

August 3, 1994

Docket Nos. 50-498
and 50-499

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

Dear Mr. Cottle:

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - AMENDMENT NOS. 63
AND 52 TO FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80
(TAC NOS. M89050 AND M89051)

The Commission has issued the enclosed Amendment Nos. 63 and 52 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 March 16, 1994.

The amendments modify Figure 3.4-4, "Nominal Maximum Allowable PORV Setpoint for the Cold Overpressure System," for the cold overpressure mitigation system with a revised setpoint curve.

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 Thomas W. Alexion for

Lawrence E. Kokajko, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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PDR

Enclosures:

- 1. Amendment No.63 to NPF-76
- 2. Amendment No.52 to NPF-80
- 3. Safety Evaluation

cc w/enclosures:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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and 50-499

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Group Vice-President, Nuclear
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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,

A handwritten signature in cursive script that reads "Thomas W. Allison".

for Lawrence E. Kokajko, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 63 to NPF-76
2. Amendment No. 52 to NPF-80
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. William T. Cottle

- 2 -

cc w/enclosures:

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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. 63
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 March 16, 1994, 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.

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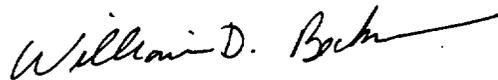
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-76 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 63, 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



William D. Beckner, Director
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 3, 1994



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. 52
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 March 16, 1994, 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.

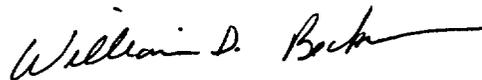
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-80 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 52, 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



William D. Beckner, Director
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 3, 1994

ATTACHMENT TO LICENSE AMENDMENT NOS. 63 AND 52
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 a marginal line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

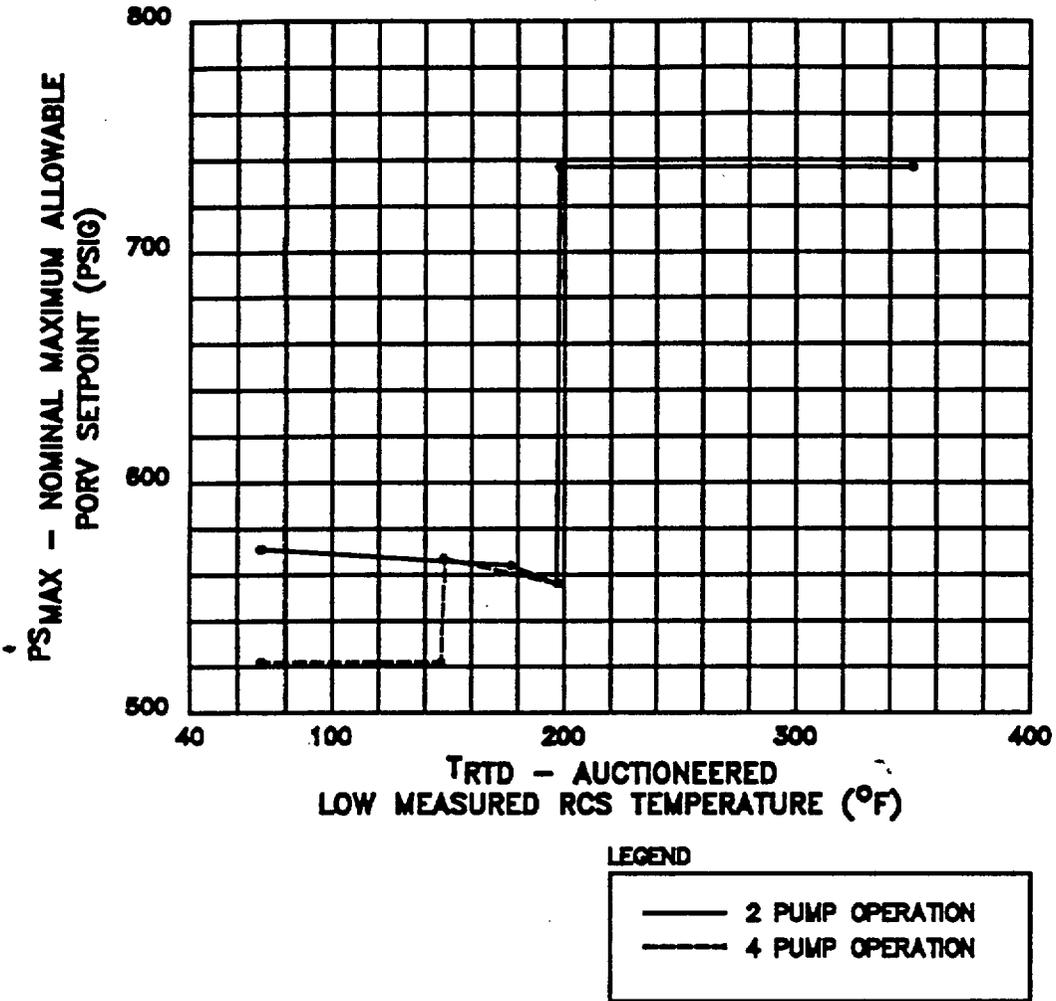
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FIGURE 3.4-4

NOMINAL MAXIMUM ALLOWABLE PORV SETPOINT FOR THE COLD OVERPRESSURE SYSTEM

REACTOR COOLANT SYSTEM

OVERPRESSURE PROTECTION SYSTEMS

SURVEILLANCE REQUIREMENTS

4.4.9.3.1 Each PORV shall be demonstrated OPERABLE by:

- a. Performance of an ANALOG CHANNEL OPERATIONAL TEST on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required OPERABLE and at least once per 31 days thereafter when the PORV is required OPERABLE;
- b. Performance of a CHANNEL CALIBRATION on the PORV actuation channel at least once per 18 months; and
- c. Verifying the PORV block valve is open at least once per 72 hours when the PORV is being used for overpressure protection.

4.4.9.3.2 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vent(s) is being used for overpressure protection.

4.4.9.3.3 The positive displacement pump shall be demonstrated inoperable** at least once per 31 days, except when the reactor vessel head is removed or when both centrifugal charging pumps are inoperable and secured, by verifying that the motor circuit breakers are secured in the open position.***

*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

**The provisions of 3.0.4 and 4.0.4 are not applicable for entry into MODE 4 from MODE 3 for the positive displacement pump declared inoperable pursuant to Specification 4.4.9.3.3 provided that the positive displacement pump is declared INOPERABLE within 4 hours after entry into MODE 4 from MODE 3 or prior to the temperature of one or more of the RCS cold legs decreasing below 325°F, whichever comes first.

***The positive displacement pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve secured in the closed position.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 63 AND 52 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 March 16, 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 modify Figure 3.4-4, "Nominal Maximum Allowable PORV Setpoint for the Cold Overpressure System," for the cold overpressure mitigation system with a revised setpoint curve.

2.0 BACKGROUND

The reactor coolant system (RCS) pressure-temperature (P/T) limits during plant heatup and cooldown for South Texas Project Electric Generating Station, Units 1 and 2 are specified in TS Figures 3.4-2 and 3.4-3, and are applicable up to 32 effective full power years (EFPY). The pressurizer power operated relief valves (PORVs) setpoints for overpressure mitigation are specified in TS Figure 3.4-4.

By letter dated March 16, 1994, Houston Lighting and Power Company submitted an application to modify TS Figure 3.4-4 (for PORV setpoints). The proposed changes incorporated corrections for a nonconservative item in the original setpoint study. The methodology used in developing the modified TS Figure 3.4-4 is provided in WCAP-13782, Revision 2, "Setpoint Program Determination for the Westinghouse Cold Overpressure Mitigating System in the Houston Lighting & Power, South Texas Units 1 and 2," dated February 1994. The new PORV setpoints provide protection against a potential overpressurization during low temperature plant conditions with either two or four reactor coolant pumps (RCPs) in operation.

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3.0 EVALUATION

In the current TSs, when the reactor is operated at Modes 4, 5 and 6 and when the head is on the reactor vessel, low temperature overpressure protection (LTOP) is provided by either of the pressurizer PORVs with lift settings specified in TS Figure 3.4-4. These settings were developed to avoid RCS pressures from exceeding either the reactor vessel Appendix G limit, or 800 psig at the PORVs, whichever is the most limiting. The 800 psig was included to limit the loads on the PORV discharge piping and supports when the PORVs cycle (open and close) during a subcooled water discharge, which could occur during design basis cold overpressure events. Either PORV has adequate relieving capacity to protect the RCS from overpressurization when the transient is limited to either (1) the start of an idle RCP with the secondary water temperature of the steam generator less than or equal to 50°F above the RCS cold leg temperature; or, (2) the mass injection flow rate due to the startup of a single high head safety injection (HHSI) pump plus 100 gpm net charging flow, while the RCS is in a water solid condition, and RCS temperature is between 350°F and 200°F. For RCS temperature less than 200°F, the mass addition event consists of operating a centrifugal charging pump with complete termination of letdown flow.

By letter dated March 16, 1994, the licensee proposed a change in the PORV settings. This change was proposed by the licensee as a corrective action in response to a nonconservative item that was discovered in late 1992. This nonconservative item is that the pressure difference between the wide range pressure sensor and the reactor vessel location where the Appendix G limit is applicable, was not taken into account in the calculation of limits. This pressure difference effectively results in the pressure in the reactor vessel being greater than that seen by the wide range pressure transmitters, and therefore potentially resulting in violation of the Appendix G limit during a transient. Shortly following the discovery of this, the licensee implemented a temporary correction by lowering the PORV setpoints by 35 psi with only two RCPs in operation during low temperature operating conditions. The licensee has recently performed reanalysis to determine the correct PORV setpoints for either two or four RCPs in operation. The methodology used for developing the new setpoints is documented in WCAP-13782, Rev. 2. Heatup and cooldown curves for isothermal conditions and without instrument errors, applicable to 32 EFPY, were utilized for the Appendix G limit. The calculation associated with the Appendix G limit is documented in Appendix A of WCAP-13782, Rev. 2. The licensee considers that the use of isothermal curve for developing PORV setpoints is appropriate since the majority of the past overpressure transients were occurring during isothermal conditions. The staff agrees with this assessment in developing the new PORV setpoints. Both mass input and heat input overpressure transients are considered, which are consistent with the assumptions made in the previous setpoint study.

The licensee's proposed changes in TS Figure 3.4-4 reflect the changes discussed above. The staff has reviewed the licensee's submittal and finds that the changes are based on applicable regulatory guidance in Standard Review Plan 5.2.2 (Revision 2), are reasonably conservative, and are acceptable.

4.0 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.

5.0 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 17601). 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.

6.0 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: C. Liang, NRR

Date: August 3, 1994