

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

July 18, 2005 NOC-AE-05001908 File No.: G09.19 10CFR50.54(a) STI: 31903934

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk One White Flint North 11555 Rockville Pike Rockville, MD 20852-2738

#### South Texas Project Units 1 and 2 Docket Nos. STN 50-498 and STN 50-499 Submittal of Operations Quality Assurance Plan Change QA-058

Reference: (1) Letter, T.W. Alexion to W.T. Cottle, "Graded Quality Assurance Operations Quality Assurance Plan," dated November 6, 1997;
(2) J.A. Zwolinski to W.T. Cottle, "Safety Evaluation on Exemption Requests from Special Treatment Requirements of 10CFR Parts 21, 50, and 100," dated August 3, 2001.

The South Texas Project Nuclear Operating Company (STPNOC) submits the attached change to revision 16 of the Operations Quality Assurance Plan. This change provides the necessary revision to the applicable section of Chapter 6.0, Design and Modification Control, of the Operations Quality Assurance Plan (OQAP) in order to clarify the applicability of exceptions to Regulatory Guide 1.64, rev. 2 (6/76), position C.2 that were previously approved by the Nuclear Regulatory Commission in Reference 1 for items in the "Basic" program (safety-related Medium, Low, or Non-Risk Significant SSCs). The change clarifies that these exceptions continue to safety-related Low or Non-Risk Significant SSCs, but which are now part of the "Limited" program. The "Limited" program was developed as part of the Exemption to Special Treatment Requirements approved by the Nuclear Regulatory Commission in Reference 1.

This change does not reduce any element of or responsibilities for implementation of the QA program. This change therefore does not represent a reduction in commitment and does not require NRC approval prior to implementation in accordance with the provisions of 10CFR50.54(a)(3).

There are no commitments in this letter.

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If there are any questions regarding this matter, please contact Mr. M. A. McBurnett at (361) 972-7206 or me at (361) 972-8434.

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5. J. Sheppard President and Chief Executive Officer

Attachments: (1) Clarification of OQAP changes to Chapter 6.0 for Limited Components (2) QA-058

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Bruce S. Mallett Regional Administrator, Region IV U. S. Nuclear Regulatory Commission 611 Ryan Plaza Drive, Suite 400 Arlington, Texas 76011-8064

Richard A. Ratliff Bureau of Radiation Control Texas Department of State Health Services 1100 West 49th Street Austin, TX 78756-3189

Jeffrey Cruz U. S. Nuclear Regulatory Commission P. O. Box 289, Mail Code: MN116 Wadsworth, TX 77483

C. M. Canady City of Austin Electric Utility Department 721 Barton Springs Road Austin, TX 78704 (electronic copy)

A. H. Gutterman, Esquire Morgan, Lewis & Bockius LLP

David H. Jaffe U. S. Nuclear Regulatory Commission

Jack A. Fusco Michael A. Reed Texas Genco, LP

C. Kirksey City of Austin

Jon C. Wood Cox Smith Matthews

J. J. Nesrsta R. K. Temple E. Alarcon City Public Service

# **ATTACHMENT 1**

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#### Clarification of OQAP changes to Chapter 6.0 for Limited Components

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Revision 13 of the South Texas Project Operations Quality Assurance Plan (OQAP) was approved by the NRC on November 6, 1997 (Reference 1). This revision incorporated the methodology for implementation of Graded Quality Assurance (GQA) and provided for the establishment of three levels of controls as shown below:

QA Program	Scope	Controls
Full	Safety related High risk significant SSCs	Highest levels of program controls and oversight. These programmatic controls are in full compliance with the requirements of 10 CFR 50 Appendix B, and additionally represent compliance with the applicable STP commitments relative to USNRC Regulatory Guides and ANSI Standards that they endorse. Other recognized industry standards are applied, as appropriate.
Basic	Safety related Medium, Low, or Non-Risk significant SSCs	Lower levels of control and oversight, designed to maintain and/or preserve those identified critical attributes of SSCs needed to support risk significant functions. They reflect economical and efficient business practices while maintaining compliance with the basic requirements of 10 CFR 50 Appendix B. They do not necessarily reflect the strict controls as depicted in USNRC Regulatory Guides and the ANSI standards they endorse. Other industry standards are applied, as appropriate.
Targeted	Non-safety related High or Medium risk significant SSCs	Specific program controls which are consistent with applicable portions of the "Full" and "Basic" program controls, applied in a selected manner and specifically "targeted" at those attributes which placed the component into that category.

The specific program controls applicable to the Full and Basic programs are delineated, in part, in Table I of Chapter 2.0 of the OQAP. This table provides the specific STP commitments to applicable Regulatory Guides and/or ANSI standards and highlights the differences between the Full and Basic programs. In the area of independent design verification, these differences are shown in the following excerpt from Table I.

R.G./ANSI Standard	Full Program	Basic Program
R.G. 1.64, rev. 2	No exceptions taken	Regulatory Position C.2 – STP may implement the requirement regarding design verification as prescribed in ANSI N45.2.11, 1974, 6.1, second sentence as opposed to R. G. wording.
ANSI N45.2.11	No exceptions taken	<ul> <li>3.2 (1<sup>st</sup> paragraph) – STP will require personnel to consider items 1 through 28, but a documented checklist may not be required.</li> <li>6.3 – Verification and checking of design may be accomplished through supervisory or management review/approval as provided for in 6.1. Personnel will be required to consider items 1 through 19, but a documented checklist may not be required.</li> </ul>

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Revision 13 of the OQAP was determined to be acceptable based on a safety evaluation performed by NRC staff. In regard to the Basic program controls for independent design verification shown above, the safety evaluation stated the following in paragraph 3.4.1.2.c:

"<u>Staff Evaluation</u>: The licensee's exception to Regulatory Position C.2 of RG 1.64 (Reference 28) is considered acceptable since it is included in NQA-1-1983 (Reference 16) which was endorsed by the NRC in RG 1.28, Rev. 3 (Reference 29). In addition, this alternative is consistent with the provisions of Draft RG DG-1064 (Reference 3).

With regard to documentation of the 19 design review question checklist, the licensee will continue to consider the technical aspects of the 19 questions and the staff considers documentation to be implemented only as deemed necessary to be acceptable, and consistent with the provisions contained in Draft RG DG-1064 (Reference 3)."

Chapter 6.0 of the OQAP provides requirements and responsibilities for design and modification control of SSCs. Paragraph 5.4.3 of this chapter specifies design verification controls and incorporates the exception to RG 1.64 discussed above for SSCs in the Basic program.

Subsequent to the incorporation of the GQA methodology into the OQAP, STP was granted an exemption from Special Treatment Requirements of 10CFR Parts 21, 50, and 100 (Reference 2). The main impact of this exemption on the OQAP was to incorporate a new category of program controls called Limited, as shown below.

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QA Program	Scope	Controls
Limited	Safety related Low and Non-Risk significant SSCs	Lower levels of oversight than those under the Basic program, limited to design, modification, or corrective action activities, as described in Chapters 6.0 and 13.0 of the OQAP. They reflect economical and efficient business practices while maintaining compliance with those requirements of 10 CFR 50 Appendix B that relate to design control, corrective action, and nonconforming materials, parts, or components. They do not necessarily reflect the strict controls as depicted in USNRC Regulatory Guides and the ANSI standards they endorse. Other industry standards are applied, as appropriate.

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In incorporating the Limited program category into the OQAP, STP, through an oversight, neglected to clarify that the Chapter 6 exception for design verification that applies to the Basic Program also applies to the Limited Program. It is clear that safety related SSCs categorized as Low or Non-Risk significant that, prior to the exemption, had been afforded this exception by being part of the Basic Program, should continue to have this exception and should not have more stringent controls than safety related Medium risk components.

It is noted that this change to the OQAP is in full compliance with the requirements of 10CFR Appendix B, criterion III, Design Control and with the STP UFSAR, section 13.7 (Risk-Informed Special Treatment Requirements).

## **ATTACHMENT 2**

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## ALL CHANGES ARE IN BOLD TYPE

		1.0		
	2.0 <u>CHAPTER</u>	LOCATION	ACTION	TEXT
TOC	CH 6.0	INSERT	QA-058	
CH 6.0	) 5.4.3	INSERT	apply to v for items i	graph's ndation does not erification of design in the "Basic" <b>or</b> " program category)

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Chapter	Title	Effective	Effective	Change
Number	Chapter	Revision	Date	Notice No.
	Definitions	9	2-1-02	
1.0	Organization	12	2-1-04	QA-057
2.0	Program Description	14	2-1-04	QA-056,QA-057
3.0	Conduct of Plant Operations	7	2-1-98	
4.0	Qualification, Training, and Certification of Personnel	6	2-1-98	
5.0	Maintenance, Installation of Modifications, and Related Activities	5	2-1-98	
6.0	Design and Modification Control	8	2-1-02	QA-058
7.0	Procurement	9	2-1-02	QA-057
8.0	Control and Issuance of Documents	6	2-1-98	
9.0	Control of Material	6	2-1-98	
10.0	Inspection	9	2-1-02	QA-057
11.0	Test Control	7	2-1-00	
12.0	Instrument and Calibration Control	6	2-1-98	
13.0	Control Of Conditions Adverse to Quality	10	2-1-02	QA-057
14.0	Records Control	7	2-1-02	QA-057
15.0	Quality Oversight Activities	9	2-1-04	QA-057

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Chapter Number	Title Chapter	Effective Revision	Effective Date	Change Notice No.
16.0	Independent Technical Review	8	2-01-04	QA-057
17.0	ASME Code Section XI - Repairs and Replacements	6	2-01-00	QA-057
18.0	ASME Code Section XI - Inservice Inspection and Testing	7	2-01-00	QA-057
19.0	Administrative Controls	1	2-01-04	QA-056, QA-057

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### 1.0 PURPOSE

1.1 The purpose of this chapter is to establish the requirements and responsibilities for design and modification control of structures, systems, or components at the South Texas Project Electric Generating Station (STP).

### 2.0 SCOPE

2.1 This chapter applies to the design and modification activities associated with the preparation and review of design documents including the translation of applicable Code of Federal Regulation requirements and design bases into design documents.

#### 3.0 DEFINITIONS

3.1 None

### 4.0 **REFERENCES**

- 4.1 STP Technical Specifications
- 4.2 OQAP Chapter 5.0, Maintenance, Installation of Modifications, and Related Activities
- 4.3 OQAP Chapter 14.0, Records Control
- 4.4 10CFR50.59, Changes, Tests and Experiments
- 4.5 OQAP Chapter 13.0, Control of Conditions Adverse to Quality
- 4.6 OQAP Chapter 2.0, Table I

### 5.0 REQUIREMENTS

5.1 Measures shall be established to document selection of design inputs. Changes to specified design inputs, including identification of their source, shall be identified and documented. As the design evolves, unreviewed safety question evaluations shall be performed as required by Reference 4.4.

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- 5.2 Measures shall be established to control design activities to assure design inputs are translated into design documents such as specifications, drawings, procedures, or instructions.
  - 5.2.1 Design activities involving reactor physics; stress, thermal, hydraulic, and accident analysis; materials compatibility; and accessibility for maintenance, inservice inspection, and repair will be performed according to approved procedures by appropriately qualified individuals. Results of analyses will be appropriately verified and documented.
  - 5.2.2 Design documents shall include appropriate quality standards. If an alternate quality requirement is used (e.g., other than the originally specified quality standard) the change shall be documented and approved.
  - 5.2.3 Design analyses shall be sufficiently detailed as to purpose, method, assumptions, design input, references, units, and status (preliminary or final) such that a technically qualified person can review and understand the analyses and verify the adequacy of the results without recourse to the originator.
  - 5.2.4 A review for application suitability of materials, parts, equipment, and processes essential to the functions of structures, systems, and components is done as part of the design document preparation and review process. The procedures, which govern the preparation and review of design documents, require that valid industry standards and specifications be used for this review. Review of standard off-the-shelf commercial materials, parts, and equipment for suitability of application with structures, systems, and components will be conducted before selection.
- 5.3 Measures shall be established to identify and control design interface among participating organizations (internal and external).
- 5.4 Measures shall be established to verify adequacy of design and design changes.

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- 5.4.1 The design process shall include verification by qualified persons to assure that the design is adequate and meets specified design input. Design control procedures shall specify requirements for the selection and performance of design verification methods. Design verification shall be either by design review, alternate calculation, qualification testing, or a combination of these. The depth of design verification shall be commensurate with the importance of the system or component to plant safety, complexity of the design, and similarity of design to previous designs.
  - 5.4.1.1 If the verification method performed is only through qualification testing, the following are required.
    - Procedures shall provide criteria that specify when verification should be by test.
    - Prototype, component, or feature testing shall be performed as early as possible before installation of plant equipment, or before the point when the installation would become irreversible.
    - Verification by test shall be performed under conditions that simulate the most adverse design conditions as determined by analysis.
- 5.4.2 Design verification shall be performed by competent individuals or groups other than those who performed the original design.
- 5.4.3 Design verification should not be performed by individuals that have immediate supervisory responsibility for the individual performing the design; have specified a singular design approach; have ruled out certain design considerations; or have established the design inputs for that particular design aspect. (This paragraph's recommendation does not apply to verification of design for items in the "Basic" or "Limited" program category)

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- 5.4.4 Design verification will normally be performed prior to release for procurement, manufacture, installation, or use by another organization in other design activities. Exceptions shall be justified and documented. Procedures shall control the justification of exceptions and the completion of the verification of all affected design output documents prior to relying on the component, system, or structure to perform its function.
- 5.5 Measures shall be established to control the approval, issuance, and changes of design documents to prevent the inadvertent use of superseded design information.
- 5.6 Changes made to design documents are reviewed and approved by the same groups or organization, which reviewed and approved original design documents. If the organization which originally approved a particular design document is no longer responsible, another organization may be designated if competent in the specific design area, has access to pertinent background information and has an adequate understanding of the requirements and intent of the original design.
- 5.7 Conditions adverse to quality found in approved design documents, including design methods, that could adversely affect structures, systems, or components shall be documented and action taken to correct and prevent recurrence, in accordance with Reference 4.5.
- 5.8 Measures shall be established for the identification and control of deviations from specified quality standards.
- 5.9 Measures shall be established which assure that maintenance and modifications associated with design changes which may affect the functioning of structures, systems, or components are performed in a manner to ensure quality at least equivalent to that specified in the UFSAR or current design bases and requirements.
- 5.10 Measures shall be established to maintain the list of structures, systems, and components current after modifications are made.
- 5.11 Measures shall be established to assure that only appropriately verified, qualified and controlled computer codes are authorized for use.

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#### 5.12 Modifications

- 5.12.1 Modifications to structures, systems, and components shall be controlled, reviewed, and approved.
- 5.12.2 Installation and testing of modifications shall be performed in accordance with Reference 4.2 and approved procedures. These procedures shall contain provisions as appropriate to ensure quality of installation and appropriate post modification testing. (This paragraph does not apply to components in the "Limited" program category, unless design verification testing is being performed in accordance with 5.4.1.1.)
- 5.12.3 Structures, systems, and components shall not be declared operable after a modification until the following provisions are satisfied:
  - 5.12.3.1 Affected procedures are revised and distributed to appropriate users.
  - 5.12.3.2 Appropriate personnel are trained.
- 5.13 Modifications will be checked against the design change documentation for proper implementation prior to closing out the design change process.

### 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 4.3.

### 7.0 ATTACHMENTS

7.1 None