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| <b>SOUTH TEXAS PROJECT ELECTRIC GENERATING<br/>STATION</b><br><br><b>OPERATIONS QUALITY ASSURANCE PLAN</b><br><br><b>TABLE OF CONTENTS</b> | <b>NUMBER</b>             | <b>REV.<br/>NO.</b> |
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### Chapters Requiring NRC Approval

| Chapter<br>Number | Title  | Effective<br>Chapter<br>Revision | Effective<br>Revision<br>Date | Change<br>Notice<br>No.          |
|-------------------|--|----------------------------------|-------------------------------|----------------------------------|
|                   | Definitions  | 5                                | 12-21-90                      |                                  |
| 1.0               | Organization   | 6                                | 12-18-92                      | QA-015,<br>016, 020,<br>021, 023 |
| 2.0               | Program Description  | 8                                | 12-18-92                      | QA-013, 023                      |
| 3.0               | Conduct of Plant Operations  | 6                                | 12-20-91                      |                                  |
| 4.0               | Qualification, Training, and<br>Certification of Personnel               | 4                                | 12-21-90                      | QA-017                           |
| 5.0               | Maintenance, Installation of<br>Modifications, and Related<br>Activities | 4                                | 12-21-90                      |                                  |
| 6.0               | Design and Modification Control  | 6                                | 12-18-92                      |                                  |
| 7.0               | Procurement  | 5                                | 12-21-90                      | QA-014,<br>020, 022              |
| 8.0               | Control and Issuance of<br>Documents                                     | 4                                | 12-21-90                      |                                  |
| 9.0               | Control of Material  | 5                                | 12-20-91                      |                                  |
| 10.0              | Inspection   | 6                                | 12-21-90                      |                                  |
| 11.0              | Test Control   | 5                                | 12-21-90                      |                                  |
| 12.0              | Instrument and Calibration<br>Control                                    | 5                                | 12-21-90                      |                                  |
| 13.0              | Deficiency Control   | 5                                | 12-20-91                      | QA-018, 023                      |
| 14.0              | Records Control  | 4                                | 12-21-90                      |                                  |
| 15.0              | Quality Assurance Audit<br>and Surveillance                              | 4                                | 12-21-90                      | QA-018                           |

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### Chapters Not Requiring NRC Approval

| Chapter<br>Number | Title   | Effective<br>Chapter<br>Revision | Effective<br>Revision<br>Date | Change<br>Notice<br>No. |
|-------------------|---|----------------------------------|-------------------------------|-------------------------|
| 16.0              | Nuclear Fuel Management                                       | 4                                | 12-21-90                      | QA-015, 020<br>022, 023 |
| 17.0              | ASME Code Section XI -<br>Repairs and Replacements            | 4                                | 12-21-90                      | QA-019, 023             |
| 18.0              | ASME Code Section XI -<br>Inservice Inspection and<br>Testing | 4                                | 12-21-90                      | QA-023                  |

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## 1.0 PURPOSE

- 1.1 The purpose of this chapter is to describe the organizational structure as related to quality assurance and to establish the responsibilities of organizations for the South Texas Project Electric Generating Station (STPEGS).

## 2.0 SCOPE

- 2.1 Houston Lighting & Power Company (HL&P), as licensee and Project Manager for itself and the other owners, has the Quality Assurance (QA) responsibility for design, engineering, procurement, fabrication, modification, maintenance, repair, in-service inspection, refueling, testing, and operation of the STPEGS.

## 3.0 DEFINITIONS

- 3.1 None

## 4.0 REFERENCES

- 4.1 None

## 5.0 RESPONSIBILITIES

- 5.1 The Nuclear Group is comprised of Nuclear Generation, Nuclear Engineering, Nuclear Assurance & Licensing, Plant Services, and Human Resources and Access. The heads of these groups report to the Group Vice President, Nuclear.
- 5.1.1 The Group Vice President, Nuclear, has overall responsibility for the implementation of the Operations Quality Assurance Program and approving the Operations Quality Assurance Plan (OQAP) and revisions thereto.
- 5.1.2 The Vice President, Nuclear Generation is responsible for implementing quality program requirements applicable to staffing STPEGS with qualified personnel and acquiring and coordinating the assistance of internal and external organizations for the testing, operation, modification, maintenance and security functions of STPEGS.

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- 5.1.2.1 The General Manager, Generation Support; Plant Manager, Unit 1; Plant Manager, Unit 2; and Manager, Nuclear Security; report to the Vice President, Nuclear Generation.
- 5.1.2.2 The Plant Managers have prime responsibility for the safe operations of their respective units. The plant staff, under the direction of the Plant Managers, develop detailed procedures and instructions for testing, operation, modification, and maintenance, of the STPEGS.
- 5.1.3 The Vice President, Nuclear Engineering is responsible for implementing quality program requirements applicable to the design engineering and control, systems engineering, nuclear fuels design, acquisition and management; engineering programs, and engineering support functions.
- 5.1.3.1 The Manager, Design Engineering; Manager, Systems Engineering; Manager, Programs; Manager, Engineering Support; and Director, Nuclear Fuel and Analysis report to the Vice President, Nuclear Engineering.
- 5.1.4 The General Manager, Nuclear Assurance & Licensing is responsible for the development, maintenance, and independent verification of implementation of the STPEGS QA Program; making periodic reports on its effectiveness; review of selected documents which control activities within its scope; and preparation, control, and approval of the QQAP and revisions thereto.

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The General Manager, Nuclear Assurance & Licensing is also responsible for implementing quality program requirements applicable to STPEGS corrective action, licensing, emergency preparedness, and Independent Safety Engineering Group activities, and administration of the Nuclear Safety Review Board.

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The General Manager, Nuclear Assurance & Licensing has the authority to identify, initiate, recommend, or provide solutions to quality-related problems and verify the implementation and effectiveness of the solutions. This position has the independence to conduct QA/Quality Control (QC) activities without undue pressure of cost or schedule.

The General Manager, Nuclear Assurance & Licensing, has the authority to stop work for cause. This authority in QA matters has been granted by the Group Vice President, Nuclear.

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The NA&L organization's quality responsibilities during operation are shown in Attachment II. The QA organization, including the inspection staff, is based upon the anticipated QA/QC involvement in operations, modification, and maintenance activities.

The position of General Manager, Nuclear Assurance & Licensing is on the same or higher organizational level as the highest line manager responsible for performing activities affecting quality as shown in Attachment I.

- 5.1.4.1 The Director, Quality; Manager, Operating Experience; Manager, Emergency Response; and Manager, Industry Relations report to the General Manager, Nuclear Assurance & Licensing.

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5.1.4.2 The NSRB administratively reports to the Manager, Industry Relations. The NSRB functionally reports directly to and advises the Group Vice President, Nuclear.

5.1.4.3 The Director, Quality is responsible for Independent Safety Engineering Group activities, audits, independent assessments, surveillances, inspections and NDE examinations.

5.1.4.4 During the overview of activities performed by the Nuclear Assurance & Licensing organization, the Director, Quality; at his discretion; reports directly to the Group Vice President, Nuclear.

5.1.5 The General Manager, Plant Services is responsible for implementing quality program requirements applicable to nuclear training, planning and scheduling; maintenance of programs for records management, document control and information systems; and procurement and material control for STPEGS.

5.1.5.1 The Manager, Nuclear Training; Manager, Records Management and Administration; Director, Nuclear Information Systems; Manager, Plant Projects and Programs; and Director, Nuclear Purchasing and Materials Management; report to the General Manager, Plant Services.

5.1.6 The Manager, Human Resources and Access is responsible for implementing quality program requirements applicable to personnel access authorization for the protected and vital areas of STPEGS.

5.1.6.1 The Manager, Access Authorization reports to the Manager, Human Resources and Access.

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## 6.0 REQUIREMENTS

- 6.1 The fundamental responsibility for implementing quality program requirements is assigned to all personnel performing activities affecting the safe and reliable operation of the STPEGS. These personnel and their management are responsible for implementing through procedures and other work documents, the quality assurance program controls described in the QAP.
- 6.2 Attachment I depicts the organizational structure of the STPEGS as it relates to the implementation of the Operations Quality Assurance Plan. The structure reflects the reporting alignment for key positions. Line organizational details and responsibilities are further described in STPEGS UFSAR Chapter 13.1.

## 7.0 DOCUMENTATION

- 7.1 None

## 8.0 ATTACHMENTS

- 8.1 Attachment 1 - Nuclear Group - QA Functions
- 8.2 Attachment 2 - Quality Responsibilities

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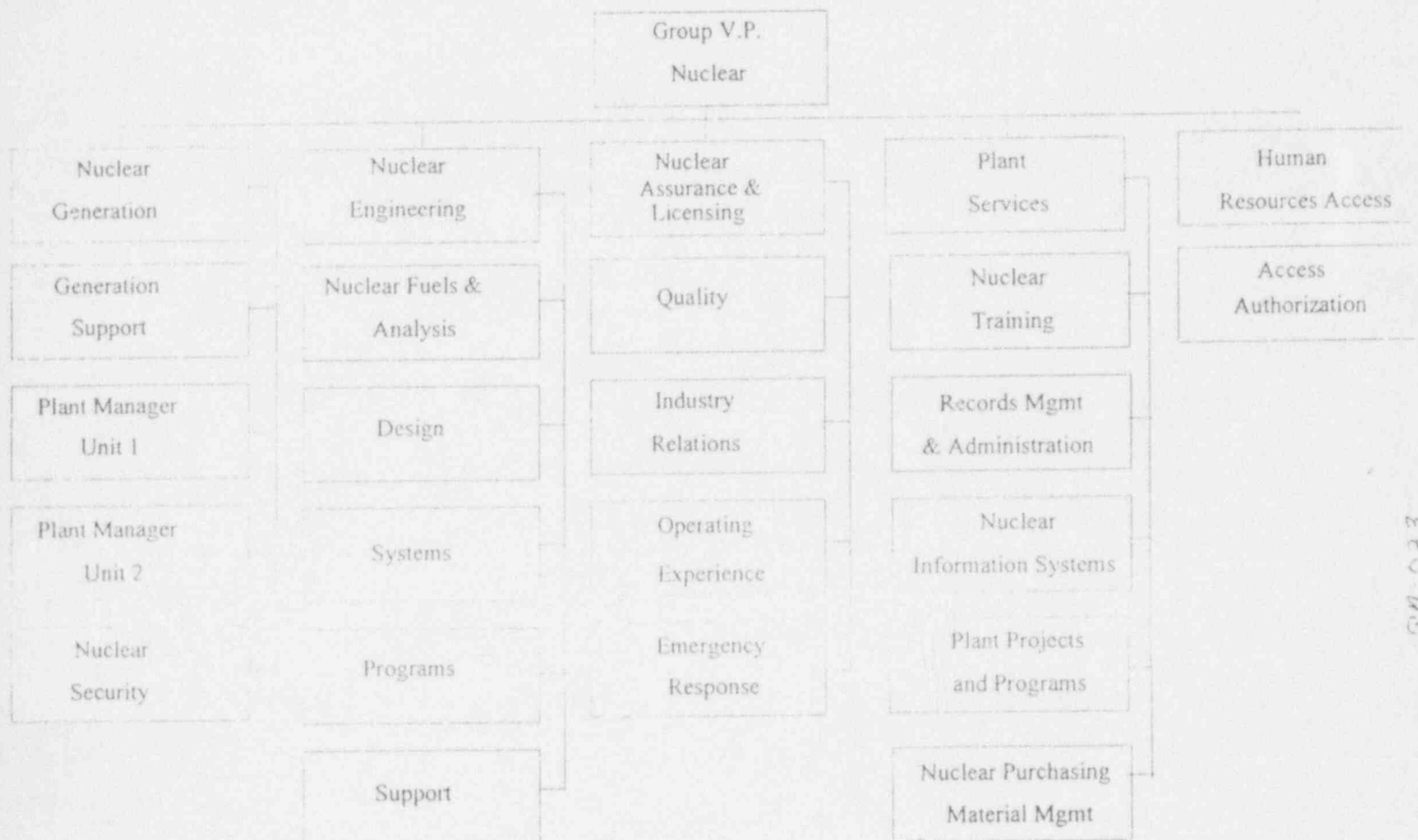


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## ATTACHMENT I

## HOUSTON LIGHTING & POWER COMPANY

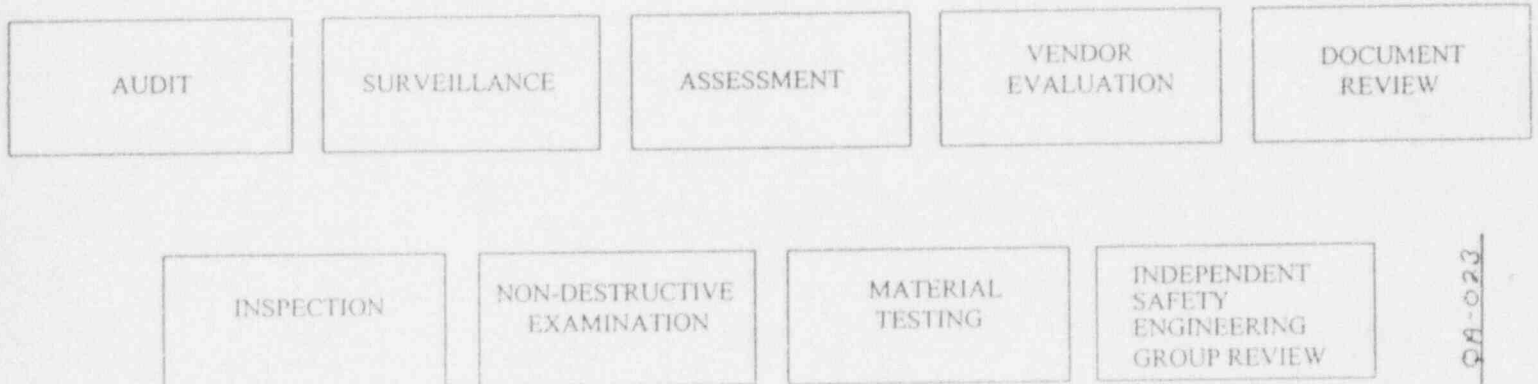
### NUCLEAR GROUP - QA FUNCTIONS





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## ATTACHMENT II

**QUALITY RESPONSIBILITIES**

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## 1.0 PURPOSE

- 1.1 The purpose of this chapter is to define criteria and establish administrative controls for implementation of the Operations Quality Assurance Program for the South Texas Project Electric Generating Station (STPEGS).

## 2.0 SCOPE

- 2.1 The Operations Quality Assurance Program is applicable to safety-related material, equipment, services and activities described in 10CFR50, Appendix B; 10CFR71, Subpart H (except design and fabrication of NRC certified radioactive waste shipping casks); ASME Boiler and Pressure Vessel Code, Sections III and XI; and quality related areas as defined by STPEGS management in this Operations Quality Assurance Plan (OQAP) or other program documents or procedures. Quality-related areas include the Fire Protection Program, Emergency Plan, Radiological Environmental Monitoring Program, Radwaste Management Program, Computer Program Verification and Control, Physical Security Program, Seismic and Environmental Equipment Qualification Programs, Radiation Protection Program, and Station Blackout (SBO) systems and equipment.

## 3.0 DEFINITIONS

- 3.1 None

## 4.0 REFERENCES

- 4.1 10CFR50, Appendix B  
4.2 10CFR71, Subpart H  
4.3 ASME B&PV Code  
4.4 OQAP Chapter 14.0, Records Control  
4.5 10CFR50.63, Loss of All Alternating Current Power

## 5.0 REQUIREMENTS

- 5.1 The Operations Quality Assurance Program consists of various documents which identify and provide the mechanism for verifying implementation of commitments, requirements, and actions necessary to attain quality assurance objectives.

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5.2 The QQAP is prepared to implement the STPEGS Operations Quality Assurance Program.

5.2.1 The QQAP provides policies to be implemented for the STPEGS. The QQAP also assigns responsibilities necessary for the attainment of quality assurance objectives and the verification of conformance to established requirements.

5.2.2 Attachment I provides a matrix of 10CFR50, Appendix B criteria to the QQAP chapters.

5.3 Establishing Policies and Goals

5.3.1 QA policies and goals for STPEGS are defined in the QQAP. The Group Vice President, Nuclear has overall responsibility for quality assurance.

5.3.2 The General Manager, Nuclear Assurance & Licensing (NA&L), is responsible for the development of the Quality Assurance (QA) Program. The minimum requirements established for this position are:

5.3.2.1 A bachelors degree in science or engineering, or an equivalent combination of education and experience.

5.3.2.2 Five years of experience in the management of quality assurance. Fifteen years experience in industry quality assurance standards, and federal and state regulatory requirements.

5.3.2.3 Familiarity with nuclear power generation facilities and the related operations.

5.3.2.4 Knowledge of the industry's quality assurance standards and regulatory requirements.

5.3.2.5 Management experience and familiarity with HL&P corporate organizations.

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5.3.3 Procedures and revisions which control quality-related work programs and activities, performed by STPEGS organizations described in Chapter 1.0 are reviewed by QA as defined in this chapter.

#### 5.4 Organizational Independence

5.4.1 The reporting arrangement utilized by the NA&L Organization ensures that those personnel charged with responsibility for verifying compliance with QA Program requirements have the organizational freedom to:

5.4.1.1 Identify quality problems.

5.4.1.2 Initiate, recommend, or provide solutions.

5.4.1.3 Verify implementation of solutions.

5.4.2 The reporting arrangement, as illustrated on Attachment I, of Chapter 1.0, is such that personnel responsible for verifying compliance with quality requirements do not have direct responsibility for the performance of that work.

5.4.3 The General Manager, Nuclear Assurance & Licensing, provides technical and administrative direction to the QA Managers in the areas of audits, surveillance, QA Reviews, inspection, and material testing.

#### 5.5 QA Program

5.5.1 HL&P has established the Operations QA Program for the operations phase of the STPEGS, which includes testing, operation, maintenance, refueling, inservice inspection, and modification. The HL&P Nuclear QA Program for the operations phase requires that HL&P, its contractors, subcontractors, and vendors comply with the criteria established by 10CFR Part 50, Section 50.55a; 10CFR Part 50, Appendix A, General Design Criterion (GDC) 1; 10CFR Part 50, Appendix B, and 10CFR Part 71 Sub-Part H.

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It is the intent of HL&P to comply, as defined herein, with the applicable American National Standards Institute (ANSI) N45.2 daughter standards, ANSI N18.7, and implementing Regulatory Guides (RG) as defined herein and in Updated Final Safety Analysis Report (UFSAR) Table 3.12-1.

## 5.6 Delegation of QA Functions

5.6.1 During normal operations the QA Program will be executed by STPEGS personnel, who may be assisted by subcontract personnel. During refueling, maintenance, and inservice inspection, first-level quality control inspection and nondestructive examination (NDE) activities may be subcontracted. However, STPEGS will retain responsibility for the total QA Program, and NA&L personnel will perform audits and surveillance(s) of subcontracted QA activities.

5.6.2 When first-level quality control inspection and NDE are performed by STPEGS personnel, they are qualified and certified in accordance with applicable codes, standards, procedures, and other regulations. Monitoring and surveillance of the quality control and NDE activities shall be performed by Operations QA personnel.

## 5.7 Identification of Safety-Related Items and Services

5.7.1 The STPEGS QA Program described herein is applied to all activities affecting the safety-related functions of those structures, systems, and components which prevent, or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The safety-related structures, systems, and components controlled by the QA Program are listed in UFSAR Section 3.2, along with their associated fire protection systems. UFSAR Section 3.2 also identifies those quality-related structures, systems, and components (in addition to fire protection systems) which are not safety-related but to which the STPEGS Operations QA Program is applied.

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5.7.2 The fire protection QA Program is part of the overall STPEGS Operations QA Program and is therefore under the management control of QA. Fire protection QA Program criteria are being implemented as part of the HL&P Operations QA Program, as defined in this OQAP.

5.7.3 Expendable or consumable items necessary for the functional performance of safety-related structures, systems, and components are subjected to quality assurance requirements as specified in written procedures. These procedures include provisions for review and control in accordance with industry standards and specifications and the safety-related function of the expendable or consumable item.

#### 5.8 Development of the QA Program

5.8.1 The Operations QA Program was fully implemented 90 days prior to initial fuel loading. The QA Program shall be in effect throughout the operating life of the STPEGS.

#### 5.9 QA Program Documents

5.9.1 The QA Program shall be implemented with documented instructions, procedures, and drawings which include appropriate quantitative and qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. Procedures shall include the control of the sequence of required inspections, tests, and other operations when important to quality. To change these controls, the individual procedure must be changed and shall require the same review and approval given to the original procedure. Such instructions, procedures, and drawings are reviewed and approved for compliance with requirements appropriate to their safety classification by individuals qualified to do so.



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## 5.9.2 Procedures

- 5.9.2.1 Procedures shall be established to implement and control activities covered by the OQAP and other operating, licensing and code requirements. When more than one department or organization is involved, these procedures provide for the integration of responsibilities and activities to ensure continuity of activity between departments or organizations.
- 5.9.2.2 Specific departments or organizations shall be designated for the preparation and approval of each procedure. Procedures which contain requirements for more than one department or organization require a designated procedure coordinator who is responsible for initiating review with affected departments or organizations and resolution of comments. Procedures shall be approved by the management of the issuing department.
- 5.9.2.3 Selected procedures and revisions are reviewed by NA&L before their issuance. The review attests that these procedures have been reviewed for compliance with the Operations Quality Assurance Program. The review is documented and the comments on the current procedure revision will be maintained for verification.

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## 5.10 Personnel Indoctrination and Training

- 5.10.1 General indoctrination and training programs shall be provided for site personnel to assure that they are knowledgeable regarding quality programs and requirements. The training requirements for STPEGS personnel are described in UFSAR Section 13.2. Records shall demonstrate compliance with applicable requirements. Personnel performing complex, unusual, or potentially hazardous work shall be instructed in special indoctrination or briefing sessions. Emphasis shall be on special requirements for safety of personnel, radiation control and protection, unique features of equipment and systems, operating constraints, and control requirements in effect during performance of work. Where required by codes and standards, personnel are trained, qualified, and certified according to written procedures in the principles and techniques of performing specific activities.
- 5.10.2 Personnel performing surveillance testing activities shall be similarly trained in accordance with written procedures.
- 5.10.3 Training will be conducted in a time frame adequate to allow personnel to prepare for their job responsibilities and before commencing quality-related work. Proficiency of personnel shall be maintained by retraining, reexamining, and/or recertifying in accordance with initial requirements and procedures.
- 5.10.4 In addition to general employee training and indoctrination described above, departmental and interdepartmental procedures provide for training of personnel who perform quality-related work. These procedures provide for training in the principles and techniques of the activity involved and for maintenance of proficiency of personnel by retraining, reexamining, and/or recertifying to an extent commensurate with the safety significance of the activity. The procedures address documentation of:

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5.10.4.1 Scope, objective, and method of implementing the training program.

5.10.4.2 Documentation of the training sessions including attendees, dates, and results, where appropriate.

### 5.11 Policies and Goals

5.11.1 It is the policy of HL&P, acting as licensee and Project Manager for itself and the other owners of the STPEGS, to assure that the design, procurement, construction, testing, and operation of the STPEGS are in conformance with specifications, procedures, codes, and Nuclear Regulatory Commission (NRC) regulations. The responsibility of each organization supporting the STPEGS is to ensure that the requirements stated in this QA Program are incorporated into procedures. Adherence to those procedures is mandatory for all STPEGS organizations and contractors or vendors providing items or services covered by the QA Program.

5.11.2 The OQAP identifies activities and establishes requirements for procedures which identify, report, and verify the resolution of safety-related quality problems. The implementing procedures call for the resolution of quality problems at the lowest possible authorized level. However, if a dispute is encountered in the resolution of a quality problem which cannot be resolved at lower levels, Nuclear Assurance presents the problem to the Group Vice President, Nuclear, for resolution.

### 5.12 Control of Activities

5.12.1 The OQAP requires NA&L review and/or approval of procedures which control selected activities. These procedures shall require the use of the proper equipment, completion of prerequisites for starting an activity, and suitable environment for performing the activity. Procedures will comply with the appropriate standards.

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- 5.12.2 STPEGS personnel attend planning, scheduling, and status meetings affecting quality-related activities as necessary to assure adequate QA coverage and program application exists.

### 5.13 Management Review

- 5.13.1 The implementation of the QA Program requirements shall be verified through independent and integral control activities. The QA Organization, under the General Manager, Nuclear Assurance & Licensing, shall conduct audits, surveillance, and inspections of the operating plant and of the interfacing organizations' quality-related activities.
- 5.13.2 The results of the audits, surveillance, and inspection activities are presented in a periodic report to the Group Vice President, Nuclear.
- 5.13.3 Assessments of HL&P's implementation of the Operations QA Program are conducted under the cognizance of the Nuclear Safety Review Board and results are transmitted to the Group Vice President, Nuclear for his review and/or action.
- 5.13.4 STPEGS may use the services of architect-engineer firms, Nuclear Steam Supply System (NSSS) suppliers, fuel fabricators, constructors, and others which provide or augment STPEGS efforts during operations. These organizations are required to work under a QA program to provide control of quality activities consistent with the scope of their assigned work. The QA programs of such contractors or consultants shall be subject to review, evaluation, and acceptance by QA before initiation of activities affected by the program.

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#### 5.14 Operations Quality Assurance Plan Changes

5.14.1 HL&P is committed to maintaining the OQAP as an effective and meaningful document to provide programmatic direction on STPEGS. Changes to the QA Program, as described in the OQAP, will be processed under 10CFR50.54(a). When changes are made in the OQAP to the organizational elements only, appropriate notification will be made to the NRC within 30 days of implementation.

#### 5.15 Computer Code Programs

5.15.1 The development, control, and use of computer code programs which affect quality-related items will be controlled by OQAP. Prior to use of a computer code program in a quality-related activity, the appropriateness of the program shall be verified. In addition, all such programs shall be appropriately certified for use.

### 6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.4.

6.2 Operations Quality Assurance Plan (OQAP)

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## 7.0 ATTACHMENTS

7.1 Attachment I OQAP - 10CFR50, Appendix. B Matrix

|  |                                    |                          |
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## ATTACHMENT I

OPERATIONS QUALITY ASSURANCE PLAN CHAPTERS 10 CFR 50 APPENDIX B CRITERIA

|      |  |                                     |
|------|--|-------------------------------------|
| 1.0  | Organization   | I                                   |
| 2.0  | Program Description  | II                                  |
| 3.0  | Conduct of Plant Operations  | V, XIV                              |
| 4.0  | Qualification, Training and<br>Certification of Personnel                | II, IX                              |
| 5.0  | Maintenance, Installation of<br>Modifications, and Related<br>Activities | III, V, VIII, IX                    |
| 6.0  | Design and Modification Control  | III                                 |
| 7.0  | Procurement  | IV, VIII, X, XIII, XIV,<br>VII      |
| 8.0  | Control and Issuance of Documents  | V, VI                               |
| 9.0  | Control of Material  | VII, VIII, XIII, XIV                |
| 10.0 | Inspection   | X                                   |
| 11.0 | Test Control   | XI                                  |
| 12.0 | Instrument and Calibration<br>Control                                    | XII                                 |
| 13.0 | Deficiency Control   | XV, XVI                             |
| 14.0 | Records Control  | XVII                                |
| 15.0 | QA Audit and Surveillance  | XVIII                               |
| 16.0 | Nuclear Fuel Management  | III, IV, VII, VIII, X,<br>XIII, XIV |

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## ATTACHMENT I

OPERATIONS QUALITY ASSURANCE PLAN CHAPTERS 10 CFR 50 APPENDIX B CRITERIA

- |      |  |   |
|------|--|---|
| 17.0 | ASME Section XI Repairs and Replacements | * |
| 18.0 | ASME Section XI Examination and Testing  | * |

## NOTE

- \* These sections do not address 10 CFR 50 Appendix B criteria, but are included in the OQAP to identify STPEGS Code and ASME Section XI commitments.



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## 1.0 PURPOSE

- 1.1 The purpose of this chapter is to establish requirements and responsibilities for the identification, documentation, evaluation, resolution, control and reporting of deficiencies.

## 2.0 SCOPE

- 2.1 This chapter applies to deficiencies discovered in items, services and activities under the scope of the Operations Quality Assurance Plan and the reporting of items to the Nuclear Regulatory Commission (NRC) in accordance with Title 10 Code of Federal Regulations.

## 3.0 DEFINITIONS

- 3.1 None

## 4.0 REFERENCES

- 4.1 10CFR50, Appendix B
- 4.2 10CFR21, Reporting of Defects and Noncompliance
- 4.3 10CFR50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors
- 4.4 10CFR50.73, Licensee Event Report System
- 4.5 South Texas Project Electric Generating Station (STPEGS) Technical Specifications
- 4.6 OQAP Chapter 14.0, Records Control

## 5.0 REQUIREMENTS

- 5.1 All personnel working under the jurisdiction of the Operations Quality Assurance Plan are responsible for reporting identified deficiencies to appropriate management for resolution in accordance with approved procedures.

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5.2 Procedures shall be developed for the control of items, services or activities which do not conform to established requirements. These procedures shall provide for the following:

5.2.1 Identification and documentation of the deficient condition.

5.2.2 Identification of the requirements, source, or reference information being violated.

5.2.3 Notification of responsible management.

5.2.4 Control of the deficient item or activity by tagging, segregation, administrative controls, or other appropriate means to prevent inadvertent installation, use, or continuation of the deficient activity and removal of such controls when the item is returned to service or availability.

5.2.5 Resolution and/or disposition approved by authorized personnel prior to closing out the nonconformance documentation and restoring the item to normal service.

5.2.5.1 Material nonconformance disposition categories are:

- o "Use-as-is"
- o "Reject"
- o "Rework" in accordance with documented procedures
- o "Repair" in accordance with documented procedures

5.2.5.2 "Use-as-is" and "repair" disposition of nonconforming items shall be approved and justified in writing by Engineering.

5.2.5.3 Evaluations shall be performed to ascertain recurrence control measures.

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- 5.2.6 Documentation of the corrective action taken.
- 5.2.7 Review and/or verification of the corrective action by Nuclear Assurance and Licensing, as appropriate.
- 5.2.8 Reinspection of repaired and reworked items shall be to criteria as stringent as those applied to the original work. Reinspection results are documented on inspection reports or other work process control documents.
- 5.2.9 Installation of nonconforming material, parts, and components may be performed after the effect of their installation has been evaluated and the installation approved by Plant Management and Engineering. Nonconforming items which may not be installed are those which, because of their makeup and intended use, cannot be repaired or reworked after being installed and those which, if installed and later removed, would degrade that system, structure, or component. Once installed, nonconforming items are not energized, used, or placed in service until the action required by the disposition, including reinspection, has been completed or an engineering evaluation has been prepared to justify the intended use of the nonconforming item.
- 5.2.10 Nonconformances identified on installed items will be evaluated for operability.
- 5.2.11 Disputes over corrective action are normally resolved by Plant Management. Should this resolution not be satisfactory, the parties may elevate the matter to higher management for resolution.
- 5.3 Procedures shall provide the following administrative controls of deficiencies
  - 5.3.1 Unique identification and numbering of deficiencies.
  - 5.3.2 Preparing and maintaining status reporting of deficiencies.

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5.3.3 Actions to be taken to assure timely corrective action on deficiencies.

5.4 Procedures which identify and track deficiencies shall require management review of each report to determine if the condition is significant. For significant conditions adverse to quality, the cause of the condition and the corrective action taken to preclude repetition shall be documented and reported to appropriate levels of management.

5.5 Measures shall be established for review and evaluation of deficiencies for reportability to the NRC as required by Reference 4.1, 4.2, 4.3, and 4.4, as appropriate.

5.6 The authority to stop work has been assigned to the General Manager, Nuclear Assurance & Licensing for any activity being performed by company personnel or contractors which do not conform to established requirements.

5.7 Measures shall be established for the evaluation and trending of plant deficiencies. The results of these reviews and analyses are reported to the affected organization and executive management, and are audited by the QA organization. Significant adverse trends shall be handled in accordance with this chapter.

## 6.0 DOCUMENTATION

6.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.6.

## 7.0 ATTACHMENTS

7.1 None

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| <b>SOUTH TEXAS PROJECT ELECTRIC GENERATING<br/>STATION</b><br><br><b>OPERATIONS QUALITY ASSURANCE PLAN</b><br><br><b>NUCLEAR FUEL MANAGEMENT</b> | <b>NUMBER</b><br><br>Chapter 16.0  | <b>REV.<br/>NO.</b><br><br>4 |
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## 1.0 PURPOSE

1.1 The purpose of this chapter is to describe the requirements and responsibilities for the design, procurement, control and physical accounting of nuclear fuel for the South Texas Project Electric Generating Station (STPEGS).

## 2.0 SCOPE

2.1 This chapter describes the fabricated nuclear fuel activities within the scope of the Operations Quality Assurance Plan (OQAP).

## 3.0 DEFINITIONS

3.1 None

## 4.0 REFERENCES

- 4.1 OQAP Chapter 6.0, Design and Modification Control
- 4.2 OQAP Chapter 7.0, Procurement
- 4.3 OQAP Chapter 9.0, Control of Material
- 4.4 OQAP Chapter 13.0, Deficiency Control
- 4.5 OQAP Chapter 14.0, Records Control
- 4.6 OQAP Chapter 15.0, Quality Assurance Audit and Surveillance

## 5.0 RESPONSIBILITIES

5.1 The Vice President, Nuclear Generation is responsible for the core operations within core performance guidelines and safety analyses.

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5.2 The Vice President, Nuclear Engineering is responsible for assuring that nuclear fuel management activities, which include technical support for fuel procurement, receipt and receipt inspection, onsite storage, handling, physical accountability and monitoring of nuclear fuel assemblies, fuel design and analyses, reactor core performance guidelines and safety analyses in support of core operations, special nuclear materials status report preparation, the preparation of spent fuel for shipment, and licensing new and reload fuel with the Nuclear Regulatory Commission, are conducted in accordance with this chapter.

5.3 The General Manager, Nuclear Assurance & Licensing is responsible for providing quality assurance support for fuel procurement, receipt and installation of fuel assemblies and verification that requirements are being implemented thorough quality assurance surveillance and audits.

## 6.0 REQUIREMENTS

6.1 Application of quality assurance requirements to nuclear fuel management activities shall be accomplished in accordance with approved procedures that implement the following elements of the Operations Quality Assurance Plan.

### 6.1.1 Deficiency Control

6.1.1.1 Nonconforming items related to the receipt of nuclear fuel assemblies shall be documented and controlled in accordance with Reference 4.4.

### 6.1.2 Auditing and Surveillance Activities

6.1.2.1 The activities identified in this chapter shall be audited in accordance with the Reference 4.6.

### 6.1.3 Collection, Storage, and Maintenance of Quality Assurance Records

6.1.3.1 The appropriate quality assurance records applicable to nuclear fuel shall be identified, administered, and stored in accordance with the applicable requirements of Reference 4.5.

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#### 6.1.4 Control of Modification and Design Activities

6.1.4.1 Fuel and core design and design verification activities shall be accomplished in accordance with the applicable requirements described in Reference 4.1.

#### 6.1.5 Procurement Control

6.1.5.1 Procurement activities related to fabricated nuclear fuel assemblies shall be accomplished in accordance with the requirements of Reference 4.2.

#### 6.1.6 Material Control

6.1.6.1 The handling and storage of nuclear fuel assemblies and associated equipment received at the STPEGS shall be performed in accordance with the applicable requirements of Reference 4.3. Technical assistance, including necessary instructions for handling, preservation, storage and other special controls, shall be provided by the supplier of nuclear fuel assemblies in accordance with the fuel contract.

#### 6.2 Engineering Support Activities

6.2.1 The following fuel management activities shall be accomplished in accordance with approved procedures which provide the necessary interface controls:

6.2.1.1 Fuel Design and Analysis

6.2.1.2 Core-related Safety and Transient Analysis

6.2.1.3 Fuel Performance Analysis



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## 7.0 DOCUMENTATION

7.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.5.

## 8.0 ATTACHMENTS

8.1 None

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| <b>OPERATIONS QUALITY ASSURANCE PLAN</b>                   |                            |             |
| <b>ASME CODE SECTION XI - REPAIRS AND REPLACEMENTS</b>     |                            |             |

## 1.0 PURPOSE

- 1.1 The purpose of this chapter is to prescribe requirements and responsibilities for repair and replacement activities governed by ASME Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components.

## 2.0 SCOPE

- 2.1 This chapter is applicable to examination, repair and replacement activities performed on ASME Class 1, 2, and 3 components.

## 3.0 DEFINITIONS

- 3.1 None

## 4.0 REFERENCES

- 4.1 ASME Code Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components
- 4.2 OQAP Chapter 14.0, Records Control
- 4.3 Generic Letter 89-009, ASME Section III Component Replacements

## 5.0 RESPONSIBILITIES

- 5.1 The Vice President, Nuclear Generation is responsible for the planning, management, and control of the performance of repairs, replacements and tests.
- 5.2 The Vice President, Nuclear Engineering is responsible for developing the repair and replacement program including specifications for design, fabrication, testing, and examination.
- 5.3 The General Manager, Nuclear Assurance & Licensing is responsible for providing qualified personnel to perform examinations of component repairs and replacements and verifying the requirements of this chapter are implemented.

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## 6.0 REQUIREMENTS

- 6.1 Repair and replacement activities required by Reference 4.1 shall be conducted in accordance with written and approved procedures or instructions.

Areas to be addressed include:

- 6.1.1 Accessibility for component examination, repair or replacement.
- 6.1.2 Identification of system boundaries and code class for each component.
- 6.1.3 The method for interfacing with the authorized nuclear inspection agency.
- 6.1.4 Qualification of nondestructive examination methods.
- 6.1.5 Qualification requirements for nondestructive examination personnel.
- 6.1.6 Qualification requirements for welders and welding operators.
- 6.1.7 Qualification of welding procedures.
- 6.1.8 Conduct of examinations and inspections.
- 6.1.9 A component repair or replacement package including installation and test procedures and quality assurance requirements.
- 6.1.10 Conduct of system pressure and functional tests.
- 6.1.11 A component replacement package including specifications for design, fabrication and examination as applicable for the replacements.
- 6.1.12 Preparation, submittal and retention of required records and reports.
- 6.1.13 Procurement, in accordance with Reference 4.3, of component replacements not available in full compliance with ASME code stamping and

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documentation requirements.

7.0 DOCUMENTATION

- 7.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.2.

8.0 ATTACHMENTS

- 8.1 None

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## 1.0 PURPOSE

- 1.1 The purpose of this chapter is to prescribe requirements and responsibilities for the inservice examination and testing programs at the South Texas Project Electric Generating Station (STPEGS).

## 2.0 SCOPE

- 2.1 This chapter applies to the inservice examination and testing of Class 1, 2 and 3 pressure retaining components and component supports as specified in Section XI of the ASME Boiler and Pressure Vessel Code and additional ISI commitments as specified in the UFSAR.

## 3.0 DEFINITIONS

- 3.1 None

## 4.0 REFERENCES

- 4.1 ASME Code Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components
- 4.2 10CFR50.55a, Codes and Standards
- 4.3 OQAP Chapter 4.0, Qualification, Training and Certification of Personnel
- 4.4 OQAP Chapter 14.0, Records Control

## 5.0 RESPONSIBILITIES

- 5.1 The Vice President, Nuclear Engineering is responsible for developing and implementing the inservice examination and testing programs as required by ASME Code Section XI.
- 5.2 The General Manager, Nuclear Assurance & Licensing is responsible for verifying the implementation of the inservice examination and testing programs through audits and surveillances, interfacing with the Authorized Inspection Agency, and performance of nondestructive examinations as requested by Nuclear Engineering.

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## 6.0 REQUIREMENTS

6.1 The inservice examination and testing programs consist of plans and implementing procedures for the examination and testing of Class 1, 2, and 3 pressure retaining components and their supports and the inservice testing of Class 1, 2, and 3 pumps and valves.

### 6.1.1 Examination and Testing of Pressure Retaining Components and Component Supports

6.1.1.1 Nuclear Engineering shall develop plans for examination and testing of Class 1, 2, and 3 components and their supports. These plans shall prescribe the requirements for nondestructive examinations and tests and the schedule for their performance.

6.1.1.2 Inspection plans (e.g., specifications, vendor documents, etc.) shall be developed which identify the nature and extent of examination and testing activities including the acceptance criteria which must be met.

6.1.1.3 Procedures shall be developed which provide measures for the performance of activities identified in the plans.

### 6.1.2 Inservice Testing of Pumps and Valves and System Pressure Testing

6.1.2.1 Nuclear Engineering shall develop the Inservice Testing Program for pumps and valves and the System Pressure Testing Program. These programs shall include the requirements and the schedule for their performance.

6.1.3 Examination and test results shall be evaluated by specified personnel and verified by the Authorized Nuclear Inservice Inspector.



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- 6.1.4 Coordination of involved HL&P departments, including the use of contractors for the performance, documentation and evaluation of inservice inspection activities, shall be controlled by approved procedures.
- 6.1.5 When contractors are used to perform activities within the scope of this section, their quality assurance program shall be approved by HL&P Nuclear Assurance.
- 6.1.6 Exceptions to code examination and testing requirements shall be documented in accordance with Reference 4.2.
- 6.1.7 Personnel performing examinations and tests shall be qualified as required by Reference 4.1 and Reference 4.3.
- 6.1.8 Plans and reports for inservice examinations and tests shall be submitted to the appropriate regulatory and enforcement authorities as required by Section XI.

## 7.0 DOCUMENTATION

- 7.1 Procedures which are generated as required by this chapter shall identify the records which are required to implement and document those activities. The records shall be controlled in accordance with Reference 4.4.

## 8.0 ATTACHMENTS

- 8.1 None