

The Light company

Houston Lighting & Power

South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

February 15, 1995
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File No.: G09.06
10CFR50.90
10CFR50.92

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Proposed Amendment to Technical Specification 3.6.2.3

Houston Lighting & Power proposes to amend Facility Operating Licenses NPF-76 and NPF-80 for South Texas Project Units 1 and 2 by incorporating the attached proposed amendment to Technical Specification 3.6.2.3, Containment Cooling System. The purpose of the proposed amendment is to change the value of the cooling water flow rate to the fan coolers verified by Surveillance Requirement 4.6.2.3.a.2.

Houston Lighting & Power has reviewed the proposed amendment pursuant to 10CFR50.92 and determined that it does not involve a significant hazards consideration. In addition, Houston Lighting & Power has determined that the proposed amendment satisfies the criteria of 10CFR51.22(c)(9) for categorical exclusion from the requirement for an environmental assessment. The South Texas Project Nuclear Safety Review Board has reviewed and approved the proposed change.

The required affidavit, along with a Safety Evaluation and No Significant Hazards Consideration Determination associated with the proposed change, and a marked-up of the affected pages of the Technical Specification and Bases are included as an attachment to the letter.

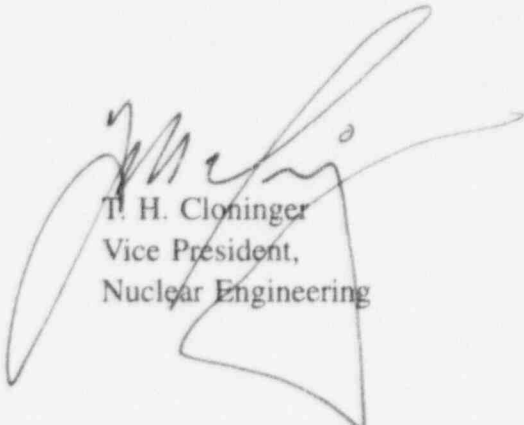
In accordance with 10CFR50.91(b), Houston Lighting & Power is providing the State of Texas with a copy of this proposed amendment.

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Project Manager on Behalf of the Participants in the South Texas Project

ADD

If you should have any questions concerning this matter, please contact Mr. M. A. McBurnett at (512) 972-7206 or me at (512) 972-8787.



T. H. Cloninger
Vice President,
Nuclear Engineering

SJS/pas

- Attachment:
1. Affidavit
 2. Safety Evaluation and No Significant Hazards Consideration Determination
 3. Proposed Technical Specification Change to 3.6.2.3 and the associated Bases.

c:

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ATTACHMENT 1

AFFIDAVIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

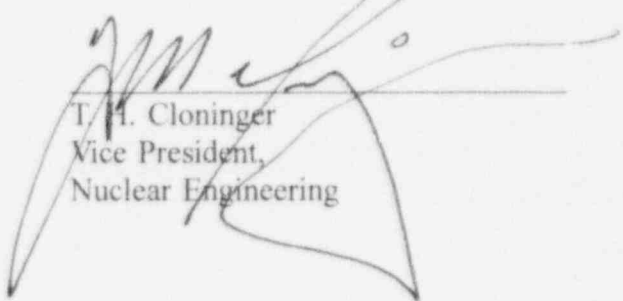
Houston Lighting & Power)
Company, et al.,)

South Texas Project)
Units 1 and 2)

Docket Nos. 50-498
50-499

AFFIDAVIT

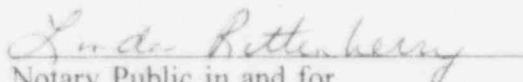
I, T. H. Cloninger, being duly sworn, hereby depose and say that I am Vice President, Nuclear Engineering, of Houston Lighting & Power Company; that I am duly authorized to sign and file with the Nuclear Regulatory Commission the attached Proposed Amendment to Technical Specification 3.6.2.3; that I am familiar with the content thereof; and that the matters set forth therein are true and correct to the best of my knowledge and belief.


T. H. Cloninger
Vice President,
Nuclear Engineering

STATE OF TEXAS)
)
)

Subscribed and sworn to before me, a Notary Public in and for the State of Texas, this
15th day of February, 1995.




Notary Public in and for
The State of Texas

ATTACHMENT 2

SAFETY EVALUATION
AND
NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION
FOR
CHANGING THE FLOW RATE
TO THE
REACTOR CONTAINMENT FAN COOLERS

Background

During the performance of a surveillance procedure enhancement/revision project, Houston Lighting & Power identified a problem with a Reactor Containment Fan Cooler Operability surveillance procedure. The procedure demonstrates the operability of the Reactor Containment Fan Coolers per Technical Specifications 4.6.2.3.a.1 and 4.6.2.3.a.2. The procedure provides an acceptance criteria for flow to each Reactor Containment Fan Cooler unit of greater than or equal to 550 gallons per minute. The surveillance procedure enhancement/revision project research revealed that the existing Technical Specification Surveillance Requirement (4.6.2.3.a.2) reflected the flow the fan coolers are to receive from the Chilled Water System during normal operation. The fan coolers are used during normal plant operation and following an accident. Following an accident, in particular a Loss-of-Coolant Accident (LOCA) and a Main Steam Line Break (MSLB) accident, the cooling supply to the fan coolers switches to the Component Cooling Water System. The required flow rate for the post-accident conditions is different than the flow rate required during normal operating conditions. The flow to the fan coolers during normal operation is from the Chilled Water System and is required to be greater than or equal to 550 gallons per minute. During post-accident operation, the flow is supplied by the Component Cooling Water System and is required to be greater than or equal to 1800 gallons per minute. The subject surveillance procedure and Technical Specification 4.6.2.3.a.2 were determined to reference the normal operating flow requirement instead of the post-accident flow requirement.

Discovery of the discrepancy in the Surveillance Test Procedure and the Technical Specification Surveillance Requirement resulted in the issuance of a letter documenting the error and the writing of a Station Problem Report (SPR 940936). These actions resulted in an investigation by Houston Lighting & Power's Nuclear Licensing Department. The immediate compensatory action was to review the records of the most recent surveillance test results for each of the South Texas Project units. The investigation revealed that the actual Component Cooling Water System flow rates to the fan coolers was greater than or equal to 1800 gallons per minute for each unit.

A Nuclear Licensing Department review, and accompanying engineering evaluations, indicated that the event was not reportable since the plant had never operated in a condition that was outside of the design basis and that the fan coolers would have performed their intended safety function if required.

Following the reportability review, Houston Lighting & Power took immediate corrective actions to address this issue. The first action was to issue a Field Change Request which changed all occurrences of 550 gallons per minute component cooling water flow to 1800 gallons per minute in the relevant pages of the Reactor Containment Fan Cooler Operability procedure. This change, which has been completed, will ensure that the surveillance test procedures verify that appropriate plant systems are within the design and licensing basis of the plant. The second corrective action is to submit a Technical Specification Amendment that will change the flow rate specified by Technical Specification 4.6.2.3.a.2 from greater than or equal to 550 gallons per minute to greater than or equal to 1800 gallons per minute and to specify that this flow is from the Component Cooling Water System. This corrective action, the purpose of this amendment request, will assure that the South Texas Project Reactor Containment Fan Coolers are maintained within the design and accident analysis.

Proposed Change

Houston Lighting & Power proposes to modify Technical Specification 4.6.2.3.a.2 to reflect the Reactor Containment Fan Cooler flow rate assumed in the accident analyses and to specify that this flow is provided by the Component Cooling Water System. The modification will change the cooling water flow rate requirement to each Reactor Containment Fan Cooler from greater than or equal to 550 gallons per minute to greater than or equal to 1800 gallons per minute. It will also make it clear that the cooling water supplied to the Reactor Containment Fan Coolers is from the Component Cooling Water System. The proposed change is necessary because the flow to the fan coolers following receipt of an Engineered Safety Features signal is from the Component Cooling Water System and it is this flow, due to the corresponding temperature of the component cooling water, that is used in the accident analyses involving the reactor containment fan coolers.

A markup of the proposed change to Specification 4.6.2.3.a.2 is included as Attachment 3 of this request. The change involves changing the flow rate to be verified by the surveillance test from greater than or equal to 550 gallons per minute to greater than or equal to 1800 gallons per minute and specifying that the measured flow is component cooling water. Attachment 3 also includes text to be added to the Bases which states that the fan coolers have two operating modes, i.e., normal and post-accident. Cooling water is supplied from the chilled water system to the fan coolers during normal operations conditions. In the post-accident mode of operation, the fan coolers are supplied with cooling water from the Component Cooling Water System. The proposed change will bring the surveillance test for the Reactor Containment Fan Cooler system into agreement with the appropriate accident and design analyses. The added Bases information will make it clear that the Reactor Containment Fan Coolers have two operating modes which involve cooling water being supplied from two different sources with two different flow rates. However, for Technical Specification purposes, the post-accident flow rate is the one that must be assured by surveillance testing.

Safety Evaluation

Current Licensing Basis

The function of the South Texas Project containment heat removal system is to remove heat from the containment atmosphere to limit, reduce, and maintain the containment pressure and temperature at acceptably low levels following a LOCA or secondary system pipe rupture. In addition to heat removal provided by passive means; such as heat transfer to containment walls, structures, and equipment located inside containment, the South Texas Project design includes active containment heat removal systems. The active containment heat removal systems consist of the Reactor Containment Fan Cooler System and the Containment Spray System. The Reactor Containment Fan Cooler system also functions during normal operation to maintain a suitable atmosphere for the equipment located within the containment. The Containment Spray System does not have a function during normal operation.

The Reactor Containment Fan Cooler system consists of three trains, each with two fan cooler units. The system is sized on the basis of three out of six Reactor Containment Fan Cooler units operating. Each fan cooler unit consists of an axial fan, a fan motor, cooling coils, and backdraft dampers. The fan cooler units are designed to remove heat from the containment during both normal operation and accident conditions. In the event of an accident, all fan cooler units are automatically placed into operation on receipt of a safety injection signal.

Only three of six fan units are assumed to operate in the accident analyses. The system design will permit remote operation from the control room. In addition, the system has been designed to allow periodic component inspection and functional testing to ensure system operability. The containment fan cooler units are designed to seismic Category I and Quality Group B standards.

The current licensing basis of the Reactor Containment Fan Cooler system is described in Section 6.2.2.3 and Table 6.2.2-2 of the South Texas Project Updated Final Safety Analysis Report (UFSAR). The South Texas Project Technical Specification Surveillance Requirement (4.6.2.3.a.2) requires verifying a cooling water flow rate of greater than or equal to 550 gallons per minute to each Reactor Containment Fan Cooler unit. However, Table 6.2.2-2 of the South Texas Project UFSAR indicates an acceptance criteria of greater than or equal to 1800 gallons per minute should be used to verify compliance with accident analysis assumptions. The difference in required flow to the fan coolers is due to the fan coolers performing both a normal and post-accident function. During normal operation, cooling flow to the fan cooler units is supplied by the Chilled Water System. Following an accident, the cooling flow to the fan coolers is supplied by the Component Cooling Water System. The difference in the flow rates from the two different systems is due to the different temperature of cooling water supplied to the Reactor Containment Fan Coolers for normal and post-accident operation.

Impact of Proposed Change

Following receipt of an Engineered Safety Features signal, flow to the Reactor Containment Fan Coolers is switched from the Chilled Water System to the Component Cooling Water System. Due to the temperature difference between the chilled water and the component cooling water mentioned earlier, the flow requirement to each fan cooler changes from greater than or equal to 550 gallons per minute to greater than or equal to 1800 gallons per minute. The 1800 gallons per minute limit is assumed in the design and accident analysis. The containment Loss-of-Coolant Accident and Main Steam Line Break peak pressure/temperature analysis as well as containment safety-related equipment qualification temperatures, all take credit for the design heat removal capabilities of three Reactor Containment Fan Coolers.

The Technical Specification surveillance requirement acceptance criteria for component cooling water flow to the Reactor Containment Fan Coolers is being changed from 550 gallons per minute to 1800 gallons per minute. The current design basis and accident analysis assumptions consider 1800 gallons per minute component cooling water flow to the Reactor Containment Fan Coolers. Therefore, the Technical Specification acceptance criteria will reflect the current accident analysis assumptions. No accident scenarios need to be reanalyzed because the proposed amendment will not change the design, configuration or method of operation of the plant.

No Significant Hazards Consideration Determination

Houston Lighting & Power has evaluated the proposed amendment against the criteria of 10CFR50.59 as follows:

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

The proposed change to Technical Specification 4.6.2.3.a.2 is to reflect the cooling water temperature assumed in the accident analyses. The revised Technical Specification surveillance requirement will change the cooling water flow rate requirement to each Reactor Containment Fan Cooler from greater than or equal to 550 gallons per minute to greater than or equal to 1800 gallons per minute.

The proposed change, which will result in an increased acceptance criteria for the flow to the Reactor Containment Fan Coolers, is not indicative of accident initiators. The change will ensure that the surveillance requirement reflects the flow rate value assumed in the South Texas Project accident analyses and that the design and operability requirements of equipment important to safety are ensured.

The accident mitigation features of the plant are not affected by the proposed change since the change reflects the original assumptions made in the design of the accident mitigation features of the South Texas Project. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed change does not create the possibility of a new or different kind of accident previously evaluated in the Safety Analysis Report because all the accidents were analyzed with a flow rate of 1800 gallons per minute to the Reactor Containment Fan Cooler.

3. Does the proposed change involve a significant reduction in a margin of safety?

There will be no adverse affects on margins of safety since a more stringent surveillance requirement will be applied to the Reactor Containment Fan Cooler. The Technical Specification operability and surveillance requirements are not reduced but rather made more restrictive by this proposed change. The change ensures that the margin of safety originally intended for the Reactor Containment Fan Coolers is maintained.

Based on the reasoning stated above and South Texas Project's evaluation of the proposed amendment, Houston Lighting & Power has determined that the proposed change does not involve a significant hazards consideration.

Implementation Plan

Houston Lighting & Power requests an implementation time of 30 days from the effective date of the approved license amendment to facilitate distribution and to make appropriate changes to plant documents.