

August 8, 1997

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

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS - SOUTH TEXAS  
PROJECT, UNITS 1 AND 2 (TAC NOS. M99245 AND M99246)

Dear Mr. Cottle:

The Commission has requested the Office of the Federal Register to publish the enclosed "Notice of Consideration of Issuance of Amendments to Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing." This notice relates to your application for amendments dated August 6, 1997, which would revise Technical Specification Table 2.2-1 and 3/4.2.5 to allow the reactor coolant system total flow to be determined using cold leg elbow tap differential pressure measurements. Your previous application dated July 16, 1997, on the same subject was previously noticed in the Federal Register on July 30, 1997 (62 FR 40850). However, your August 6, 1997, submittal supersedes the July 16, 1997, submittal because there was proprietary information submitted which had not been adequately identified. The July 16, 1997, submittal was retrieved and discarded from all NRC files by the NRC staff.

If you have any questions regarding the enclosed notice, please call me at 301-415-1326.

Sincerely,  
Orig. signed by  
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

Enclosure: Notice

cc w/encl: See next page

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TAlexion CHawes TGwynn, RIV

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

August 8, 1997

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Sincerely,

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

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

Enclosure: Notice

cc w/encl: See next page

Mr. William T. Cottle  
Houston Lighting & Power Company

South Texas, Units 1 & 2

cc:

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Judge, Matagorda County  
Matagorda County Courthouse  
1700 Seventh Street  
Bay City, TX 77414

UNITED STATES NUCLEAR REGULATORY COMMISSION

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

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO  
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License Nos. NPF-76 and NPF-80 issued to Houston Lighting & Power Company, et. al., (the licensee) for operation of the South Texas Project, Units 1 and 2, located in Matagorda County, Texas.

The proposed amendment would revise Technical Specification (TS) Table 2.2-1 and 3/4.2.5 to allow the reactor coolant system (RCS) total flow to be determined using cold leg elbow tap differential pressure measurements. The proposed amendment was initially submitted via letter dated July 16, 1997. The July 16, 1997, submittal contained proprietary information that had not been properly identified. The July 16, 1997, submittal was retrieved and discarded from all NRC files by the NRC staff. Notification of the July 16, 1997, submittal was made in the *Federal Register* on July 30, 1997,

(62 FR 40850). This notice supersedes the one previously published on July 30, 1997.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

Pursuant to 10[ ]CFR[ ]50.92 each application for amendment to an operating license must be reviewed to determine if the proposed change involves a Significant Hazards Consideration. The amendment, as defined below, describing the Technical Specification change associated with the change has been reviewed and determined to not involve Significant Hazards Considerations. The basis for this determination follows.

**Proposed Change:** The current Technical Specification Table 2.2-1 (page 2-4) "Reactor Trip System Instrumentation Trip Setpoints," provides the Trip Setpoint and Allowable Value for the RCS Flow-Low trip. The Allowable Value will be changed to reflect the increased uncertainty associated with the correlation of the elbow taps to a previous baseline calorimetric. In addition, Technical Specification 3.2.5 (page 3/4.2-11), "Power Distribution Limits, DNB Parameters," will be changed to allow the RCS total flow to be measured by the elbow tap delta p method. These changes will include the modification of surveillance requirement 4.2.5.3, which currently requires performance of a precision heat balance every 18 months, to allow use of the elbow tap

delta p method for RCS flow measurement. Appropriate Technical Specification Bases sections will also be revised to reflect use of the elbow tap delta p method for flow measurement and to provide clarification. The revised Technical Specifications are in Appendix C.

**Background:** The 18-month total RCS flow surveillance is typically satisfied by a secondary power calorimetric-based RCS flow measurement. In recent cycles, South Texas Project has experienced apparent decreases in flow rates which have been attributed to variations in hot leg streaming effects. These effects directly impact the hot leg temperatures used in the precision calorimetric, resulting in the calculation of low RCS flow rates. The apparent flow reduction has become more pronounced in fuel cycles which have implemented aggressive low leakage loading patterns. Evidence that the flow reduction was apparent, but not actual, was provided by elbow tap measurements. The results of this evaluation, including a detailed description of the hot leg streaming phenomenon, are documented in Westinghouse report SAE/FSE-TGX-0152, "RCS Flow Verification Using Elbow Taps."

South Texas Project intends to begin using an alternate method of measuring RCS flow using the elbow tap delta p measurements. For this alternate method, the RCS elbow tap measurements are correlated to precision calorimetric measurements performed during earlier cycles which decreased the effects of hot leg streaming.

The purpose of this evaluation is to assess the impact of using the elbow tap delta p measurements as an alternate method for performing the 18-month RCS flow surveillance on the licensing basis and demonstrate that it will not adversely affect the subsequent safe operation of the plant. This evaluation supports the conclusion that implementation of the elbow tap delta p measurement as an alternate method of determining RCS total flow rate does not represent a significant hazards consideration as defined in 10[ ]CFR[ ]50.92.

**Evaluation:** Use of the elbow tap delta p method to determine RCS total flow requires that the delta p measurements for the present cycle be correlated to the precision calorimetric flow measurement which was performed during the baseline cycle(s). A calculation has been performed to determine the uncertainty in the RCS total flow using this method. This calculation includes the uncertainty associated with the RCS flow baseline calorimetric measurement, as well as uncertainties associated with delta p transmitters and indication via QDPS [qualified display processing system] or the plant process computer. The uncertainty calculation performed for this method of flow measurement is consistent with the methodology recommended by the Nuclear Regulatory Commission (NUREG/CR-3659, PNL-4973, 2/85). The only significant difference is the assumption of correlation to a previously performed RCS flow calorimetric. However, this has been accounted for by the addition of instrument uncertainties previously considered to be zeroed out by the

assumption of normalization to a calorimetric performed each cycle. Based on these calculations, the uncertainty on the RCS flow measurement using the elbow tap method is 2.6% flow which results in a minimum RCS total flow of 391,500 gpm and must be measured via indication with QDPS or the plant process computer at approximately 100% power.

The specific calculations performed were for Precision RCS Flow Calorimetrics for the specified baseline cycles, Indicated RCS Flow (either QDPS or the plant process computer), and the Reactor Coolant Flow - Low reactor trip. The calculations for Indicated RCS Flow and Reactor Coolant Flow - Low reactor trip reflect correlation of the elbow taps to baseline precision RCS Flow Calorimetrics. As discussed above, additional instrument uncertainties were included for this correlation.

The uncertainty associated with the RCS Flow - Low trip increased slightly. It was determined that due to the availability of margin in the uncertainty calculation, no change was necessary to either the Trip Setpoint (91.8% flow) or to the current Safety Analysis Limit (87% flow) to accommodate this increase. The Allowable Value is to be modified to allow for the increased instrument uncertainties associated with the delta p to flow correlation.

Since the flow uncertainty did not increase over the currently analyzed value, no additional evaluations of the reactor core safety limits must be performed. In addition, it was determined that the current minimum Measured Flow (MMF) assumed in the safety analyses (389,200 gpm) bounds the required MMF calculated for the elbow tap method (391,500 gpm).

Based on these evaluations, the proposed change would not invalidate the conclusions presented in the UFSAR [Updated Final Safety Analysis Report].

1. Does the proposed modification involve a significant increase in the probability or consequences of an accident previously evaluated?

Sufficient margin exists to account for all reasonable instrument uncertainties; therefore, no changes to installed equipment or hardware in the plant are required, thus the probability of an accident occurring remains unchanged.

The initial conditions for all accident scenarios modeled are the same and the conditions at the time of trip, as modeled in the various safety analyses, are the same. Therefore, the consequences of an accident will be the same as those previously analyzed.

2. Does the proposed modification create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change revises the method for RCS flow measurement, and therefore does not introduce any new accident indicators or failure mechanisms.

No new accident scenarios have been identified. Operation of the plant will be consistent with that previously modeled, i.e., the time of reactor trip in the various safety analyses is the same, thus plant response will be the same and will not introduce any different accident scenarios that have not been evaluated.

3. Does the proposed modification involve a significant reduction in a margin of safety [?]

There are no changes to the Safety Analysis assumptions. Therefore, the margin of safety will remain the same.

The proposed change does not impact the results from any accidents analyzed in the safety analysis.

**Conclusion:** Based on the preceding information, it has been determined that this proposed change to allow an alternate RCS total flow measurement based on elbow tap delta p measurements does not involve a Significant Hazards Consideration as defined by 10 CFR 50.92(c).

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves

no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room 6D22, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

By September 15, 1997, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714

which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Wharton County Junior College, J. M. Hodges Learning Center, 911 Boling Highway, Wharton, TX. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to 15 days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than 15 days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses. If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to Jack R. Newman, Esq., Morgan, Lewis & Bockius, 1800 M Street, N.W., Washington, DC 20036-5869, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated August 6, 1997, which is available for public inspection at

the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Wharton County Junior College, J. M. Hodges Learning Center, 911 Boling Highway, Wharton, TX.

Dated at Rockville, Maryland, this 8th day of August 1997.

FOR THE NUCLEAR REGULATORY COMMISSION

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

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