

Docket



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

August 18, 1992

Docket Nos. 50-498  
and 50-499

Mr. Donald P. Hall  
Group Vice-President, Nuclear  
Houston Lighting & Power Company  
P. O. Box 1700  
Houston, Texas 77251

Dear Mr. Hall:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 39 AND 30 TO FACILITY OPERATING  
LICENSE NOS. NPF-76 AND NPF-80 - SOUTH TEXAS PROJECT, UNITS 1 AND 2  
(TAC NOS. M82633 AND M82634)

The Commission has issued the enclosed Amendment Nos. 39 and 30 to Facility Operating License Nos. NPF-76 and NPF-80 for the South Texas Project, Units 1 and 2. The amendments consists of changes to the Technical Specifications (TSs) in response to your application dated August 30, 1991, as supplemented by letter dated January 24, 1992.

The amendments change the Appendix A Technical Specifications by making editorial changes to TS 3.2.1 which clarify the Action Statement, deleting the requirement of TS 4.2.1.1 to monitor indicated axial flux difference (AFD) each hour for 24 hours following restoration of the AFD monitor alarm, and clarifying the surveillance requirement of TS 4.2.4.2 regarding the use of symmetric movable incore detectors.

Other TS changes proposed in your August 30, 1992 submittal were issued as Amendment Nos. 35 and 26, for Units 1 and 2 respectively, on April 2, 1992.

On September 9, 1991, Amendment Nos. 27 and 17, for Units 1 and 2, respectively, were issued. Page 3/4 2-9 contained a typographical error. The corrected page is included as an overleaf page as part of this amendment.

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Mr. Donald P. Hall

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August 18, 1992

A copy of the Safety Evaluation supporting the amendments is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed by William D. Reckley  
for  
George F. Dick, Jr., Senior Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 39 to NPF-76
2. Amendment No. 30 to NPF-80
3. Safety Evaluation

cc w/enclosures:  
See next page

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Mr. Donald P. Hall

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August 18, 1992

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

HOUSTON LIGHTING & POWER COMPANY  
CITY PUBLIC SERVICE BOARD OF SAN ANTONIO  
CENTRAL POWER AND LIGHT COMPANY  
CITY OF AUSTIN, TEXAS  
DOCKET NO. 50-498  
SOUTH TEXAS PROJECT, UNIT 1  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 39  
License No. NPF-76

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Houston Lighting & Power Company\* (HL&P) acting on behalf of itself and for the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and City of Austin, Texas (COA) (the licensees) dated August 30, 1991, as supplemented by letter dated January 24, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

\* Houston Lighting & Power Company is authorized to act for the City Public Service Board of San Antonio, Central Power and Light Company and City of Austin, Texas and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

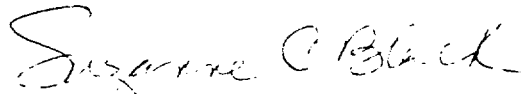
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-76 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 39, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and is to be implemented within 10 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne G. Black, Director  
Project Directorate IV-2  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 18, 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

HOUSTON LIGHTING & POWER COMPANY  
CITY PUBLIC SERVICE BOARD OF SAN ANTONIO  
CENTRAL POWER AND LIGHT COMPANY  
CITY OF AUSTIN, TEXAS  
DOCKET NO. 50-499  
SOUTH TEXAS PROJECT, UNIT 2  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30  
License No. NPF-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Houston Lighting & Power Company\* (HL&P) acting on behalf of itself and for the City Public Service Board of San Antonio (CPS), Central Power and Light Company (CPL), and City of Austin, Texas (COA) (the licensees) dated August 30, 1991, as supplemented by letter dated January 24, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

\* Houston Lighting & Power Company is authorized to act for the City Public Service Board of San Antonio, Central Power and Light Company and City of Austin, Texas and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-80 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 30, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and is to be implemented within 10 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne C. Black, Director  
Project Directorate IV-2  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 18, 1992

ATTACHMENT TO LICENSE AMENDMENT NOS. 39 AND 30

FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80

DOCKET NOS. 50-498 AND 50-499

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 2-1  
3/4 2-2  
3/4 2-10

INSERT

3/4 2-1  
3/4 2-2  
3/4 2-10



## 3/4.2 POWER DISTRIBUTION LIMITS

### 3/4.2.1 AXIAL FLUX DIFFERENCE

#### LIMITING CONDITION FOR OPERATION

3.2.1 The indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within the target band (flux difference units) about the target flux difference as specified in the CORE OPERATING LIMITS REPORT (COLR).

APPLICABILITY: MODE 1, above 15% of RATED THERMAL POWER.\*

#### ACTION:

- a. With the indicated AFD outside of the above required target band, and with THERMAL POWER:
  1. greater than or equal to 90% of RATED THERMAL POWER, within 15 minutes either:
    - a) Restore the indicated AFD to within the target band limits, or
    - b) Reduce THERMAL POWER to less than 90% of RATED THERMAL POWER.
  2. greater than or equal to 50%, but less than 90% of RATED THERMAL POWER:
    - a) POWER OPERATION may continue provided:
      - 1) The indicated AFD has not been outside of the target band for more than 1 hour cumulative penalty deviation during the previous 24 hours, and
      - 2) The indicated AFD is within the Acceptable Operation limits specified in the COLR.Otherwise, reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes and reduce the Power Range Neutron Flux\* - High Trip Setpoint to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.
    - b) Surveillance testing of the Power Range Neutron Flux Channels may be performed pursuant to Specification 4.3.1.1., provided that the indicated AFD is maintained within the Acceptable Operation Limits specified in the COLR. A total of 16 hours operation may be accumulated with the AFD outside of the Target Band during this testing without penalty deviation.

\*See Special Test Exceptions Specification 3.10.2.

## POWER DISTRIBUTION LIMITS

### LIMITING CONDITION FOR OPERATION

#### ACTION (Continued)

3. greater than 15%, but less than 50% of RATED THERMAL POWER:

THERMAL POWER shall not be increased above 50% of RATED THERMAL POWER unless the indicated AFD has not been outside of the target band for more than 1 hour cumulative penalty deviation during the previous 24 hours.

- b. THERMAL POWER shall not be increased above 90% of RATED THERMAL POWER unless the indicated AFD is within the target band, and the indicated AFD has not been outside of the target band for more than 1 hour cumulative penalty deviation during the previous 24 hours.

### SURVEILLANCE REQUIREMENTS

4.2.1.1 The indicated AFD shall be determined to be within its limits during POWER OPERATION above 15% of RATED THERMAL POWER by:

- a. Monitoring the indicated AFD for each OPERABLE excore channel at least once per 7 days when the AFD Monitor Alarm is OPERABLE.
- b. Monitoring and logging the indicated AFD for each OPERABLE excore channel at least once per hour for the first 24 hours, and at least once per 30 minutes thereafter, when the AFD Monitor Alarm is inoperable. The logged values of the indicated AFD shall be assumed to exist during the interval preceding each logging.

4.2.1.2 The indicated AFD shall be considered outside of its target band when two or more OPERABLE excore channels are indicating the AFD to be outside the target band. Penalty deviation outside of the above required target band shall be accumulated on a time basis of:

- a. One minute penalty deviation for each 1 minute of POWER OPERATION outside of the target band at THERMAL POWER levels equal to or above 50% of RATED THERMAL POWER, and
- b. One-half minute penalty deviation for each 1 minute of POWER OPERATION outside of the target band at THERMAL POWER levels between 15% and 50% of RATED THERMAL POWER.

4.2.1.3 The target flux difference of each OPERABLE excore channel shall be determined by measurement at least once per 92 Effective Full Power Days. The provisions of Specification 4.0.4 are not applicable.

4.2.1.4 The target flux difference shall be updated at least once per 31 Effective Full Power Days by either determining the target flux difference

## POWER DISTRIBUTION LIMITS

### 3/4.2.3 NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

#### LIMITING CONDITION FOR OPERATION

3.2.3  $F_{\Delta H}^N$  shall be less than  $F_{\Delta H}^{RTP}[1.0 + PF_{\Delta H}(1-P)]$

Where:  $F_{\Delta H}^{RTP}$  = the  $F_{\Delta H}^N$  Limit at RATED THERMAL POWER (RTP) specified in the Core Operating Limits Report (COLR)

$PF_{\Delta H}$  = the Power Factor Multiplier for  $F_{\Delta H}^N$  specified in the COLR.

$$P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$$

APPLICABILITY: MODE 1.

#### ACTION:

With  $F_{\Delta H}^N$  exceeding its limit:

- a. Within 2 hours reduce the THERMAL POWER to the level where the LIMITING CONDITION FOR OPERATION is satisfied.
- b. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the limit required by ACTION a., above; THERMAL POWER may then be increased, provided  $F_{\Delta H}^N$  is demonstrated through incore mapping to be within its limit.

#### SURVEILLANCE REQUIREMENTS

4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2  $F_{\Delta H}^N$  shall be demonstrated to be within its limit prior to operation above 75% RATED THERMAL POWER after each fuel loading and at least once per 31 EFPD thereafter by:

- a. Using the movable incore detectors to obtain a power distribution map at any THERMAL POWER greater than 5% RATED THERMAL POWER.
- b. Using the measured value of  $F_{\Delta H}^N$  which does not include an allowance for measurement uncertainty.

## POWER DISTRIBUTION LIMITS

### 3/4.2.4 QUADRANT POWER TILT RATIO

#### LIMITING CONDITION FOR OPERATION

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3.2.4 The QUADRANT POWER TILT RATIO shall not exceed 1.02.

APPLICABILITY: MODE 1, above 50% of RATED THERMAL POWER\*.

#### ACTION:

With the QUADRANT POWER TILT RATIO determined to exceed 1.02:

- a. Within 2 hours reduce THERMAL POWER at least 3% from RATED THERMAL POWER for each 1% of indicated QUADRANT POWER TILT RATIO in excess of 1 and similarly reduce the Power Range Neutron Flux-High Trip Setpoint within the next 4 hours.
- b. Within 24 hours and every 7 days thereafter, verify that  $F_q(Z)$  (by  $F_{xy}$  evaluation) and  $F_{\Delta H}^N$  are within their limits by performing Surveillance Requirements 4.2.2.2 and 4.2.3.2. THERMAL POWER and setpoint reductions shall then be in accordance with the ACTION statements of Specifications 3.2.2 and 3.2.3.

#### SURVEILLANCE REQUIREMENTS

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4.2.4.1 The QUADRANT POWER TILT RATIO shall be determined to be within the limit above 50% of RATED THERMAL POWER by:

- a. Calculating the ratio at least once per 7 days when the alarm is OPERABLE, and
- b. Calculating the ratio at least once per 12 hours during steady-state operation when the alarm is inoperable.

4.2.4.2 The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75% of RATED THERMAL POWER with one Power Range channel inoperable by using the movable incore detectors to confirm indicated QUADRANT POWER TILT RATIO at least once per 12 hours by either:

- a. Using the four pairs of symmetric thimble locations (Specification 3.3.3.2.a does not apply), or
- b. Using the movable incore detection system to monitor the QUADRANT POWER TILT RATIO subject to the requirements of Specification 3.3.3.2.

\*See Special Test Exceptions Specification 3.10.2.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 39 AND 30 TO

FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80

HOUSTON LIGHTING & POWER COMPANY

CITY PUBLIC SERVICE BOARD OF SAN ANTONIO

CENTRAL POWER AND LIGHT COMPANY

CITY OF AUSTIN, TEXAS

DOCKET NOS. 50-498 AND 50-499

SOUTH TEXAS PROJECT, UNITS 1 AND 2

1.0 INTRODUCTION

By application dated August 30, 1991, Houston Lighting & Power Company, et.al., (the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. NPF-76 and NPF-80) for the South Texas Project, Units 1 and 2. The proposed changes would clarify sections of the axial flux difference (AFD) and incore moveable detection system specifications. The licensee's January 24, 1992, letter requested a 10-day implementation period following the date of issuance of the license amendments.

The text of the AFD specification has been rewritten to provide clearer direction without changing the function of the specification. The Surveillance Requirements for this specification have also been changed. The current specification requires 24 hours of AFD monitor alarm monitoring when the AFD Monitor Alarm is returned to operable status. The proposed change would eliminate this requirement.

The second change clarifies the operability requirements for the Incore Moveable Detection System in the unique circumstance that only the four symmetric thimble pairs are used to verify the quadrant power tilt ratio (QPTR) above 75 percent power. The QPTR specifications make allowance for using these eight unique thimbles, but the flux mapping system operability specification requires 75 percent of the incore flux thimbles be available before the system can be used for QPTR measurement. The proposed change makes it clear that the eight thimbles to be used to monitor the QPTR can be used without accessing the rest of the incore thimbles.

## 2.0 EVALUATION

The proposed changes to the AFD specifications are much easier to read and understand. They should eliminate interpretation difficulties and do not change the function of the specification. The current specification required 24 hours of AFD monitor alarm monitoring when the AFD monitor alarm is returned to operable status. The monitor alarm is often lost due to a process computer shutdown and the monitor alarm is returned to operable status within a few minutes. Currently, a 24-hour log must then be kept. Since the return to operability of the monitor alarm includes verification of it and updating of any penalty time accumulated, the 24 hour monitoring is redundant and unnecessary.

The QPTR must be determined to be within the limit at least once every 7 days when the alarm is operable and at least once per 12 hours when the alarm is inoperable. In addition, when one Power Range channel is inoperable the QPTR must be determined at least once every 12 hours. In the latter case, it may be determined using the movable incore detection system subject to the requirements of Specification 3.3.3.2 or it may be determined using the four pairs of symmetric thimbles. The present specification does not state whether the requirements of Specification 3.3.3.2, namely that 75 percent of the thimble locations are accessible must be followed if the four pairs of symmetric thimbles are used. The proposed change will state that Specification 3.3.3.2 does not apply when the four pairs of symmetric locations option is being used. The use of the four pairs of symmetric thimble locations as allowed by Specification 4.2.4.2.a and discussed in the associated Bases is sufficient to verify equipment performance and is an alternative to the use of the full incore flux map method of Specification 4.2.4.2.b. The added note which states that Specification 3.3.3.2, requiring 75 percent of the thimbles be available, is not applicable clarifies the existing requirements. Therefore, the proposed change is acceptable.

## 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendment. The State official had no comments.

## 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 51926).

Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: M. Chatterton (SRXB)

Date: August 18, 1992