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PROJECT QUALITY ASSURANCE PLAN

PROJECT ENGINEERING

Section 4.0

HOUSTON LIGHTING & POWER COMPANY

Approved By *[Signature]* Date 10/22/80
Executive Vice President

Project Endorsement *D. R. Sarker* Date 10/16/80
Manager, STP

Approved By *[Signature]* Date 10/13/80
Manager, STP QA

Prepared By *D. Jordan* Date 10/13/80
Supervisor, Quality Systems

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4.0 PROJECT ENGINEERING

4.1 INTRODUCTION

The purpose of this section is to describe the measures used for the engineering and design control of the South Texas Project Electric Generating Station. These measures are commensurate with the requirements of the South Texas Project Management Policy Manual and Appendix B to 10CFR50, and are structured in accordance with the guidance provided by the "Gray Book" (WASH-1283, Guidance on Quality Assurance Requirements During the Design and Procurement Phase of Nuclear Power Plants) and industry standards, as applicable.

The design and engineering control methods delineated in this section address the following activities:

- a) Organizations responsible for STP design
- b) Design control
- c) Design review and approval
- d) Design interface control
- e) Design changes

4.2 ORGANIZATIONS RESPONSIBLE FOR DESIGN

4.2.1 HOUSTON LIGHTING AND POWER COMPANY

The South Texas Project participation agreement has established that HL&P has overall responsibility for design and engineering of the STP Electric Generating Station. HL&P's prime contractors, B&R and Westinghouse do the design, engineering and design verification while HL&P performs reviews of key elements of the finished design. The areas of responsibility, organization and interface are summarized in Section 2.0.

4.2.2 BROWN & ROOT, INC.

The areas of responsibility and organization of Brown & Root, Inc. (B&R) are described in Section 3.2.1 which includes the interrelationships between HL&P and B&R.

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4.2.3 WESTINGHOUSE ELECTRIC CORPORATION

The areas of responsibility and organization of Westinghouse Electric Corporation (Westinghouse) are described in Section 3.2.2 which includes the interrelationships between HL&P and Westinghouse.

4.2.4 SUBCONTRACTOR DESIGN ORGANIZATION(S)

HL&P, as appropriate, selects subcontractors to perform design related tasks. These tasks include but are not limited to the following:

1. New design
2. Special design studies
3. Design work outside the scope of prime contractors
4. Changes to existing design performed by subcontractors no longer associated with the South Texas Project.

To be eligible to participate in design activities the subcontractor must have demonstrated their capabilities in the applicable field of design or requested task and comply with specified subcontractor requirements. When a subcontractor has been selected, HL&P Project Manager or designee shall ensure that all appropriate design background information upon which to perform the task is provided.

4.3 DESIGN CONTROL

4.3.1 RESPONSIBILITY

HL&P, having overall design control for the STP, invokes the requirements of 10CFR50, Appendix B, Criteria III on the prime contractors (B&R, Westinghouse) and subcontractors. HL&P performs reviews of key elements of the finished design to ensure that the requirements of 10CFR50, Appendix B, Criteria III are being met.

4.4 DESIGN REVIEW AND APPROVAL

This section describes the process for design review performed by HL&P for systems, structures and components related to the

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constructability, availability, maintainability, economy, operability and safety of the South Texas Project Electric Generating Station.

4.4.1 RESPONSIBILITY

The overall responsibility for conducting the HL&P review of specific STP design documentation rests with the Manager, STP. The Manager, STP assigns the responsibility of reviewing the design to the Project Engineering Manager. Consultants may be used to perform selected reviews of design documents in specialized areas not within the realm of HL&P expertise. HL&P Engineering is responsible for coordinating the design review activities of the consultant.

4.4.2 DESIGN REVIEW

The design review guidelines specified in the HL&P STP Project Engineering Procedure Manual shall be used for the review of STP design documents within HL&P. Assigned reviewers shall utilize additional criteria, including their own experience, as necessary, to perform as comprehensive a review as the importance, complexity, cost, and relation to nuclear safety warrants.

4.4.3 DESIGN APPROVAL

The Project Engineering Manager, or his designated representative, indicates HL&P concurrence with specified design documents by signature in accordance with the HL&P STP Project Engineering Procedure Manual.

4.5 DESIGN INTERFACE CONTROL

The HL&P Manager, STP is responsible for coordinating design interfaces among B&R, Westinghouse, subcontractors, and HL&P. The design interfaces are controlled through the methods outlined in sections 4.2, 4.3, and 4.4.

4.6 DESIGN CHANGE CONTROL

Although HL&P Project Engineering is ultimately responsible for the design, the responsibility for controlling design changes to systems, components, and structures belongs to the prime contractors, B&R and Westinghouse.

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PROJECT QUALITY ASSURANCE PLAN

PROCUREMENT

Section 5.0

HOUSTON LIGHTING & POWER COMPANY

Approved By


Executive Vice President

Date

10/22/80

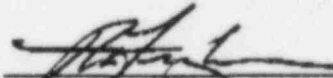
Project
Endorsement


Manager, STP

Date

10/16/80

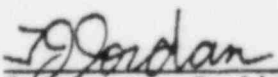
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Manager, STP QA

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5.0 PROCUREMENT

5.1 INTRODUCTION

5.2 RESPONSIBILITY

5.2.1 HOUSTON LIGHTING & POWER COMPANY

5.2.2 WESTINGHOUSE ELECTRIC CORPORATION

5.2.3 BROWN & ROOT, INC.

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5.0 PROCUREMENT

5.1 INTRODUCTION

This section describes the measures used during the procurement of Nuclear Safety Related Items for the STP.

5.2 RESPONSIBILITY

5.2.1 HOUSTON LIGHTING AND POWER CO.

To assure that Nuclear Related Safety Items are purchased in a planned and controlled manner, HL&P, having overall responsibility, has established basic requirements to be used by HL&P, prime and subcontractors in preparing procurement programs for the STP. These are:

1. Procurement procedures which ensure that the applicable regulatory, quality assurance, and engineering design requirements as well as the purchasers right to access to the suppliers facilities are included in purchase documents.
2. Provisions for review, change control, and approval of procurement documents.
3. Procedures for the evaluation and selection of suppliers. The evaluation shall involve a technical review by the cognizant engineering group, a commercial review by Purchasing/Subcontracts and a quality assurance review.
4. Measures for the control of purchased material, equipment and services, including supplier surveillance and source inspection.
5. Control measures taken to assure that required documented evidence of conformance of material and equipment to procurement requirements is available at the plant site prior to installation or use of such material or equipment.

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HL&P monitors procurement packages of Nuclear Safety Related Items of the prime contractors (B&R, Westinghouse) who, in turn, are responsible for monitoring their respective subcontractors. The procurement activities are included in the HL&P audit program.

5.2.2 WESTINGHOUSE ELECTRIC CORP.

Westinghouse is responsible for the procurement of Nuclear Safety Related equipment, material, and services for the NSSS contract. Westinghouse is responsible for assuring that their suppliers comply with HL&P requirements.

5.2.3 BROWN AND ROOT, INC.

Brown and Root, Inc. is responsible for the procurement of Nuclear Safety Related equipment, material, and services exclusive of the NSSS system. Brown and Root is responsible for assuring that their suppliers comply with HL&P requirements.

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