

February 25, 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

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Dear Mr. Hall:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 33 AND 24 TO FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80 - SOUTH TEXAS PROJECT, UNITS 1 AND 2 (TAC NOS. M81552 AND M81553)

The Commission has issued the enclosed Amendment Nos. 33 and 24 to Facility Operating License Nos. NPF-76 and NPF-80 for the South Texas Project, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated August 26, 1991 as supplemented by letter dated January 24, 1992.

The amendments change the Appendix A Technical Specifications by decreasing the required minimum volume for the Auxiliary Feedwater Storage Tank (AFST) from 518,000 gallons to 485,000 gallons.

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

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. 33 to NPF-76
2. Amendment No. 24 to NPF-80
3. Safety Evaluation

cc w/enclosures:
See next page

OFC	: PDIV-2/LA	: PDIV-2	: PDIV-2/PM	: OGC	: PDIV-2/D
NAME	: EPeyton	: SFlanders	: GDick:nb	: SBlack	
DATE	: 2/14/92	: 2/05/92	: 2/05/92	: 2/20/92	: 2/24/92

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P PDR

ENCLOSURE COPY

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February 25, 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. 33
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 26, 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. 33, 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 to be implemented within 90 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: February 25, 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. 24
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 26, 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.

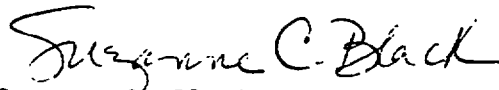
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-80 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 24, 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 to be implemented within 90 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: February 25, 1992

ATTACHMENT TO LICENSE AMENDMENT NOS. 33 AND 24
FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80
DOCKET NOS. 50-498 AND 50-499

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 7-6
B 3/4 7-2

INSERT

3/4 7-6
B 3/4 7-2

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 3) Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position; and
 - 4) Verifying that each automatic valve in the flow path is in the correct position whenever the Auxiliary Feedwater System is placed in automatic control or when above 10% RATED THERMAL POWER.
- b. At least once per 18 months during shutdown by:
- 1) Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an Auxiliary Feedwater Actuation test signal, and
 - 2) Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of an Auxiliary Feedwater Actuation test signal.
 - 3) Verifying that each auxiliary feedwater flow regulating valve limits the flow to each steam generator between 550 gpm and 675 gpm.

4.7.1.2.2 An auxiliary feedwater flow path to each steam generator shall be demonstrated OPERABLE following each COLD SHUTDOWN of greater than 30 days prior to entering MODE 2 by verifying normal flow to each steam generator.

PLANT SYSTEMS

AUXILIARY FEEDWATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The auxiliary feedwater storage tank (AFST) shall be OPERABLE with a contained water volume of at least 485,000 gallons of water.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the AFST inoperable, within 4 hours restore the AFST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The AFST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits.

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam line Code safety valves ensures that the Secondary System pressure will be limited to within 110% (1413.5 psig) of its design pressure of 1285 psig during the most severe anticipated system operational transient. The maximum relieving capacity is associated with a Turbine trip from 100% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink (i.e., no steam bypass to the condenser).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Code, 1971 Edition. The total relieving capacity for all valves on all of the steam lines is 20.65×10^6 lbs/h which is 122% of the total secondary steam flow of 16.94×10^6 lbs/h at 100% RATED THERMAL POWER. A minimum of two OPERABLE safety valves per steam generator ensures that sufficient relieving capacity is available for the allowable THERMAL POWER restriction in Table 3.7-1.

STARTUP and/or POWER OPERATION is allowable with safety valves inoperable within the limitations of the ACTION requirements on the basis of the reduction in Secondary Coolant System steam flow and THERMAL POWER required by the reduced Reactor trip settings of the Power Range Neutron Flux channels. The Reactor Trip Setpoint reductions are derived on the following bases:

$$SP = \frac{(X) - (Y)(V)}{X} \times (109)$$

Where:

- POWER, SP = Reduced Reactor Trip Setpoint in percent of RATED THERMAL
- V = Maximum number of inoperable safety valves per steam line,
- 109 = Power Range Neutron Flux-High Trip Setpoint for four loop operation,
- X = Total relieving capacity of all safety valves per steam line in lbs/hour, and
- Y = Maximum relieving capacity of any one safety valve in lbs/hour

PLANT SYSTEMS

BASES

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

Each auxiliary feedwater pump is capable of delivering a total feedwater flow of 540 gpm at a pressure of 1324 psig to the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation. The AFW pumps are tested using the test line back to the AFST and the AFW isolation valves closed to prevent injection of cold water into the steam generators. The STPEGS isolation valves are active valves required to open on an AFW actuation signal. Specification 4.7.1.2.1 requires these valves to be verified in the correct position.

3/4.7.1.3 AUXILIARY FEEDWATER STORAGE TANK (AFST)

The OPERABILITY of the auxiliary feedwater storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 4 hours with steam discharge to the atmosphere concurrent with total loss-of-offsite power, main feedwater line break and failure of the AFW flow control valve followed by a cooldown to 350°F at 25°F per hour. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm primary-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blow down in the event of a steam line rupture. This restriction is required to: (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements are consistent with the assumptions used in the safety analyses.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 33 AND 24 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 26, 1991, Houston Lighting & Power Company, et.al., (the licensee) requested changes to the Technical Specifications (TS) (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 amend Section 3.7.1.3 to allow the minimum required volume for the Auxiliary Feedwater Storage Tank (AFST) to decrease from 518,000 gallons to 485,000. In its letter of January 24, 1992, the licensee requested a 90-day implementation period following the date of issuance of the license amendment.

2.0 EVALUATION

The auxiliary feedwater system at South Texas Project, Units 1 and 2 (STP) supplies feedwater from a seismic Category I water source to the steam generators in emergency conditions and during some normal operating conditions. The normal water source for auxiliary feedwater (AFW) at STP is a seismic Category I storage tank with a capacity of 525,000 gallons. The present AFST volume required by TS is 518,000 gallons.

The guidelines in Standard Review Plan (SRP), Section 10.4.9, state that the AFW system should have a seismic Category I water source and be capable of operating over a time period sufficient either to hold the plant at hot standby for several hours or to cool down the primary system at a controlled rate to temperature and pressure levels at which the residual heat removal system (RHR) can operate.

The TS required volume of 518,000 gallons was chosen based on analyses of accident conditions that require AFW. The analyses included single failure of an active component of the AFW system. The worst case accident was determined to be loss of "A" train AC power, which resulted in the loss of two steam

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generator power operated relief valves (PORVs). The AFST volume included the water needed for 4 hours at hot standby with a 10-hour natural circulation cooldown. This was followed by an 8-hour soak period to prevent formation of a steam bubble in the reactor vessel head before switching to RHR. The AFST sizing also included losses due to level instrument error, water delivered to a faulted steam generator, water lost through the turbine lube oil cooler, a margin against vortex formation, and other small system water losses. The Safety Evaluation Report for STP (NUREG-0781, Supplement No. 3, Section 5.4.7) states that there is sufficient circulation flow in the reactor head so that an 8-hour soak time is not required to prevent a steam bubble in the reactor vessel head. This effectively changes the worst case scenario for AFW water needs. The licensee re-evaluated the water volume calculations and concluded that the worst case single failure for the AFW system is a main feedwater line break (MFLB) with a failure of the AFW flow controller. The flow control valve was assumed to fail in the open position and maximize the water added to the steam generator with the MFLB. This scenario would require up to 471,000 gallons of water from the AFST to cool the plant to RHR cut-in conditions.

To reduce the required volume in the AFST, the licensee did not perform a new analysis but reviewed the previous analysis. The proposed TS required volume of 485,000 gallons in the AFST has sufficient margin to provide water to the steam generators in the worst postulated accident condition. This volume of water allows for postulated losses due to instrument error, unusable volume in the tank, seal leakage, and volume required in the tank to prevent vortex formation. The licensee meets the criteria for the AFW system as specified in SRP 10.4.9. Therefore, the staff finds that the change in required volume of the AFST from 518,000 gallons to 485,000 gallons 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. 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 51925). 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: A. Dummer

Date: February 25, 1992