program Flow Chart

#### 4.10 MEDICAL EVALUATION OF NUCLEAR POWER PLANT PERSONNEL REQUIRING OPERATOR LICENSES

Section 55.10 of 10 CFR 55 requires that each application for an initial or renewal operator or senior operator license contain a report of medical examination by a licensed medical practitioner. An application for an initial or renewal operator or senior operator license will be approved if, among other things, the physical condition and general health of the applicant are not such as might cause operational errors endangering public health and safety.

VEGP meets this requirement with the following procedures:

- Procedure 00710-C, Reactor Operator Training and Qualification. The present schedule calls for this procedure to be approved by August 5, 1985.
- Procedure 00714-C, Senior Reactor Operator, Shift Supervisor, and Operations Supervisor Training and Qualifications. The present schedule calls for this procedure to be approved by September 6, 1985.

## 5.0 AUDITS

This section describes the QA audit program and completed audits. Audit and evaluation of Nuclear Operations activities have been performed by the Georgia Power Company Quality Assurance (GPC QA) Department.

The QA organization is described in General Appendix I.

The QA site manager for operations (QASMO) is responsible for developing a fully trained and functioning staff in the area of operations by 90 days prior to fuel loading. This responsibility includes the development of an audit schedule, audit plans, and audit matrices that cover all the areas listed in section 17.2.2 of the FSAR.

## 5.1 PROJECT AUDITS AND RESPONSES

The Nuclear Operations programs are receiving their initial audits during 1985 and 1986 as operations programs are implemented. Initial audits of in progress activities, programs, or activities listed in FSAR 17.2.2 will be completed at least 90 days prior to the issue of operating license. As of June 1, initial audits of Administrative Control and Document Control have been completed.

Plant administrative procedures that are identified as affecting quality or safety are reviewed by quality assurance for the inclusion of pertinent quality requirements. The initial review of those procedures shall be completed at least 90 days prior to fuel loading. As of June 1, 1985, approximately 216 procedures have been reviewed by QA and comments resolved.

The Operations QA Department has an ongoing activity oriented surveillance program that supplements the audit program. This program consists of a QA auditor/engineer observing Nuclear Operations Department personnel performing work activities affecting quality or safety and comparing the results of his observations to a pre-prepared and approved checklist. Problems are generally resolved with the personnel performing the task or their immediate supervisor. Trends detected in the QA surveillance program are used to indicate areas where additional audit focus may be needed.

Because several types of VNO procedures are used to support the ITP, QA personnel assigned to the ITP will become familiar with VNO procedures and programs prior to fuel loading.

The GPC Quality Assurance Department has conducted 8 audits of Nuclear Operations and ITP activities. Those Audit Finding Reports (AFR) pertinent to this module are briefly described below. These AFRs are related to Deficiency Reports, QC inspection documentation, and Document Control.

- AFR TP01-84104-011: Regulatory Compliance had not trended Deficiency Reports and did not have adequate procedural instructions to do so (procedure 80013-C).

Response: Regulatory Compliance procedure 80013-C has been revised and issued with sufficient controls to assure that DR trending is performed. Additionally, the trend reports are issued routinely to plant management and identify adverse trends, as appropriate.

Readiness Review Conclusion: It was ascertained through a review of revision 1 of procedure 80013-C that the addition of the DR trending forms and issuance of the Bimonthly Trend Report closes the loop between identifying DR trends and reports of trends to plant management.

- AFR SP01-84/79-713 When conducting inspection, QC inspectors did not complete Inspection Plans (IPs) properly. Examples of problems are M&TE indicated but no calibration due date, no M&TE identification or calibration due date, although action called for measurements. M&TE section is illegible, corrections without authentication or dates, and dimensions not identified that were to be verified.

Response QA personnel, having reviewed recently submitted Inspection Plans, indicate that the deficiencies mentioned in the AFR have been corrected. Documentation, IPs, will continue to be monitored by QA surveillances.

QC has taken action to insert the missing calibration due date. Human error was the root cause of this part of the finding. Also, inspection personnel were reinstructed in procedure compliance. The missing M&TE identification number was due to the fact that the equipment involved were feeler gages which were not uniquely identified or calibrated. The inspector making the illegible entry was instructed to ensure that entries are legible. The inspector making corrections without dates and authentication was instructed in the importance of the correcting writeovers or errors correctly. Also they made proper corrections to the entries in question. The inspection plan was corrected to show the location markers for the dimensions. The QC inspector was instructed to perform a better review of inspection plan entry and requirements to ensure adequacy.

Readiness Review Conclusion: It was ascertained through a review of the audit finding response and QA letter to construction, dated January 1, 1985, that the item of AFR 713 is closed, and the surveillance program by the QA department adequately monitors the controls of documentation deficiencies.

- AFR OP19-85/01-001: Procedure 00108-C allows receipt of vendor manuals outside the controls of the Supplier Data Register (SDR) for components purchased to Bechtel or Southern Company Services procurement specifications. Five of 12 vendor manuals issued in accordance with procedure 00108-C had been previously issued through the SDR. The other seven manuals could not be found in the SDR listing. Two of the five vendor manuals listed in the SDR were approved with comments that allowed work to proceed subject to incorporation of comments. The manuals in Document Control files did not contain these comments. Procedure 00108-C does not require comparison between vendor manuals and SDR listings to determine document status.

Response: Document Control has committed to revise procedure 00108-C, Control, Approval, and Use of Vendor Manuals and Revisions, by July 15, 1985. The following will be incorporated into the revision:

- Further define the scope;
- Provide a method for handling received vendor manuals that were purchased according to Nuclear Operations purchase order requirements;
- Provide a method for handling received vendor manuals that were purchased according to Bechtel or SCS procurement specifications;
- Provide a method for comparing received vendor manuals against NCRMS and SDR to avoid duplication;
- Provide a method for handling unapproved vendor manuals.

Readiness Review Conclusion: It was ascertained through a review of Document Control's response that the revision of procedure 00108-C with the proposed changes will adequately address the deficiencies found in the controlling of vendor manuals.

- AFR GD07-84/66-693: During the audit of a sample of electrical drawing referenced by the Class 1E 4160-V Switchgear Preoperational Test Procedure, it was learned that the Nuclear Operations Document Control was not receiving "controlled" drawings. The drawings transmitted to Nuclear Operations were in the form of diazo aperture cards. Per section 9.1 of Field Procedure DC-A-01, revision 12, "...These cards are considered uncontrolled and are to be used for information only." There was no indication on the film or the card to indicate they are "...uncontrolled and are to be used for information only." By procedure definition all aperture cards distributed by Nuclear Construction are uncontrolled and are to be used for information only. Nuclear Operations are utilizing these aperture cards in activities affecting quality.

Response: Field procedure DA-A-01 was revised to correctly identify silver aperture cards as controlled documents and diazo aperture cards as uncontrolled documents. The revision also included additional assurance requirements to prevent uncontrolled diazo aperture cards from being used to produce controlled documents for construction or quality purposes by any requestor.



Regulatory compliance will sample the electrical drawing referenced in the audit to determine if the drawing made from the diazo aperture cards are the same as the latest approved drawing/drawing revision information as the controlled copies of these documents. The purpose of this effort would be to determine if quality has been affected and if any corrective action needs to be taken to rectify any problems associated with these sampled drawings.

A request was made by the GMVNOD, letter dated August 31, 1984, log VEGF-2687, for the responsible organizations to provide Nuclear Operations with silver aperture cards (controlled) to allow the issue of controlled drawing to Nuclear Operations personnel.

Nuclear Operations will issue a new procedure, complimenting the existing procedure, to establish requirements governing the making/issuing/controlling of controlled drawing prints from aperture cards.

Readiness Review Conclusion: It was ascertained through a review of the audit finding response and the new administrative procedure 00101-C, Drawing Control, that the controls for administering the making/issuing/controlling of control drawings to Nuclear Operations personnel are defined and in operation.

- AFR GD07-84/66-694: During the audit of a sample of electrical drawing referenced by the Class 1E 4160-V Switchgear Preoperational Test Procedure, it was discovered that a few Design Change Requests (DCRs) and Field Change Requests (FCRs) were missing from the satellite stations, later revisions of drawings were available from Nuclear Construction than were found in the satellite stations and drawings from the satellite stations returned to Nuclear Operations Document Control without a log or transmittal documents for the returned drawing.

Response: The controls for administering the operation of Nuclear Operations departmental satellite stations will be defined in procedure 00101-C, Drawing Control.

Readiness Review Conclusion: It was ascertained through a review of the satellite stations and procedure 00101-C that the controls of the satellite stations operations are adequately addressed by the procedure 00101-C.

## 6.0 OPERATIONS ORGANIZATION AND ADMINISTRATION VERIFICATION

This section describes the verification process and the verification results obtained by the operations organization and administration Readiness Review Team. This section is divided into two parts. Section 6.1 describes identification of FSAR commitments and development of the verification plan and scope. Section 6.2 describes resultant findings, responses, and corrective actions.

## 6.1 VERIFICATION SCOPE AND PLAN

The verification plan was developed and implemented by the Readiness Review Team. The 9 members expended approximately 1100 manhours examining more than 4600 program elements to ascertain whether the operations organization and administration commitments were implemented properly. Each element is either a program commitment, program implementing document, or any meaningful part thereof which is verifiable. The 4600 elements referenced above made up the checklists associated with the major aspects of the program listed in Table 6.1-1. The 9 team members have cumulative experience of 76 man years in the construction, startup, and commercial operation of nuclear power plants.

The initial objective of the Module 5 team was to ascertain whether commitments applicable to operations organization and administration were implemented in the organization procedures. To determine implementation, the team prepared a commitment matrix. The FSAR (for this module amendment 14 was used) is the controlling or "base line" document for the identification of commitments. The completed matrix (section 3) contains 260 commitments.

The team then reviewed plant procedures to determine the implementation or capture of these commitments. An implementation matrix was prepared which identifies each of 260 commitments, along with the procedure which fulfills that commitment. Where an implementing procedure was identified but not issued, it is noted in the remarks column. The implementation matrix is presented as a product of the Module 5 effort which may be used to ensure present and continued commitment fulfillment. The team then developed a plan for verification of these commitments and implementing procedures. Specific areas chosen for observation included:

- Operations Quality Control;
  - M&TE,
  - Inspections,
  - Material receipt inspections,
  - Procedures,
  - Work planning,
  - Material control,
  - Inspector qualifications,
- Operations Document Control;
  - QC documents,
  - Procurement documents,
  - MWOs,

- Regulatory Compliance;
  - Organization,
  - Programs,
  - Procedures,
  - Reports to NRC,
- Procedure Development and Revision Program;
  - Operations Procedure Development,
- Administration;
  - Organization,
  - Fitness for Duty,
- Safety Review Board;
- Plant Review Board;
- Independent Safety Engineering Group;
- Contractors Quality Assurance Program;
- Corrective Action;
- Material Control.

Review of these items included direct observation of activities and interviews with line supervisors, engineers, QC specialists, and a review of completed documents. During the review process, over 150 of 260 commitments were covered. Items not covered include some ANSI standards, procurement document requirements, and design control requirements.

The review process not only confirmed and documented the effectiveness of controls within the operations organization, but also identified certain concerns that were submitted as Readiness Review Findings (RRF). Corrective action responses for these RRFs were reviewed by the Readiness Review Team and found to be acceptable.

Table 6.1-1 provides a description of the types of activities that were included in the programmatic verification.

TABLE 6.1-1

## SUMMARY OF VERIFICATION ACTIVITIES (SHEET 1 OF 5)

| <u>Review Phase</u> | <u>Description</u>                                     | <u>Results of Review Sample</u>   |
|---------------------|--|---|
| Phase I             | Operations Organization and Administration Commitments | Identification of implementing document for each listed commitment.   |
| Phase II            | Quality Control (QC) Inspections                       | Reviewed 55 maintenance work orders (MWOs) of approximately 2500 MWOs for adherence to QC and administrative procedures. Reviewed two inspection reports (IRs) and two inspection plans (IPs) for adherence to QC procedures.   |
|                     | QC Inspector Qualifications                            | Verified that proper certification (discipline) for nine QC inspectors was on file. These nine were selected because they signed off various documents reviewed by team members.  |
|                     | Work Monitoring Plans                                  | Scanned the two plans presently approved (May 8, 1985) for depth and details. They were acceptable.   |
|                     | Operations Assessment Program (OAP)                    | Interviewed OAP coordinator to ascertain that he was carrying out his duties per implementing procedure. Reviewed records kept by OAP coordinator to ascertain records were being kept and that procedures were being followed. |
|                     | Plant Review Board (PRB)                               | Reviewed 5 of 14 procedure manuals, reviewed PRB meeting minutes and memos issued by PRB during 1984 (39 documents) to ascertain that PRB was adhering to governing procedures.   |

TABLE 6.1-1

## SUMMARY OF VERIFICATION ACTIVITIES (SHEET 2 OF 5)

| <u>Review Phase</u> | <u>Description</u>                         | <u>Results of Review Sample</u>   |
|---------------------|--|---|
|                     | Fitness for Duty Program                   | Conducted interviews with Human Resources Coordinator, office supervisor and nuclear security investigator and reviewed 50 out of 561 records to ascertain adherence to the corporate fitness for duty procedure.   |
|                     | Reports to NRC                             | Reviewed governing procedure for adequacy.  |
|                     | Procedure Development and Revision Program | Inspected temporary changes to procedures (TCP) log and ascertained that it is being maintained. Also ascertained that procedures governing temporary changes to procedures were being adhered to. Ascertained through a review of Plant Procedures Manuals that requirements of Draft Technical Specifications, paragraph 6.8.1, are being met. It was ascertained through a review of procedure files that procedures had not reached the time limit for a biennial review. |
|                     | Corrective Action Program                  | Reviewed 11 Operations Deficiency Reports (ODRs) and the ODR log to ascertain that procedures are being adhered to. The ODR coordinator was also interviewed.   |
|                     | Commitment Tracking                        | Interviewed commitment tracking coordinator and reviewed his files to ascertain adherence to procedures. Also reviewed computer data base by calling up portions of the data base in the computer storage.  |

TABLE 6.1-1

## SUMMARY OF VERIFICATION ACTIVITIES (SHEET 3 OF 5)

| <u>Review Phase</u> | <u>Description</u>                          | <u>Results of Review Sample</u>  |
|---------------------|---|--|
|                     | Independent Safety Engineering Group (ISEG) | ISEG has not been formed. Team verified that commitment is being tracked by commitment tracking program.   |
|                     | Document Control (DC)                       | Reviewed drawing transmittal forms, reviewed 50 drawing transmittals to ascertain if they contained correct information, compared drawings to drawing register, looked at 5 drawings for inclusion of design change notices (DCNs), reviewed 14 controlled drawings to verify they were on yellow paper, reviewed 11 uncontrolled drawings to verify they were on pink paper, ascertained that satellite stations maintains work file distribution lists. In addition, it was ascertained that document control has a document file index by reviewing the Nuclear Operations record Management system (NORMS) data base, ascertained that control is maintained over entry to DC, that method, for document removal is maintained, reviewed eight DC records and ascertained that they were classified as lifetime or nonpermanent. |
|                     | Surveillance Test Tracking                  | Interviewed the surveillance test coordinator (STC) to ascertain status of program. Ascertained that responsibilities for conducting tests have been assigned to various departments. Reviewed with STC how surveillance tests are identified and entered into the program.  |

TABLE 6.1-1

## SUMMARY OF VERIFICATION ACTIVITIES (SHEET 4 OF 5)

| <u>Review Phase</u> | <u>Description</u>                    | <u>Results of Review Sample</u>   |
|---------------------|---------------------------------------|---|
|                     | Quality Assurance Definitions         | Reviewed five procedures to verify that definitions used in Vogtle procedures are consistent with those in ANSI N45.2.10 (1973).  |
|                     | Contractors Quality Assurance Program | No phase II verification was attempted due to no contractors being on site, however reviews of Contractors QA Program will be conducted by QA/QC when contractors come on site and begin performing work activities.  |
|                     | Safety Review Board                   | Because the SRB is not constructed at this time an interview with the commitment tracking coordinator was conducted to ascertain that the commitments of the SRB were being tracked. Also chairman of Hatch SRB was interviewed.  |
|                     | Noise Level Surveys                   | Mechanical equipment and switchgear rooms in the plant will be subjected to noise surveys during plant startup to determine actual noise levels. It was ascertained that this commitment is being tracked by the commitment tracking program.                               |
|                     | Test Procedures                       | An interview with the commitment tracking coordinator was conducted to ascertain that the commitments to the test procedures were being tracked. It was ascertained through a review of a representative sample of test procedures that they contain the required criteria. |



TABLE 6.1-1

## SUMMARY OF VERIFICATION ACTIVITIES (SHEET 5 OF 5)

| <u>Review Phase</u> | <u>Description</u>                          | <u>Results of Review Sample</u>   |
|---------------------|---|---|
|                     | Receipt Inspection                          | Reviewed material receipt inspection effort by operations QC. Verified four inspectors certification as receipt inspectors were on file and correct. Reviewed Material Inspection Report Log.   |
|                     | Control of M&TE                             | Ascertained that M&TE was traceable to National Bureau of Standards (selected 5 items at random from MWOs). Ascertained that M&TE used by QC has unique identification numbers (selected 5 items at random in maintenance tool room and in Instrument and Control tool room).         |
|                     | Control of Materials, Parts, and Components | Reviewed 25 items to ascertain that they were tagged properly, including PAV number and MIR number. Identified and walked down level A and level B storage areas.   |
|                     | Procurement Document Review                 | Ascertained that vendors supply materials are listed on the quality suppliers list or equipment suppliers list (Bechtel). Requisitions were reviewed to ascertain that procurement levels were assigned. Resume of EMPDR was reviewed to ascertain that he had the proper experience. |
|                     | Instructions, Procedures, Drawings          | Ascertained that individual(s) signing off special process procedures had the proper level of certification (checked 4 procedures).   |

## 6.2 FINDINGS, RESPONSES, AND CORRECTIVE ACTIONS

This section contains a listing of the findings, project responses, Readiness Review conclusions, and an overall evaluation for the finding impact on the project. The evaluation consisted of a screening that grouped the Readiness Review Findings (RRFs) into categories, an assessment of the collective significance, and the review teams conclusions.

The Readiness Review Team identified 16 findings that were forwarded to the project for response. After responses were received, the total number of findings were reduced to 15. One original finding was reduced to a nonfinding after the project identified the proposed procedures that would cover the commitments in question.

The two categories resulting from the above evaluations were found to be:

- Procedure/Program Inadequacies - A requirement was not contained in the procedure.
- Procedure Noncompliance - Personnel did not follow all elements of approved procedures.

### 6.2.1 SUMMARY EVALUATION

Module 5 Readiness Review Team verification process resulted in 15 findings. Corrective actions were reviewed and found to be acceptable by the Readiness Review Team. Two of the findings (5-7 and 5-9), which fell into the procedure/program inadequacy category, were similar in that there was no way to ascertain if documents sent to Document Control were received. Further discussions with the project about these findings resulted in a decision to change procedure (00100-C), Quality Assurance Records Administration, to alleviate this problem. When related to the functions of the operations organization and administrative controls in total, no individual finding or group of findings was considered serious enough to affect overall performance of the operations organizations effort.

### 6.2.2 COLLECTIVE EVALUATION

In its overview of the 15 individual findings, the team noted patterns of similarity. Further review of the findings in the procedure/program inadequacy category, ascertained that two of these findings related to control of documents sent to Document Control.

These findings pointed to a lack of positive assurance that Document Control could determine that they had received all the documents sent to them. As a result of this observation Nuclear

Operations was requested to initiate action to alleviate this problem. Procedure 00100-C will be revised to require that the document transmittal form identify each record and the number of pages included with each record.

### 6.2.3 INDIVIDUAL FINDINGS

- Finding 5-1

This finding was reduced to a non-finding. The team was unable to identify procedure(s) which implemented a commitment to submit medical records for persons requiring operator licenses to designated medical examiner. The project identified the proposed implementing procedures resulting in reducing 5-1 to a non-finding.

- Finding 5-2

Procedure 00101-C, Drawing Control, controls Working File Drawings, a file of selected controlled drawings, issued to organizations or individuals. As long as the working file is kept, the owner will receive new and revised drawings and Design Change Notices (DCNs) applicable to the drawing or set in his or her possession. Procedure 00101-C requires the document control supervisor to ensure proper implementation of this procedure by reviewing adherence to controls established herein by drawing recipients and satellite stations. Drawing recipients shall remove and discard superseded drawings from the appropriate files and replace them with the new drawings; ensure that outstanding DCNs not incorporated into revised drawings remain with the drawing on file; and sign and return the drawing and data transmittal form to Document Control within 10 working days. During the review of Document Control the following problems were found on the stick files of individual engineers: (a) incorporated DCNs were attached to the applicable drawing without being marked VOID as required; (b) updated controlled drawings were not placed on stick files in a timely manner; (c) some stick files contained multiple copies of the same controlled drawing; (d) inconsistencies in transmittal of drawings received by individuals (distribution changes/deletions are not being properly handled by Document Control); and (e) controlled drawings with stamped notation WORKING FILE were inappropriately marked through with a blue ink pen.

Project Response: The issue of the finding is the timeliness of updating drawings. The following responses are provided: (a) Incorporated DCNs will be

removed from the drawings and not maintained. (b) Updating of the test supervisors' stick files in a timely manner is aggravated by the large number of drawing revisions being initiated by design and the demands on test supervisors time from startup activities. The significance of the problem is lessened by the fact that the test supervisors, before starting on a quality-related system, check for the latest drawing revision by the use of NORMS. In addition it was determined that no testing was done with out of date drawings.

The corrective action is to have test supervisors to update their stick files daily. In addition the lead test supervisors have assigned their clerks the task to help with stick file updating. A review of the test supervisors' stick files will be conducted by June 30, 1985, to ensure that the corrective action is satisfactory. (c) The existence of multiple copies of the same controlled drawing does not represent a noncompliance. In fact, multiple copies are requested for specific instances, when the user needs more than one copy for different system files. (d) The inconsistencies noted in transmittal of drawings were problems encountered when the computer system printer was moved from the administration building to the service building. The problem, printouts which contained inaccurate data, were caused by a faulty communication link (telephone lines) that connected the printer to the SCS data center in Atlanta. Distribution changes/deletions are made as notification to Document Control is received, however, the communication difficulties delayed new distribution reports which reflect these changes. Therefore, some individuals received drawings they no longer needed. The problem has now been corrected. (e) Stamped Working File drawings were issued by Document Control on yellow paper, previous to the issuance of procedure 00101-C, revision 0, but were not updated. Procedure 00101-C committed Document Control to recall or stamp VOID all previous Working File drawings. The drawing in question were of this type, because the action to recall or stamp VOID the drawings had not been fully implemented. The test supervisor had crossed out the words "Working File" to identify these drawings. These drawings were removed from the test supervisors' files by the test supervisors.

The document control supervisor reviews the files of drawing recipients periodically (procedure 00101-C). This review ensures that personnel receiving control drawings maintain these drawings as specified in procedure 00101-C. As of June 15, 1985, Document Control had not performed a review of these files.

The root cause was failure of test supervisors to comply with procedures.

Readiness Review Conclusion: It was ascertained through a review of the test supervisors' stick files that stick files were being updated, distribution of controlled drawing has been corrected, and drawings with the words "Working File" crossed out have been removed from stick files.

This response is acceptable.

• Finding 5-3

Procedure 00100-C, revision 1 (paragraph 6.3.2), Quality Assurance Records Administration, requires that the record storage area be temperature and humidity controlled. During the review of Document Control it was ascertained that no method of determining humidity and temperature was available.

Project Response: The lack of measuring devices for humidity and temperature has had no significant impact on the records in the vault because the records requiring this environment have been stored for less than 3 months. The vault has an independent HVAC system with a preset thermostat. The permanent measuring devices for humidity and temperature have been ordered and are scheduled to be installed by August 1, 1985. Until the permanent devices are installed, temporary devices have been installed in the operations vault and weekly readings are taken and logged. This data is within limits. Record storage areas are required to be temperature and humidity controlled per manufacturer's requirements for special documents. If the HVAC system fails, the document control supervisor will notify the maintenance department to determine and correct the problem. A statement regarding manufacturer's conformance requirements (for special documents) and a statement which requires Document Control to notify maintenance if manufacturers' recommended limits are exceeded will be added to the next revision of procedure 00100-C, scheduled August 1, 1985.

The root cause was the failure of the building inspector to require the contractor to complete HVAC system.

Readiness Review Conclusion: It was ascertained through an inspection of the vault that a temporary device for measuring humidity and temperature has been installed. A log is in the vault and weekly readings are recorded.

This response is acceptable.

- Finding 5-4

Procedure 00101-C, revision 0 (paragraph 4.5.5d), Drawing Control, requires that Document Control maintain a Working File Distribution List for working file drawings issued by satellite stations. During the review of Document Control it was ascertained that the Scoped Drawing Distribution list was not in the computer database.

Project Response: The finding resulted primarily as a result of a communication problem between GPC Nuclear Operations and SCS Data Center personnel in Atlanta. The distribution computer report contained the base drawing, but not the scoped drawing. The only difference in the drawing numbers is a prefix added to the scope drawings of "SU"; i.e., 1X4DB101 (Base Drawing); SU1X4DB101 (Scoped Drawing). Because of this miscommunication, the computer system failed to recognize the SU as representing a separate drawing for the distribution report. The SCS Data Center has completed the necessary steps to ensure the computer system distinguishes between base drawings and scoped drawings for distribution reports. New reports have been generated that show the proper distribution for all drawings. Document Control personnel continually check the reports against changes made to the distribution to ensure the reports contain the necessary and proper information.

The root cause was miscommunication between SCS and Nuclear Operations.

Readiness Review Conclusion: This discrepancy was identified by Document Control and corrective action was initiated before Readiness Review issued the finding. It was ascertained through a review of the Working File Distribution List that the changes made by the SCS Data Center to the distribution report database have corrected the problem of identification of scoped drawings.

This response is acceptable.

- Finding 5-5

Provisions for the inspection, test, and operating status of safety-related structures, systems, and components require procedures to be established to control the use of welding stamps and inspection/status indicators, including the authority for application and removal of tags, markings, and labels (ASME Code XI). Plant Vogtle procedures do not address welding stamp control.



Project Response: The need for a procedure was identified on October 12, 1984 when the requirement was incorporated in the FSAR (amendment 8). It is included in the commitment tracking system.

The control of welding stamps is a requirement of the ASME code. Presently ASME code components are under the control of GPC Nuclear Construction and subject to the requirements of ASME section III-4300. When all the requirements of ASME section III are satisfied, control of the ASME components will be transferred to GPC Nuclear Operations, and the requirements of ASME Section XI, subsection IWA-2600, will govern work on the components. Nuclear Operations is developing an ASME section XI program (procedure 00351-C, ASME section XI Repair/Replacement Program) in preparation to receive control of ASME code components. Procedure 00351-C will specifically address the control of welding stamps.

Safety-related systems will be turned over to Nuclear Operations before procedure 00351-C is written. Until procedure 00351-C is approved, Nuclear Operations maintenance will use Nuclear Construction to perform safety-related welding if required on turned over systems.

The root cause was a program inadequacy because the procedure was not in place.

Readiness Review Conclusion: The present procedures are adequate to ensure that qualified Nuclear Construction welders perform ASME welding. Control of welding stamps will be addressed in 00351-C.

This response is acceptable.

• Finding 5-6

Procedure 80009-C, Revision 0 (paragraph 3.11), Operations Assessment Program (OAP)-Coordination, requires that the OAP coordinator perform a daily check of the OAP Log Book to ensure that due dates are met. During review of procedure 80009-C and a personal interview with the OAP coordinator it was found that the OAP coordinator reviews the OAP Log weekly, contrary to the procedure requirement of daily review.

Project Response: Although the log books are used daily, a concerted effort to identify overdue items is done weekly. Items identified as overdue during daily use are also identified. A daily check of the logs was reestablished to comply with the current revision 0 of procedure 80009-C. When the OAP was established, the OAP coordinator had to track about 15 items a month, but

the program has increased in scope to the point that a computer is now used to keep track of the status of assigned items (approximately 7000 items at the time of this review). The database is updated weekly on a status report run showing those items overdue and those that will be due the next week. The action taken to correct the identified problem is to institute a change to procedure 80009-C, paragraph 3.11, to require a weekly review for overdue responses and ensure that the OAP coordinators read and understand the procedure.

The root cause was failure to follow procedures.

Readiness Review Conclusion: Procedure 80009-C, revision 1, was reviewed to verify that the change to the procedure had been made. A change was made in paragraph 3.11 to require an OAP Log review weekly. By personal interview with the OAP coordinator it was ascertained that the OAP Log is now reviewed weekly and open items are identified and the responsible supervisor notified.

This response is acceptable.

• Finding 5-7

Procedure 00204-C, revision 0, paragraph 4.3, Control of Special Processes, states, "NDT/NDE shall be performed using procedures reviewed by the Quality Control (QC) Department and a Georgia Power Company level III inspector." There is no requirement as to where the level III qualification records should be maintained.

NDE procedures 85401-C through 85404-C were approved by a GPC QC inspector who signed as the designated level III inspector. The certification papers in the document control file, however, certified the subject inspector to only level II under the GPC program.

Project Response: The subject GPC inspector is a certified level III, and documented evidence is maintained in accordance with GPC Corporate NDT procedure GEN-12750, Qualification and Certification of NDT Personnel, which requires certification records be maintained in the corporate office. Records of his certification are there. He was a certified level III inspector at the time he signed the procedures. The fact that procedure 85003-C did not require a copy of the certifications to be placed in Document Control is a valid concern. The following actions will be taken by May 27, 1985:



- Place copies of the subject inspector's certifications for NDT methods in Document Control. Originals will continue to be maintained in the corporate office in accordance with procedure GEN-12750.
- Forward copies of NDT certifications for all QC personnel to Document Control.

Readiness Review Conclusion: The Readiness Review team checked three files in Document Control on June 5, 1985, to verify that the files had been updated and the NDT verifications were there. All three files now have NDT certification documentation, and the subject inspector's file has his level III certification papers.

There was no procedural requirement under procedure 85003-C for certification of NDT personnel to be placed in Document Control. Revision 2 of procedure 85003-C, Training and Qualification of Quality Control Nondestructive Testing Personnel, is due for approval by July 15, 1985 and will require QC to send NDT training and certification documentation to Document Control.

During the initial verification, certifications for all personnel were in Document Control and all were correct except for the subject inspector.

This response is acceptable.

• Finding 5-8

Procedure 00208-C, revision 0, Control of Measuring and Test Equipment, requires the identification of M&TE. Procedures 85301-C, revision 0, Work Planning Group and Hold Point Assignment, paragraph 5.0 and 85302-C, revision 1, Document Reviews, paragraph 5.0 require final review by QC.

MWO 18500333 does not list the wrench number on this safety-related MWO.

Six MWOs are not signed in the "reviewed by" block (SU-84-495, SU-84-500, TEX-84-079, TEX-84-488, TEX-84-492, and TEX-84-077).

Older MWOs which are identified as VEGP MWOs (prior to 1985) have initials in the lower right corner. There is no consistency in identifying these initials as QC personnel initials.

These inconsistencies were noted from a sample of 16 MWOs which were reviewed in depth.

Project Response: In response to the finding concerning MWO 18500333, a wrench number was not required because a wrench was never used to perform actual work. Item No. 3 of block 6 on the MWO listed torquing requirements; however, in block 27 "actual work performed" stated the following:

Performed CAT-E-16 and resistance readings were within tolerance. Items 1, 2, 3, and 4 (referring to block 6) were not necessary.

Therefore, under MWO 18500333 torquing was never required, thus a wrench was not used to complete this MWO.

In reference to the finding concerning QC review for six MWOs (TEX-84-079, TEX-84-077, SU-84-500, SU-84-495, TEX-84-492, and TEX-84-488). These were completed under SUM-22, Maintenance Work Orders, which states:

If the Nuclear Construction Department is to perform the work, Nuclear Construction QA/QC program will apply to the task. Block 19 will be N/A in this case. . . .

These MWOs have N/A in block 19 per SUM-22 because the work was performed by the Nuclear Construction Department.

The finding which reported "no consistency in identifying these (initials) as QC personnel initials" on earlier work orders is a valid concern. The original work order developed for VEGP Nuclear Operations did not anticipate a QC review. With the implementation of a QC review of work orders it was decided to have QC initial the form in the lower right hand corner. QC then implemented a signature/initial list to identify QC personnel.

The root cause was a program inadequacy.

With the development of the current maintenance work order a space was provided to identify QC review and close out of the work order (block 55). This corrected the problem of identifying the QC initials and will prevent future concerns over the problem noted. In addition, the revision of SUM-22 will require that the organization performing the work be identified on the MWO form. The revision is scheduled for approval by July 15, 1985.

Readiness Review Conclusion: On the earlier work order forms QC personnel initialed the form in the lower right hand corner to show closeout approval by QC. The

Readiness Review Team reported "no consistency in identifying these initials as QC personnel initials." The project response to this finding is acceptable.

The project considered the finding on the six MWOs which were not signed in the "reviewed by" block invalid because the work was done by Nuclear Construction. It was not readily obvious to the Readiness Review Team whether Nuclear Operation or Construction had done the work. Subsequent to this, the notation "Const." is being made in the upper right hand corner of the MWOs on those going to Nuclear Construction. Since the work was performed by the Nuclear Construction Department, the finding is invalid, and the project response is acceptable.

Since the torque wrench was not used, the response concerning the wrench is acceptable.

This response is acceptable.

- Finding 5-9

ANSI N45.2.9, paragraph 4.4, requires a receipt control system to permit a current assessment of the status of QA records. During a review of purchase order folders in the Document Control vault, it was noted that there was no means to identify the documents that should be in the file or determine whether the file was complete.

Project Response: In accordance with procedure 50021-C, Replacement Parts and Material Documentation Review, the equipment materials document field representative transmits documentation associated with a Material Inspection Report (MIR) to Document Control for retention only after he has determined all documentation required has been received and is satisfactory. Therefore, the files are complete at the time material is released from Receipt/Inspection to the warehouse. To permit assessment of the completeness of files in the future, a documentation checklist will be incorporated into the next revision of procedure 50021-C, scheduled for completion on July 12, 1985. As Procurement Review Section-site personnel become available, by July 15, 1985, the purchase order folders in the Document Control vault will be reviewed for documentation content, a documentation checklist will be initiated for each purchase order folder, and any incomplete documentation will be brought up to date.

The root cause was personnel oversight.

Readiness Review Conclusion: It was ascertained through a review of purchase order folders that completed MIR documentation transmitted to Document Control after May 15, 1985 had a checklist to accompany the MIR documentation. The addition of the checklist is an implementation of the steps which will be added to the next revision of procedure 50021-C, scheduled for completion on July 12, 1985.

This response is acceptable.

• Finding 5-10

ANSI N45.2.9-1974 (FSAR 1.9.88) requires QA records to be corrected in accordance with procedures which provide for appropriate review or approval by the originating organization. The correction must include the date and identification of the person authorized to issue such corrections. During a review of various QA records in the Document Control vault, it was ascertained that corrections were made in various ways to QA records. Procedure 00054-C, revision 0, Rules for Performing Procedures, addresses the recording of data, but contains no directions for making changes to the data.

Project Response: The procedure inadequacy was acknowledged by Nuclear Operations. The next revision of procedure 00100-C, Quality Assurance Records Administration, incorporated the instructions to make changes to QA records as required by ANSI N45.2.9-1974. The revised procedure was approved on June 26, 1985. Each department will be tasked via Plant Action Item to review any transmitted QA record to determine if corrections were made in accordance with procedure 00100-C, revision 2. This investigation will be completed by July 29, 1985. A letter will be written to each member of Nuclear Operations identifying the correct method to make corrections on QA records and requiring each individual to read procedure 00100-C, revision 2. Correction of QA records will be covered in General Employee Training Program.

The root cause was personnel oversight.

Readiness Review Conclusion: It was ascertained through a review of procedure 00100-C, revision 2 that the revision provides the direction to make changes to data on QA records.

This response is acceptable.

- Finding 5-11

This proposed finding was written but never issued. During the verification effort it appeared to the verification team that there was confusion over the effective dates of procedures. Because further investigation by the team members determined this was not the case, there was no finding.

- Finding 5-12

Document Control is required to maintain approved procedures with the procedure review request form (PRRF), the commitment tracking data base update form (CTDBU), and the unreviewed safety question determination form (USQD) attached.

Procedures in the 85000 series were checked for PRRFs, CTBDUs, and USQDs. Of 20 procedures which were checked, 2 of did not include the CTDBU form.

Project Response: As indicated in the finding, procedure file for 85301-C did not contain the CTDBU form. At the time this procedure was approved, August 23, 1984, the Commitment Identification, Tracking, and Implementation procedure 00405-C had not been approved. We therefore conclude that the requirement for the CTDBU form for procedure 85301-C is not applicable.

Also, as indicated in the finding, procedure file for 85003-C did not contain the CDTBU form. Document Control records did not reflect receipt of this form. The originator of the procedure will prepare and submit the CTDBU for procedure 85003-C to complete the file.

The root cause was failure to follow procedure.

Readiness Review Conclusion: The Readiness Review Team verified that CTDBU forms have been added to the files for procedure 85003-C and procedure 85301-C.

This response is acceptable.

- Finding 5-13

The superintendent of regulatory compliance is required by procedure 00200-C, revision 0, paragraph 4.5.2, Quality Control Stop Work Order, to review all stop work orders to determine reportability requirements. There is no objective evidence that the superintendent of regulatory compliance has reviewed a stop work order 85-01.

Project Response: The finding is valid in that there is no objective evidence that stop work order 85-01 was reviewed for reportability. Objective evidence exists, however, to show that DR 1-85-19, written as a result of SWO 85-01, was reviewed for reportability.

Since only one stop work order has been issued, and since the event was reviewed for reportability, the Readiness Review finding is not considered significant.

Procedure 80013-C, Handling of Deficiency Reports, will be revised to show that reviewing the deficiency report associated with a stop work order is acceptable for determining reportability. Also, procedure 80013-C will show that if a deficiency report is not issued as a result of a stop work order, the stop work order will be treated as a deficiency report for reportability review processing.

The root cause was procedure inadequacy.

Readiness Review Conclusion: Paragraph 3.0 of procedure 80013-C has been revised to require stop work orders, for which a deficiency report is not generated, be reviewed for reportability. These stop work orders are recorded in and tracked on the deficiency log.

This response is acceptable.

• Finding 5-14

Paragraph 4.2.20a of procedure 00051-C, revision 1, Procedures Review and Approval, requires the approving manager to approve or reject the procedure and sign step 8 of the procedure review request form (PRRF). Paragraph 4.2.19e requires step 7 to be signed, and paragraph 4.2.21b requires step 9 to be signed.

Eleven files were checked, and two files had discrepancies:

- In the file for 00051-C, step 8 had not been signed on the PRRF.
- In the file for 00405-C, steps 7 and 9 had not been signed.

Project Response: A review of 15 other procedures indicates that the omission of the signature in step 8 was an isolated case attributed to human error. There is no impact on procedure 00051-C since the signature appears on the procedure itself, signifying that the procedure was, in fact, approved. The required



signature has been entered on the PRRF in step 8. No other actions are required.

The finding for 00405-C was invalid for the following:

- Step 7 was not signed per the requirements of 00051-C, paragraph 4.2.19f which states, "If 'Approval Recommended' or 'Rejection Recommended' had been indicated in Step 6 of the PRRF; then N/A should be placed in the signature blank of Step 7." Since this procedure was statused "Approval Recommended," it was N/A'd as required.
- Step 9 was not signed because this block is used only when a procedure is revised. Since this procedure was the original (revision 0), a signature in this block was not required.

The root cause was failure to follow procedures.

Readiness Review Conclusion: After the project response was received by the Readiness Review team, the Readiness Review team checked the PRRF of procedure 00051-C and ascertained that the approving manager's signature has been added.

The explanation for the lack of signatures in steps 7 and 9 on the PRRF for procedure 00405-C is acceptable.

This response is acceptable.

● Finding 5-15

Procedure 00405-C, revision 0 (paragraph 4.1), Commitment Identification, Tracking, and Implementation requires Regulatory Compliance personnel, as assigned by the superintendent of regulatory compliance, review source documents to identify commitments as directed by procedure 80001-C, Guidelines for Commitment Identification and Commitment Tracking Program Coordination. Procedure 80001-C is an unapproved document. The reference to procedure 80001-C in procedure 00405-C implies that 80001-C is an implementing document necessary for the completion of steps in 00405-C.

Project Response: The finding is valid. Procedure 00405-C contains adequate guidelines to implement and run the Commitment Tracking Program by itself. Procedure 80001-C was written as a more detailed guide for the commitment tracking coordinator as a source of information or to be used to train other personnel. Procedure 80001-C was approved on June 14, 1985.

The root cause was a program inadequacy. Procedure 80001-C was not approved.

Readiness Review Conclusion: It was ascertained through a review of procedure 80001-C that this document contains the necessary guidelines for implementation of the commitment tracking program.

This response is acceptable.

• Finding 5-16

Documents that are mandatory attachments (mandatory attachments are given in procedure 00350-C, revision 0, paragraph 4.10 and procedure 85100-C, revision 2, paragraph 4.5.13) to the work order package shall reference the work order number and be indicated on the work order. Attachments that cannot be indicated on the work order shall be identified to indicate that they are part of a work package.

Sixteen maintenance work order packages were reviewed for this requirement. There was a problem with two of them: on MWOs 18500120 and 18500121, the work order number was not on the hold point sheet.

Project Response: This finding is valid.

The following series of maintenance work orders were reviewed to identify the extent of the problem:

- MWO SU84-326 through SU84-350
- MWO 18500026 through 18500050
- MWO 18500476 through 18500500
- (Totals 75 MWOs)

One additional problem was noted in that a hold point sheet identified the wrong MWO number.

The cited deficiencies have been corrected. This finding appears to have resulted from oversight or human error, and it does not appear to be a breakdown in the program.

The QC supervisor discussed the finding with the QC work planners and instructed them to be more careful when reviewing documents.

The QC superintendent has instructed the QC supervisor in charge of QC work planners to perform spot checks of MWO packages to assure reviews identify and correct these types of errors.

The root cause was failure to follow procedures.



Readiness Review Conclusion: The Readiness Review Team has verified that the deficiencies on MWOs 18500120 and 18500121 were corrected as reported in the project response. The hold point sheets were attached to the proper work orders, but the work order numbers had not been recorded on the hold point sheets. The Readiness Review Team has verified that the work order numbers have been added to the hold point sheets.

The hold point sheet having a wrong number has been corrected. The work order number on the hold point sheet was incorrect. The hold point sheet was included in the proper work order package.

The Readiness Review Team has reviewed the applicable procedures with the QC supervisor. These procedures are clear and adequate for their intended purposes.

The work of the three subject hold point sheets were done properly.

In reviewing 75 additional MWOs, QC has determined that the problem is isolated.

This response is acceptable.

• Finding 5-17

Procedure 00853-C, revision 1, paragraph 6.2.2.a, Material Identification, Control and Issue, states that the maintenance work order (MWO) number be recorded on the Material/Equipment Request (MER) form to withdraw material that is safety-related. Though no obvious or apparent errors could be found on the list, it does not appear in discussion with warehouse personnel that this is a requirement for withdrawing material. Without a MWO number on the MER, the traceability of safety-related material to its use location is lost. .

Project Response: Discussion with the material supervisor establishes that an MWO number or a Construction Acceptance Test (CAT) number, has been required and recorded on all MERs for safety related materials. The CAT number provides the same degree of traceability as an MWO number.

The traceability of safety-related material has not been compromised, although the provisions of procedure 00853-C, paragraph 6.6.2.a, are not sufficient to ensure traceability. Procedure 00853-C will be revised to change the word "should" to "shall". The procedure revision is scheduled for July 31, 1985.

The root cause was a procedure inadequacy.

Readiness Review Conclusion: It was ascertained through a review of 1651 MERs that no safety-related material has been released by the warehouse without an MWO or CAT number on the MER form. The revision of procedure 00850-C, as stated above, will ensure the traceability of safety-related permanent plant hardware.

This response is acceptable.

## 7.0 ASSESSMENT

### 7.1 SUMMARY OF OPEN CORRECTIVE ACTION

- Finding 5-2

Action: Revise test supervisors stick files to ensure that corrective action is satisfactory.

Completion Date: June 30, 1985

- Finding 5-3

Action: Install permanent devices for measurement of temperature and humidity. Revise procedure 00100-C, Quality Assurance Records Administration, to require the document control supervisor to notify the Maintenance Department of the exceeding temperature and humidity limits in the record storage vault.

Completion Date: August 1, 1985

- Finding 5-5

Action: Write procedure 00351-C (untitled) to control safety-related welding. (ASME code section XI, Repair/Replacement Program)

Completion Date: January 31, 1986

- Finding 5-7

Action: Generate procedure requiring training personnel to send NDT training and certification documentation to Document Control.

Completion Date: July 15, 1985

- Finding 5-8

Action: Revise SUM-22 to require that organization doing work be identified on the MWO form.

Completion Date: July 15, 1985.

- Finding 5-9

Action: Revise procedure 50021-C, Replacement Parts and Material Documentation Review, to include a documentation checklist. Revise procedure 00100-C to require that the document transmittal form identify each record and the number of pages included with each record.

Completion Date: July 12, 1985 for procedure 50021-C.  
August 30, 1985 for procedure 00100-C.

- Finding 5-10

Action: Revise Procedure 00100C, Quality Assurance Record Administration, to include instructions on correcting QA documents. In addition, an audit of QA documents will be done per revised procedure 00100-C and corrective action initiated if required.

Completion Date: Procedure revision, QA Documentation Audit, July 29, 1985

- Finding 5-15

Action: Write procedure 80001-C, Guidelines for Commitment Identification and Commitment Tracking Program Coordination.

Completion Date: June 14, 1985

- Finding 5-17

Action: Revise procedure 00853-C, to change SHOULD to SHALL in reference to MWO numbers on MER sheets for safety-related items.


Completion Date: July 31, 1985

## 7.2 QA STATEMENT

The process for the development of this module was monitored by the Readiness Review staff quality assurance representative for general adequacy. The finding reports issued by Readiness Review and their responses were reviewed individually and collectively for root causes and generic issues; i. e., trends. Based upon review of the responses and commitments to individual finding reports and generic concerns, the resolutions were determined to be adequate.

All findings are initially distributed to project QA for a reportability review [10 CFR 21, 10 CFR 50.55(e)] in accordance with existing QA procedures. In addition, all findings were screened by Readiness Review QA to determine if any required additional evaluation by the project for reportability. None were identified.

Based upon review of the module development process and the responses to the findings, the Readiness Review Team conclusions are judged to be acceptable.

  
George C. Bell  
Readiness Review Team  
Quality Assurance Representative

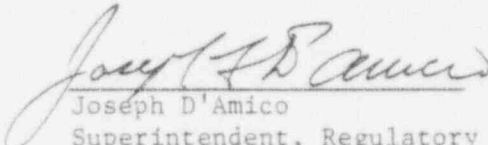
DATE: June 27, 1985


RE: Plant Vogtle - Units 1 & 2  
Readiness Review Module 5  
File: X7BH01 System: N/A  
Log: NOR-00112  
Security Code: NC  
Keyword: Readiness Review Module

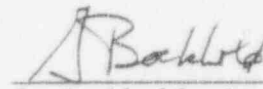
FROM: G. Bockhold, Jr.

TO: W. C. Ramsey

Nuclear Operations has reviewed Module 5 excluding the reference appendices. To the best of our knowledge and belief, the module is a complete and accurate representation of the Nuclear Operations Program described therein and the commitments related thereto.

  
Joseph D'Amico  
Superintendent, Regulatory  
Compliance

  
Vince Agro  
Superintendent, Administration

  
G. Bockhold, Jr.  
General Manager,  
Nuclear Operations

  
WTN:apk

xc: NORMS

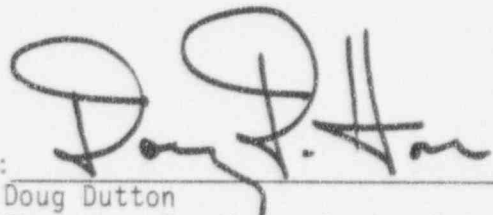
Operations Organization and Administration

Readiness Review Board Acceptance

The Readiness Review Board has been apprised of the scope and content of Module 5, Operations Organization and Administration.

The Board has reviewed the program verification, as well as corrective actions, both proposed and implemented, by the Vogtle Project. Based upon this review and based upon the collective engineering experience and professional judgement of the the members, the Readiness Review Board is of the opinion that the corrective actions proposed are acceptable, and that the Operations Organization and Administration Program is sound and consistent with commitments set forth in the FSAR, the PSAR and acceptable engineering nuclear operations practice.

APPROVED: \_\_\_\_\_



Doug Dutton  
Chairman, Readiness Review Board  
Vogtle Electric Generating Plant

DATE: July 18, 1985

## 7.5 RESUMES

The following resumes, arranged in alphabetical order, present a brief professional history of those people instrumental to the development of Module 5.

William H. Grieves, Supervisor - Reports and Analysis, Team Member

Mr. Grieves has 11 years of nuclear experience with the Stone and Webster Engineering Corporation. He is responsible for the supervision of personnel performing data analysis and status reporting of site and shop activities. In addition to these duties, he has performed support activities as follows: field QC inspection of concrete, soils, cadwelding, and protective coating application; analysis of QA program implementation at Forked River Nuclear Plant; implementation of the Concrete Block Wall Test Program at Pilgrim Nuclear Power Station; and development of program specifications for the analysis of welding performance, audit history, and NRC site inspections.

### Educational Background

Northeastern University  
B.S., Civil Engineering

Richard S. Ives, Senior QA Engineer, Team Member

Mr. Ives has 18 years of experience in the nuclear power industry. As a senior QA engineer with Stone and Webster Engineering Corporation, he is responsible for all QC in the Civil/Structural disciplines for Field QC. His duties are problem investigation, code and standard review, specification approval, quality audits, surveys of vendors, and technical direction to all sites relative to the Civil/Structural areas. He was also assigned as part of the cnsite team conducting independent assessment of a west coast nuclear plant.

### Educational Background

University of Massachusetts  
Civil Engineering

Wentworth Institute  
Associate's Degree, Civil Engineering

P.E., State of California



Thomas L. Penland, Jr., Associate Engineer, Team Member

Mr. Penland has over 2 years of nuclear power plant experience which includes organizing, developing, and implementing the Nuclear Operations planning, scheduling, and budgeting system. He has also performed test supervisor responsibilities including Preoperational Test Procedures review, Flushing Procedure reviews, system scoping, and CAT scheduling.

Educational Background

Georgia Institute of Technology  
Bachelor of Industrial Engineering

Homer P. Rose, Assistant Section Supervising Engineer, Team Member

Mr. Rose has 19 years of engineering experience including 4 years of nuclear experience. His responsibilities have included project design, pump, piping, ash handling, and similar equipment installations for electric generation stations. He also studied low river cooling water problems and served on the Pump Task Force at Hatch Nuclear Plant. Mr. Rose has published numerous technical publications, proposals, accident investigations, specifications, inquiries, and design review publications.

Educational Background

University of Tennessee at Knoxville  
B.S., Mechanical Engineering

Richard S. Scallan, QA Engineer, Team Member

Mr. Scallan has been with Stone and Webster Engineering Corporation for over 5 years and he has 13 years of nuclear experience. His duties have included the preparation and issue of trend analysis reports to management concerning project inspection activities; to review and approve Quality Control purchase orders; and data entry of all site N&Ds and inspection reports. He was also assigned as a lead mechanical engineer in the Construction Implementation Overview Program at the Midland Nuclear Project, Units 1 and 2.

Educational Background

Louisiana, State University  
A.S., Accounting

Mehdi Shebani, Plant Engineer, Team Member

Mr. Shebani is employed with Georgia Power Company as a plant engineer and he has 4 years of nuclear experience. His responsibilities include coordinating the development of material for the Final Safety Analysis Report, OLSER review, and responses to the NCR's questions; coordinating development of VEGP Technical Specifications, development and implementation of the Deficiency Report Program; and coordinating the development of Regulatory Compliance Procedures, and maintaining approved Plant Administrative Procedures.

Educational Background

University of Florida  
B.S., Nuclear Engineering

Ronald E. Stancil, Junior Engineer, Team Member

Mr. Stancil has 2 years of nuclear experience and has been involved with NRC reporting, security system backfit, and action item tracking at Georgia Power Company's Plant Hatch.

Educational Background

Georgia Institute of Technology  
B.S., Electrical Engineering

Paul F. Wilson, Section Supervisor, Team Member

Mr. Wilson has 22 years experience in the engineering field, 11 of which is in the nuclear field. Since joining Stone and Webster Engineering Corporation, he has been assigned to the development and implementation of a Quality Assurance Management Information System which involves the collection, processing, and analysis of quality data. This includes the preparation and issuance of appropriate reports to all levels of management, identification of quality problems, and recommendations of corrective and preventive action.

Educational Background

Southeastern Massachusetts University  
B.S., Electrical Engineering

University of Rhode Island  
MBA

P.E., State of California and State of Massachusetts

Howard E. Varnadoe, Plant Engineering Supervisor, Team Leader

Mr. Varnadoe has 10 years of nuclear experience with Georgia Power Company. As a piping engineer, he served as a group supervising engineer in the mechanical engineering department, which provide engineering support for Plant Vogtle and Plant Hatch. Previously Mr. Varnadoe was responsible for supervising the Mechanical Technical Support Group in the Nuclear Operations Department. This group was responsible for developing and implementing the fire protection program, writing fire protection procedures, developing and implementing the equipment qualification program, reviewing equipment qualifications data packages, monitoring and coordinating SCS's development of Section XI testing and inspection program, and for developing the HVAC testing and balancing program, thermal expansion, and dynamic analysis programs.

Educational Background

Georgia Institute of Technology  
Bachelor of Industrial Engineering

Donald R. Rhodes, Electrical Engineer, Team Member

Mr. Rhodes has 14 years of engineering experience which includes 3 years of nuclear experience and has been assigned at Plant Vogtle as a consultant for the past 2 years. He has been involved with the preparation of preoperational test procedures; the development of specifications and calculations; and the design of motor control centers, switchgears, wiring diagrams, and relay and control panel layouts.

Educational Background

Southern Technical Institute  
B.E., Electrical Engineering

0006R



## Vogtle Project

July 12, 1985

Mr. D. O. Foster  
Vice President and General Manager  
Vogtle Project  
Waynesboro, Ga. 30830

RE:        Readiness Review Program  
          Module No. 5  
          Operations Organization And Administration

File:     X7BD102

LOG:      RR-383

Dear Mr. Foster:

Pursuant to your instructions I am enclosing Module No. 5 of the Readiness Review Program entitled Operations Organization and Administration. This module reports the work of the Readiness Review team and has been prepared in order to present you with an accurate picture of the readiness for operations of the Vogtle Project, based upon a close examination of the Operations Organization and Administration Program.

The Readiness Review process included an initial assessment and review of basic licensing documents in order to identify Project commitments within the scope of the module. The Readiness Review team then verified implementation processes designed to meet those commitments, including programs and controls relating to work within the scope of the module.

The team then engaged in a process designed to verify that implementation programs were operating as described in procedures, policy statements, and other descriptive documents. In concluding this verification process, the team then actually verified that the licensing commitments identified during the process were being fulfilled and met.

Mr. D. O. Foster  
Readiness Review Program - Module 5  
July 12, 1985  
Page 2

The Readiness Review Team employed a sampling method for conducting the overall verification process. The verification process included consideration of relevant project QA audits, NRC inspection reports, and problems experienced by other near term operating license utilities in their Operations Organization and Administration Program.

We are confident that the sampling and verification methodology used allowed RRP to properly appraise the actual condition of the Operations Organization and Administration Program and provided a valid means of assessing the quality of the program having also considered applicable past audits, inspection reports, and problems experienced by other utilities.

Based upon our review process, as described in detail in the module, the Readiness Review Task Force concluded that the Operations Organization and Administration Program at Plant Vogtle is of sound quality and principally complies with the commitments set forth in the FSAR.

Members of the Readiness Review Team and myself will be prepared to discuss this module with you if you so desire. If we can provide you with any further information or assistance regarding this matter please contact me.

Very truly yours,



William C. Ramsey

WCR/chd

xc: R. E. Conway  
Readiness Review Board Members

0184C