April __ 1995

Mr. William T. Cottle
Group Vice-President, Nuclear
Houston Lighting & Power Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - AMENDMENT NOS. 73 AND 62 TO FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80 (TAC NOS. M90868 AND M90869)

Dear Mr. Cottle:

The Commission has issued the enclosed Amendment Nos. 73 and 62 to Facility Operating License Nos. NPF-76 and NPF-80 for the South Texas Project, Units 1 and 2 (STP). The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated November 8, 1994, as supplemented by letter dated March 14, 1995.

The amendments require only one of the two battery chargers associated with each Class 1E 125-VDC Channel I and Channel IV to be operable.

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

Sincerely,
ORIGINAL SIGNED BY: L. Kokajko for
Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures: 1. Amendment No. 73 to NPF-76
2. Amendment No. 62 to NPF-80
3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Mr. William T. Cottle
Houston Lighting & Power Company

South Texas, Units 1 & 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 73
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 November 8, 1994, as supplemented by letter dated March 14, 1995, 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. 73, 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 to be implemented within 31 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 17, 1995

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 62
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 November 8, 1994, as supplemented by letter dated March 14, 1995, 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. 62, 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 to be implemented within 31 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 17, 1995

ATTACHMENT TO LICENSE AMENDMENT NOS. 73 AND 62

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

DOCKET NOS. 50-498 AND 50-499

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by Amendment number and contains marginal lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE	INSERT
3/4 8-10	3/4 8-10

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the Onsite Class 1E Distribution System, and

b. Two standby diesel generators each with a separate fuel tank containing a minimum volume of 60,500 gallons of fuel.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the spent fuel pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 2.0 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Specification 4.8.1.1.2a.3)), and 4.8.1.1.3.

ELECTRICAL POWER SYSTEMS

3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical sources shall be OPERABLE:

a. Channel I 125-volt Battery Bank E1A11 (Unit 1), E2A11 (Unit 2) and one of its two associated chargers,

b. Channel II 125-volt Battery Bank E1D11 (Unit 1), E2D11 (Unit 2) and one of its two associated full capacity chargers,

c. Channel III 125-volt Battery Bank E1B11 (Unit 1), E2B11 (Unit 2) and one of its two associated full capacity chargers, and

d. Channel IV 125-volt Battery Bank E1C11 (Unit 1), E2C11 (Unit 2) and one of its two associated chargers.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With one of the required battery banks inoperable, restore the inoperable battery bank to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With no battery chargers for a channel OPERABLE, restore at least one battery charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The parameters in Table 4.8-2 meet the Category A limits, and

2) The total battery terminal voltage is greater than or equal to 129 volts on float charge.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 73 AND 62 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 November 8, 1994, Houston Lighting & Power Company, et al., (the licensee) requested changes to the Technical Specifications (TSs) (Appendix A to Facility Operating License Nos. NPF-76 and NPF-80) for the South Texas Project, Units 1 and 2 (STP). The proposed changes would require only one of the two battery chargers associated with each Class 1E 125-VDC Channel I and Channel IV to be operable, in TS 3/4.8.2.1, D.C. Sources, Operating, and in TS 3/4.8.2.2, D.C. Sources, Shutdown.

Subsequently, by letter dated March 14, 1995, the licensee withdrew that portion of the amendment request regarding TS 3/4.8.2.2, because the required wording was incorporated into this TS by Amendment Nos. 71 and 60, issued by the NRC on February 14, 1995, in response to another amendment request. The March 14, 1995, letter also provided clarifying information and did not change the initial no significant hazards consideration determination.

2.0 EVALUATION

The proposed changes would require only one of the two battery chargers associated with each Class 1E 125-VDC Channel I and Channel IV to be operable. The current TS 3.8.2.1 requires two battery chargers associated with Channel I and Channel IV to be operable during power operation. The proposed change will make TS 3.8.2 identical for all four Class 1E 125-VDC channels.

The Class 1E 125-VDC system at STP consists of four independent, physically separated channels (Channels I, II, III, IV), each served by two battery chargers and one battery. Each battery supplies 125-VDC power required for plant protection and controls when power from normal AC power sources fails. Each battery also supplies power to the associated inverters, which convert DC power to AC power for the vital instrumentation and control systems. Each battery has sufficient capacity to supply its loads for 2 hours. Each battery charger has sufficient capacity to restore the battery from its design minimum charge to its fully charged state while supplying normal and post-accident steady-state loads. The current limit setting of each battery charger is adjustable from 110 to 125 percent of the nominal rating and is presently set at 110 percent of the nominal setting, or 330 amperes. During normal operation, the 125-VDC load is supplied from the battery chargers with the batteries floating on the system. Upon loss of offsite power, the entire load is powered from the batteries until the power is restored by the diesel generators (DGs).

Channels I and IV have a larger DC load and use a larger battery than Channels II and III. This load difference requires only one of the two operable battery chargers associated with Channels II or III, but requires two operable battery chargers associated with Channels I and IV. The licensee is proposing to require only one instead of two battery chargers associated with Channels I and IV to be operable. This proposal is based on the recent evaluation of the DC load requirements for battery chargers for Channels I and IV. The licensee states that requiring two battery chargers for Channels I and IV can potentially result in unnecessary and unplanned unit shutdowns as a result of the loss of a single battery charger.

The reason for the load difference between Channels I and IV and Channels II and III is a note in Updated Final Safety Analysis Report (UFSAR) Table 8.3-6, which imposes 393 amperes of load on Channels I and IV. This value represents the maximum possible load that the batteries are capable of supporting while concurrently maintaining the required 2-hour duty cycle; however, this maximum possible load has been interpreted as the battery charger output current requirements. The licensee contends that this is not the correct battery charger load since this maximum load includes the inverters which are not powered from the battery or the battery charger if AC power is available. When normal AC power is lost, power to the DC loads including the inverters is supplied by the batteries until the DG starts and loads. The motor control centers supplying the battery chargers and the inverters will then be sequenced onto the bus being supplied by the DG. Thus, the inverters do not become a load on the chargers unless normal AC supplies to the inverters or the rectifier portion of the inverters fail. Therefore, one battery charger is sufficient to supply the necessary loads for Channel I or Channel IV.

The licensee has performed an analysis that identifies all of the actual Class 1E 125-VDC loads for Channels I and IV for which the battery chargers may have to supply power, assuming the battery is fully charged. This analysis is conservative because it assumes the simultaneous failure of two inverters rated for 7.5 kilovolt amperes (kVA) and 25 kVA connected to Channels I and

IV. For this analysis, Channel I values (worst case) were used. The total normal DC loads with batteries fully charged and the charger on normal float voltage is calculated to be 64 amperes. The current required by two inverters with batteries fully charged and the charger on normal float voltage is 216 amperes. These current requirements are based on 100 percent loading of both inverters. Current conditions include minimum margins for future load growth of 21 percent for the 25-kVA inverter, 25 percent for the 7.5-kVA inverter, and 50 percent for the dc loads.

The total current required by the two inverters with batteries fully charged, the charger on normal float voltage, and the normal DC bus loads is 280 amperes. Thus, a single battery charger using 110 percent (330 amperes) current limit can maintain the Channel I or the Channel IV bus loads operable.

Based on the above information, the staff finds that the analysis submitted by the licensee is conservative because the inverters do not become a load on the chargers unless an inverter failure occurs and that even with the loss of both inverters, a single battery charger is able to maintain the operability of Channel I or Channel IV at the design loading. Therefore, the staff finds the proposed revision to TS 3.8.2.1, to require only one battery charger to be operable for Channels I and IV instead of two, to be acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 63123). 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 amendments.

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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: O. Chopra

Date: April 17, 1995