

# The Light company

Houston Lighting & Power

P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

January 08, 1991  
ST-HL-AE-3635  
File No. : G2.06,  
G20.02.01  
10CFR50.90

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

South Texas Project Electric Generating Station  
Units 1 & 2  
Docket No. STN 50-498, STN 50-499  
Proposed Amendment to the Unit 1  
and Unit 2 Technical Specifications

Pursuant to 10 CFR 50.90, Houston Lighting & Power (HL&P) hereby proposes to amend its Operating Licenses NPF-76 and NPF-80 by incorporating the attached proposed changes to the Technical Specifications, for the South Texas Project Electric Generating Station (STPEGS) Units 1 and 2.

The proposed amendment to the Technical Specifications involves cycle specific parameter limits. The proposed amendment further relieves the burden of processing Technical Specification changes to update such limits for each core reload by transferring more of these limits to the existing Core Operating Limits Report (COLR).

The Technical Specifications for which changes are requested involve limits associated with reactor physics parameters that change for each fuel cycle. This amendment will remove these cycle specific limits from the Technical Specifications and place them in the COLR. This alternative to modifying the individual Technical Specifications for each core reload is responsive to industry and NRC efforts to improve Technical Specifications. As recommended by the staff, STP has used the recent V. C. Summer COLR submittal as a reference.

The individual Technical Specifications which are affected are contained in Attachment 1, accompanied by a change description and basis. Attachment 3 provides the marked-up pages for the proposed amendment. Attachment 4 is a sample COLR for each unit based on current cycle data.

HL&P has reviewed the attached proposed amendment pursuant to 10CFR50.91(a) (1) and determined that it does not involve a significant hazards consideration. The basis for this determination is provided in Attachment 2. In addition, based on the information contained in this submittal and the NRC Final Environmental Assessment for STPEGS Units 1 and 2,

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HL&P has concluded that, pursuant to 10CFR51, there are no significant radiological or nonradiological impacts associated with the proposed action and the proposed license amendment will not have a significant effect on the quality of the environment.

The STPEGS Nuclear Safety Review Board has reviewed and approved the proposed changes.

In accordance with 10CFR50.91(b), HL&P is providing the state of Texas with a copy of this proposed amendment.

If the NRC should have any questions concerning this matter, please contact Mr. A. W. Harrison at (512) 972-7298 or myself at (512) 972-7921.



Warren H. Kinsey, Jr.  
Vice President  
Nuclear Generation

SDP/amp

Attachments:

1. Index of Technical Specifications affected by the proposed Amendment and a brief description of the change
2. Significant Hazards Evaluation for changes to Delete Certain Cycle-Specific Parameters
3. Mark-ups of Proposed Changes to Technical Specifications
4. Sample Core Operating Limits Reports

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Regional Administrator, Region IV  
Nuclear Regulatory Commission  
517 Rynn Plaza Drive, Suite 1000  
Washington, TX 76017

George Dick, Project Manager  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

J. I. Tapia  
Senior Resident Inspector  
c/o U. S. Nuclear Regulatory  
Commission  
P. O. Box 910  
Bay City, TX 77414

J. R. Newman, Esquire  
Newman & Holtzinger, P.C.  
1615 L Street, N.W.  
Washington, DC 20031

R. P. Verret/D. E. Ward  
Central Power & Light Company  
P. O. Box 2121  
Corpus Christi, TX 78403

J. C. Lanier/M. B. Lee  
City of Austin  
Electric Utility Department  
P.O. Box 1088  
Austin, TX 78767

R. J. Ceccello/M. T. Hardt  
City Public Service Board  
P. O. Box 1771  
San Antonio, TX 78296

Rufus S. Scott  
Associate General Counsel  
Houston Lighting & Power Company  
P. O. Box 61867  
Houston, TX 77208

INPO  
Records Center  
1100 Circle 75 Parkway  
Atlanta, GA 30339-3064

Dr. Joseph M. Hendrie  
50 Bellport Lane  
Bellport, NY 11713

D. K. Lacker  
Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3189

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter )

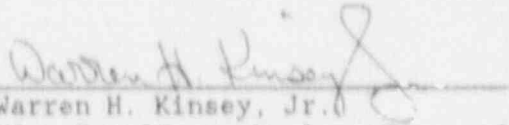
Houston Lighting & Power )  
Company, et al., )

Docket Nos. 50-498  
50-499

South Texas Project )  
Units 1 and 2 )

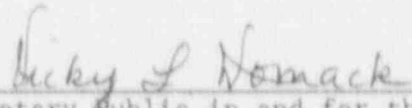
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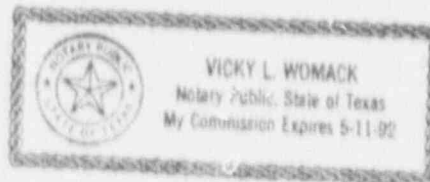
Warren H. Kinsey, Jr. being duly sworn, hereby deposes and says that he is Vice President, Nuclear Generation, of Houston Lighting & Power Company; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the proposed amendment to the Unit 1 and Unit . Technical Specifications; is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge and belief.

  
Warren H. Kinsey, Jr.  
Vice President, Nuclear Generation

STATE OF TEXAS )  
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Subscribed and sworn to before me, a Notary Public in and for The State of Texas this 8<sup>th</sup> day of January, 1991.

  
Notary Public in and for the  
State of Texas



Attachment 1

Technical Specifications Affected and Description of Change

TECHNICAL SPECIFICATIONS AFFECTED BY PROPOSED  
 AMENDMENT AND BRIEF DESCRIPTION OF CHANGE

<u>PAGE</u>	<u>TECHNICAL SPECIFICATION</u>	<u>CHANGE DESCRIPTION</u>
3/4 1-6	3.1.1.1 Moderator Temperature Coefficient	Relocates MTC Limits to the COLR and corrects references
3/4 1-7	4.1.1.3 MTC Surveillance Requirement	Relocates MTC Limits to the COLR and corrects references
3/4 1-7a	New Figure 3.1-2a, Maximum MTC Limit Curve, MCT vs Power Level. Page added to Tech Specs to accommodate it.	Retains upper MTC Limit. Required for positive MTC Spec (future possibility). Figure is also in COLR for T. S. 3.1.1.3
B3/4 1-2	3/4.1.1.3 Moderator Temperature Coefficient Bases	Administrative Change. MTC Limits have been relocated to the COLR.
3/4 1-16	3.1.3.1.b.2 Movable Control Assemblies-Group Height	Administrative change. Removes reference to Figure 3.1-3, removed to the COLR in a previous amendment
3/4 1-17	3.1.3.1.c.1 Movable Control Assemblies-Group Height	Administrative change. Removes reference to figure 3.1-3, removed to the COLR in a previous amendment.
3/4 1-22	3.1.3.5 Shutdown Rod Insertion Limit	Administrative change. Clarifies that the fully withdrawn position for shutdown banks is specified in the COLR.
3/4 2-1	3.2.1.b Axial Flux Difference	Replaces references to Figure 3.2-1, which is moved to the COLR
3/4 2-2	3.2.1.C Axial Flux Difference	Deletes the word "above" twice in reference to Figure 3.2-1.
3/4 2-4	Figure 3.2-1 BLANK	Figure moved to the COLR
B3/4 2-1	3/4.2.1 Axial Flux Difference Bases	Administrative change. The $F_0$ Limit is removed to the COLR
B3/4 2-2	3/4.2.1 Axial Flux Difference Bases	Removes reference to Figure 3.2-1, Figure 3.2-1 removed to the COLR

TECHNICAL SPECIFICATIONS AFFECTED BY PROPOSED  
 AMENDMENT AND BRIEF DESCRIPTION OF CHANGE

<u>PAGE</u>	<u>TECHNICAL SPECIFICATION</u>	<u>CHANGE DESCRIPTION</u>
3/4 2-5	3.2.2 Heat Flux Hot Channel Factor	Relocates the $F_0$ and $K(Z)$ to the COLR. The numerical $F_0$ limit is replaced with a function $F_0^{RTP}$ , which is to be specified in the COLR
3/4 2-6	Figure 3.2-2 BLANK	Figure moved to the COLR
3/4 2-7	4.2.2.2.C.2 Heat Flux Hot Channel Factor Surveillance Requirements	Replaces the numerical part power multiplier for $F_{xy}$ with a function $PF_{xy}$ , which will be specified in the COLR
3/4 2-8	4.2.2.2.e Heat Flux Hot Channel Factor Surveillance Requirements	Administrative Change The Radial Peaking Factor Limits Report was replaced by the COLR in a previous amendment
B3/4 2-5	3/4.2.2 and 3/4.2.3 Heat Flux Hot Channel Factor and Nuclear Enthalpy Rise Hot Channel Factor Bases	Administrative change. The Radial Peaking Factor Limits Report was replaced by the COLR in a previous amendment
3/4 2-9	3.2.3 Nuclear Enthalpy Rise Hot Channel Factor	Relocates the $F_{DH}$ to the COLR. The numerical values for the $F_{DH}$ limit and the part power multiplier are replaced with parameters $F_{DH}^{RTP}$ , and $PF_{DH}$ , which are to be defined in the COLR
6-20	6.9.1.6 Core Operating Limits Report	Administrative change. Expand the description of the COLR and its control. Spillover and T.S. 6.9.2 go onto new page 6-20a

Attachment 2

No Significant Hazards Evaluation



NO SIGNIFICANT HAZARDS EVALUATION FOR CHANGES TO  
TECHNICAL SPECIFICATIONS DELETING CERTAIN CYCLE-SPECIFIC PARAMETERS

Background

Generic Letter 88-16, dated October 4, 1989,, was issued to encourage licensees to prepare changes to Technical Specifications related to cycle-specific parameters. These Technical Specification changes will relocate cycle-specific parameter limits from Technical Specifications to the Core Operating Limits Report (COLR). These parameter limits in the South Texas Project Electrical Generating Station Technical Specifications are currently calculated using NRC-approved methodologies. These limits are evaluated for every reload cycle, and may be revised periodically to reflect changes to cycle-specific variables. This represents an administrative burden to both the NRC, and Houston Lighting & Power.

The generic letter provided guidance to allow relocation of certain cycle-dependent core operating limits from the STP Technical Specifications. This would allow changes to the values of core operating limits without prior approval (i.e., license amendment) by the NRC, provided that an approved methodology was used for the parameter limit. Thus, cycle-specific changes to these limits will require a safety review in accordance with 10 CFR 50.59 instead of a prior submittal to the NRC.

Toward this end, a previous license amendment created a COLR for the South Texas Project. The initial creation of this document relocated limits for control rod insertion,  $F_{xy}$ , and axial flux difference. The proposed amendment expands on the document previously created, moving Moderator Temperature Coefficient, Heat Flux Hot Channel Factor, and Nuclear Enthalpy Rise Hot Channel Factor to the COLR. The COLR limits will continue to be calculated with NRC-approved methodologies, and the COLR itself will continue to be controlled as a unit-specific document.

Proposed Change

The proposed technical specification changes concern the relocation of several cycle-specific core operating limits for the South Texas Project from the Technical Specifications to the COLR. The impacted Technical Specifications will be amended to note that the limit has been relocated to the COLR, and the COLR paragraph in the Administrative Controls Section will be expanded to provide more information than is currently present. The COLR will still be required to be submitted to the NRC to allow for continued trending of the cycle-specific parameters.

The proposed changes will reference the COLR for specific parameters, and will ensure that cycle-specific parameters are maintained within the limits of the COLR. The cycle-specific parameter limits proposed for relocation to the COLR as part of this license amendment include:

- (a) 3.1.1.3 Moderator Temperature Coefficient
- (b) 3.1.1.5 Shutdown Rod Insertion Limits
- (c) 3.2.1 Axial Flux Difference
- (d) 3.2.2 Heat Flux Hot Channel Factor
- (e) 3.2.3 Nuclear Enthalpy Rise Hot Channel Factor

The proposed changes are consistent with the requirements of 10 CFR 50.36 and the staff's proposed policy for improving Technical Specifications, delineated in SECY-86-10, "Recommendations for Improving TS". The policy allows process variables such as core operational limits to be controlled by specifying them numerically in the Technical Specifications, or by specifying the method of calculating their numerical values if the staff finds that the correct limits will be followed in operation of the plant. The proposed revision references the NRC-approved methodologies.

The proposed changes to the Technical Specifications are also considered to be improvements, and are consistent with the NRC stated policy for improving Technical Specifications (52 FR 3788, February, 1987).

#### Safety Evaluation

The current Technical Specification method of controlling the above reactor physics parameters to assure conformance to 10 CFR 50.36 (which requires the lowest functional levels acceptable for continued safe operation) is to specify the values determined to be within the acceptance criteria using an NRC-approved calculation methodology. As previously discussed, the methodologies for calculating these parameters have been approved by the NRC, and are consistent with the applicable limits in the Final Safety Analysis Report (FSAR).

The removal of cycle-dependent variables from the Technical Specifications has no impact upon plant operation or safety. No safety related equipment, safety function, or plant operations will be altered as a result of this proposed change. Since applicable FSAR limits will be maintained, and the Technical Specifications will continue to require operation within the core operating limits calculated by the approved methodologies, this proposed change is administrative in nature, and does not affect the purpose of the Technical Specification involved. Appropriate actions to be taken if the limits are violated will remain in the Technical Specifications.

This proposed change will control the cycle-specific parameters within the acceptance criteria and assure conformance to 10 CFR 50.36 by using the approved methodology instead of specifying Technical Specification values.

The COLR will document the specific parameter limits resulting from NRC approved calculations, including mid-cycle or other revisions to parameter values. Therefore, the proposed change is in conformance with the requirements of 10 CFR 50.36.

Any changes to the COLR will be made in accordance with the requirements of 10 CFR 50.59, with a copy of the revised COLR sent to the NRC as required in Section 6.9.1.6 of the Technical Specifications. From cycle to cycle, the COLR will be revised such that the appropriate core operating limits for the applicable unit and cycle will apply. The Technical Specifications will not be changed.

#### Determination of Significant Hazards

Pursuant to 10 CFR 50.91, Houston Lighting & Power has determined that operation of the facility in accordance with the proposed license amendment request does not involve any significant hazards considerations as defined by NRC regulations in 10 CFR 50.92. The following discussion describes how the proposed amendment satisfies each of the three requirements of 10 CFR 50.92(c).

- 1) The proposed change does not involve a significant increase in the probability or consequence of an accident previously evaluated.

The removal of cycle-specific core operating limits from the South Texas Project Technical Specifications has no influence or impact on the probability or consequences of any accident previously evaluated. The core operation limits, although not in the Technical Specifications, will be followed in the operation of the South Texas Project Electric Generating Station. The proposed amendment requires exactly the same actions to be taken if a core operating limit is exceeded that the current Technical Specifications do. The cycle-specific limits in the COLR will continue to be controlled by the South Texas Project programs and procedures. Each accident analysis addressed in the South Texas Project FSAR will be examined with respect to changes in the cycle-dependent parameters, which are obtained from the use of NRC approved reload design methodologies, to ensure that the transient evaluation of new reloads are bounded by previously accepted analyses. This examination, which will be conducted per the requirements of 10 CFR 50.59, will ensure that future reloads will not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2) The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

As stated earlier, the removal of the cycle specific variables has no influence or impact, nor does it contribute in any way to the probability or consequences of an accident. No safety-related equipment, safety function, or plant operation will be altered as a result of this proposed

change. The cycle specific variables are calculated using the NRC approved methods, and submitted to the NRC to allow the staff to continue to trend the values of these limits. The Technical Specifications will continue to require operation within the core operating limits, and appropriate actions will be required if these limits are exceeded.

Therefore, the proposed amendment does not in any way create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3) The proposed amendment does not result in a significant reduction in the margin of safety.

The margin of safety is not affected by the removal of cycle specific core operating limits from the Technical Specifications. The margin of safety presently provided by current Technical Specifications remains unchanged. Appropriate measures exist to control the values of these cycle specific limits. The proposed amendment continues to require operation within the core limits as obtained from the NRC-approved reload design methodologies, and the actions to be taken if a limit is exceeded remains unchanged.

The development of the limits for future reloads will continue to conform to those methods described in NRC-approved documentation. In addition, each future reload will involve a 10 CFR 50.59 safety review to assure that operation of the unit within the cycle specific limits will not involve a significant reduction in the margin of safety. Therefore, the proposed changes are administrative in nature, and do not impact the operation of the South Texas Project in a manner that involves a reduction in the margin of safety.

### Conclusion

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists. This guidance (51 FR 7750) includes examples of the type of amendments that are considered not likely to involve significant hazards considerations. The change proposed is similar to the examples of administrative changes in 51 FR 7750. Additionally, the proposed change is consistent with the NRC policy for improving Technical Specifications (52 FR 3788), and the proposed change is consistent with 10 CFR 50.36 and 10 CFR 50.59.

In view of the preceding, the Houston Lighting & Power Company has determined that the proposed license amendment for the South Texas Project does not involve any significant hazards considerations.

Attachment 3

Marked-Up Technical Specification Pages