The Light company
Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

June 6, 1994
ST-HL-AE-4736
File No.: G09.06
10CFR50.90,
10CFR50.92, 10CFR51

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

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Revision to Proposed Changes to the South Texas Project
Technical Specification (TAC NOS. M88291 and M88292)

Reference: Letter from HL&P dated November 23, 1993
(ST-HL-AE-4625) TAC No. M88291/M88292

In the referenced letter, Houston Lighting & Power (HL&P) proposed to amend Facility Operating Licenses NPF-76 and NPF-80 for South Texas Project Units 1 and 2 by revising Technical Specification 3.8.1.1, Electrical Power System - A.C. Sources - Operating. This transmittal is a supplement to the changes proposed in the referenced letter. The purpose of this supplement is the elimination of additional identified unnecessary testing of the Standby Diesel Generators discovered since the original submittal. This supplement will replace the original submittal.

HL&P has reviewed the proposed revision to the amendment pursuant to 10CFR50.92 and determined that it does not involve a significant hazards consideration. In addition, HL&P 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 Electric Generating Station Nuclear Safety Review Board has reviewed and approved the proposed changes.

The required affidavit, along with a Safety Evaluation and No Significant Hazards Consideration Determination associated with the proposed changes, and the marked up effected pages of the Technical Specifications are included as attachments to the letter.

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

If you should have any questions concerning this matter, please contact Mr. A. W. Harrison at (512) 972-7298 or me at (512) 972-7921.

J. F. Groth
Vice President
Nuclear Generation

JFG/tck

Attachment: 1. Affidavit

2. Safety Evaluation and No Significant Hazards Consideration Determination

3. Technical Specification 3.8.1.1 - proposed change.

c:

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ATTACHMENT 1

AFFIDAVIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Houston Lighting & Power	)	Docket Nos. 50-498
Company, et al.,	)	50-499
	)	
South Texas Project	)	
Units 1 and 2	)	

AFFIDAVIT

I, J. F. Groth, being duly sworn, hereby depose and say that I am Vice President, Nuclear Generation, of Houston Lighting & Power Company; that I am duly authorized to sign and file with the Nuclear Regulatory Commission the attached revision to proposed changes to Technical Specification 3.8.1.1(TAC Nos. M88291 and M88292); 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.

J. F. Groth
Vice President,
Nuclear Generation

STATE OF TEXAS)
)
)

Subscribed and sworn to before me, a Notary Public in and for the State of Texas, this 6 day of June, 1994.

CONNIE MONTGOMERY
Notary Public, State of Texas
My Commission Expires 08-20-95

Connie Montgomery
Notary Public in and for the
State of Texas

TSC-94\94-140.001

ATTACHMENT 2

SAFETY EVALUATION
AND
NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION

Background

On December 14, 1993, a meeting was held between Houston Lighting & Power and NRR. During this meeting the changes to Technical Specification 3.8.1.1 submitted in letter ST-HL-AE-4625, dated November 23, 1993, were discussed and additional changes were identified as necessary to improve the reliability of the Diesel Generators. The additional changes identified will eliminate requirements not applicable to the South Texas Project diesels, create generator operating bands for load testing, provide better flexibility for testing and modify the surveillance tests to reflect industry's operating experience about the type of testing required to demonstrate operability and reliability.

Description of Proposed Changes

All new and existing notes to the specification have been consolidated on a single page as follows:

SPECIFICATION NOTATIONS

(1) Loss of one 13.8 kV Standby Bus to 4.16 kV ESF bus line constitutes loss of one offsite source. Loss of two 13.8 kV Standby busses to 4.16 kV ESF bus lines constitutes loss of two offsite sources.

(2) All diesel generator starts for the purpose of these surveillances may be preceded by a prelube period.

(3) A diesel generator start in less than or equal to 10 seconds (fast start) shall be performed every 184 days. All other diesel generator starts for the purpose of this surveillance may be modified starts involving reduced fuel (load limit) and/or idling and gradual acceleration to synchronous speed.

(4) Generator loading may be accomplished in accordance with vendor recommendations, including a warmup period prior to loading.

(5) The diesel generator start for this surveillance may be a modified start(see SR 4.8.1.1.2a.2))

(6) Momentary transients outside this load range due to changing conditions on the grid shall not invalidate the test.

(7) If Specification 4.8.1.1.2a.2) is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the standby diesel generator may be operated at 5000-5500 kW until operating temperatures are stabilized or for a minimum of 2 hours.

(8) Criteria for determining number of failures and number of valid tests shall be in accordance with Regulatory Position C.2.e of Regulatory Guide 1.108, but determined on a per diesel generator basis.

For the purpose of determining the required test frequency, the previous test failure count may be reduced to zero if a complete diesel overhaul to like-new condition is completed, provided that the overhaul, including appropriate post-maintenance operation and testing, is specifically approved by the manufacturer and if acceptable reliability has been demonstrated. The reliability criterion shall be the successful completion of 14 consecutive tests in a single series. Ten of these tests shall be in accordance with the routine Surveillance Requirements 4.8.1.1.2a.2 and 4.8.1.1.2a.3 and four tests in accordance with the 184-day testing requirement of Surveillance Requirements 4.8.1.1.2a.2 and 4.8.1.1.2a.3. If this criterion is not satisfied during the first series of tests, any alternate criterion to be used to transvalue the failure count to zero requires NRC approval.

(9) The associated test frequency shall be maintained until seven consecutive failure free demands have been performed and the number of failures in the last 20 valid demands has been reduced to one.

LCO 3.8.1.1.a, Replace "System**" with "System(1)"

Note at bottom of page 3/4 8-1	Delete from bottom of page "** Loss of one 13.8 kV Standby Bus to 4.16 kV ESF bus line constitutes loss of one offsite source. Loss of two 13.8 kV Standby busses to 4.16 kV ESF bus lines constitutes loss of two offsite sources."

The proposed changes to the Actions of South Texas Project Technical Specification 3.8.1.1 are:

Action a, delete "Demonstrate the OPERABILITY of each standby diesel generator that has not been successfully tested within the past 24 hours by performing Surveillance Requirement 4.8.1.1.2a.2 for each such standby diesel generator, separately, within 24 hours."

Action b, add "an inoperable support system, an independently testable component, or" to the causes not requiring an operability test.

Action b, delete the 24 hour time limit and add "8 hours, unless the absence of any common mode failure for the remaining diesel generator(s) is demonstrated."

Action b, delete "*" from the Action statement and "*This test is required to be completed regardless of when the inoperable standby diesel generator(s) is restored to OPERABILITY." the bottom of the page.

Action c, add "an inoperable support system, an independently testable component, or" to the causes not requiring an operability test.

Action c, add "unless the absence of any common mode failure for the remaining diesel generator is demonstrated."

Action c, delete "*" from the Action statement and "*This test is required to be completed regardless of when the inoperable standby diesel generator is restored to OPERABILITY." from bottom of page.

Action e, delete "demonstrate the OPERABILITY of three standby diesel generators by performing Surveillance Requirement 4.8.1.1.2a.2) within 8 hours unless the standby diesel generators are already operating;"

The proposed changes to the South Texas Project Technical Specification Surveillance Requirement 4.8.1.1.2 are:

Item 4.8.1.1.2	Replace "OPERABLE:" with "OPERABLE: (2)".
Item 4.8.1.1.2a.2	Replace "10 seconds*" with "10 seconds(3)" both times it appears in this item.
Item 4.8.1.1.2a.3	Replace "greater than or equal to 5500 kW" with "5000 to 5500 kW (4)(6)".
Item 4.8.1.1.2a.3	Delete "in less than or equal to 10 minutes*".
Item 4.8.1.1.2c.	Replace with entire section with item c on Attachment C.
Item 4.8.1.1.2d.	Replace with entire section with item d on Attachment C.
Item 4.8.1.1.2e.2	Replace "greater" with "greater(4)(5)".
Item 4.8.1.1.2e.3	Replace "load of" with "load of(4)(5)".
Item 4.8.1.1.2e.7	Replace "least" with "least(4)(5)".
Item 4.8.1.1.2e.7	Replace "greater than or equal to 5935 kW*" with "5700 to 6050 kW(6)"

Item 4.8.1.1.2e.7	Replace "greater than or equal to 5500 kW" with "5000 to 5500 kW(6)"
Item 4.8.1.1.2e.7	Insert the following "a fast start per" between "perform" and "Specification" on page 3/4 8-6.
Item 4.8.1.1.2e.7	Replace "4.8.1.1.2e.6)b);**" with "4.8.1.1.2a.2);(7)"
Item 4.8.1.1.2e.10	Replace "in a" with "in a (5)"
Notes at bottom of page 3/4 8-6	Delete both notes at bottom of page.
Table 4.8-1	Replace "TESTS*" with "TESTS(8)" in first column header.
	Replace "2**" with "2(9)" in first column.
Notes at bottom of page 3/4 8-8	Delete both notes at bottom of page.

The proposed changes to the South Texas Project Technical Specification Section 6.0, Administrative Controls are:

6.8.3 Insert Attachment E following 6.8.3.h) to provide the requirements of the Diesel Fuel Oil Testing Program.

Safety Evaluation

The proposed amendment to the South Texas Project (STP) Technical Specifications (TS) will eliminate the excessive and unnecessary testing of the Standby Diesel Generators (SDG). The changes requested are consistent with the guidance provided in NUREG-1366, NUREG-1431, Generic Letter 84-15, Generic Letter 93-05, industry and STP plant operating experience, and the licensing basis for STP. An example of this compatibility is the elimination of the diesel generator start test now required by Technical Specifications when a Essential Cooling Water pump is declared inoperable. The Essential Cooling Water pump is an independently testable component of a supporting system.

TS 3.8.1.1 Actions a. and e. require all operable SDGs be started as a demonstration of operability whenever one or more of the offsite AC power sources is declared inoperable. The proposed amendment would eliminate the requirement to demonstrate the operability of an operable SDG whenever an offsite AC power source is determined to be inoperable. The inoperability of an offsite AC power source has no effect on the reliability of a SDG. Deleting this requirement does not affect the design or performance characteristics of the SDGs. The SDGs maintain their ability to perform their design function.

TS 3.8.1.1 Actions b. and c. require all remaining operable SDGs be started as a demonstration of operability whenever one of the SDGs is declared inoperable except for preplanned preventive maintenance or testing. The proposed amendment would revise the testing exclusion to include an inoperable support system and an independently testable component. The addition of these testing exclusions will eliminate the need to test the SDG when the source of the inoperability originated in a support system, such as Essential Cooling Water or in an independently testable component, such as a relay. The inoperability of these types of items does not reduce the reliability of the effected SDG to start, once the support system or component is declared operable. The proposed amendment would also eliminate the testing requirement of the remaining operable SDGs, when a SDG is declared inoperable, if it can be demonstrated there is no common mode failure for the remaining SDGs. The normal TS surveillance testing schedule assures that operable SDG(s) are capable of performing their intended safety functions. A failure of one SDG does not reduce the reliability of another, otherwise operable SDG. Deleting this requirement does not affect the design or performance characteristics of the SDGs, once a common mode failure has been dismissed. Therefore, the SDGs maintain their ability to perform their design function.

Technical Specification Surveillance Requirement (SR) 4.8.1.1.2 provides the testing requirements necessary to verify a diesel generator is operable. The proposed changes, which are based on and compatible with NUREG-1431, NUREG-1366, Generic Letter 84-15, Generic Letter 93-05, industry and STP plant operating experience, will eliminate the unnecessary wear on the diesel generators caused by the current testing requirements. The following are justifications for the proposed changes:

1. In sections 4.8.1.1.2a.3 and 4.8.1.1.2e.7 the phrase "greater than or equal to [a specific number] kW" is replaced with a load band which provides a range for the testing. This load band is provided to avoid routine overloading of the diesel generators caused by the need to ensure the load is never less than the current value. This routine overloading creates unnecessary wear and mechanical stress that adversely affects the reliability and longevity of the diesel generators. Industry experience has shown that a diesel generator operating at 90% of continuous design rating with temperatures, pressures, etc. within their normal ranges, will also operate at 100% of continuous design rating.

2. In section 4.8.1.1.2a.3 delete "in less than or equal to 10 minutes*". The loading of a diesel in 10 minutes is a very stressful testing method that does not provide any useful results on the diesel's ability to handle block loading. This requirement is being replaced by a note to allow for loading in accordance with vendor's recommendations.

3. Replace section 4.8.1.1.2c. and d with items c and d on Attachment C. These requirements are being relocated to the Diesel Fuel Oil Testing Program in section 6.8.3 of Administrative Controls. This action is in accordance with the recommendations of NUREG 1431.

4. In section 4.8.1.1.2e.7 insert "a fast start per" between the words "perform" and "Specification" and replace "4.8.1.1.2e.6)b)" with "4.8.1.1.2a.2)" on page 3/4 8-6. These changes will prevent the unnecessary performance of a LOOP test when the only intent of the requirement was to verify the start of a hot engine. These changes will prevent the unnecessary mechanical stress and wear on the diesel engine created by unnecessary testing.

5. All of the Notes used in for Technical Specification 3.8.1.1 have been consolidated unto a single page. Each note has been assigned a number and this number attached to the appropriate section or item. The following is the justification for each note:

   Note (1) The change is the assigning of the number to the note and replacement of the "*" in LCO 3.8.1.1.a with "(1)".

   Note (2) This note is added to section 4.8.1.1.2 and allows all diesel generator starts for these surveillances to be preceded by an engine prelube period. This is designed to minimize the wear on the moving parts that do not get lubricated when the diesel engine is not running thereby reducing the possibility of premature failure of the diesel engine due to wear. Adequate industry experience exists to prove that these diesels will start and run successfully without a prelube period.

   Note (3) This note replaces the "*" in section 4.8.1.1.2a.2 both times it appears. It only requires a diesel generator start in less than or equal to 10 seconds (fast start) be performed every 184 days. All other diesel generator starts for these surveillances may be preceded by an engine prelube period. This is designed to minimize the wear on the moving parts that do not get lubricated when the diesel engine is not running and there by reduce possibility of premature failure of the diesel engine due to wear.

   Note (4) This note is added to sections 4.8.1.1.2a.3, 4.8.1.1.2e.2, 4.8.1.1.2e.3 and 4.8.1.1.2e.7. The loading of a diesel in 10 minutes is a very stressful testing method that does not provide any useful

results on the diesel's ability to handle block loading. This change permits the gradual loading of the diesel, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

Note (5) This note is added to sections 4.8.1.1.2e.2, 4.8.1.1.2e.3, 4.8.1.1.2e.7 and 4.8.1.1.2e.10. It allows the type of start for this surveillance that is described in 4.8.1.1.2a.2. This start is one where the starting speed is limited, warmup is limited to this lower speed, and the diesel generator is gradually accelerated to synchronous speed prior to loading. This type of start is designed to reduce the stress and wear on the diesel engine which will improve it's reliability and availability.

Note (6) This note is added to section 4.8.1.1.2a.3 and section 4.8.1.1.2e.7. It allows momentary transients outside the stated load range due to changing conditions on the grid. This will prevent the repeating of this test for a condition that does not indicate a problem with the diesel generator.

Note (7) The change is replacing the "**" with "(7)" for the note on the bottom of page 3/4 8-6. The note is also being revised to replace "4.8.1.1.2e6)b)" with "4.8.1.1.2a.2", "5500" with "5000 - 5500" and "1 hour" with "a minimum of 2 hours". The "**" is also being replaced by "(7)" in section 4.8.1.1.2e.7. These changes will eliminate the mechanical stress on the diesel engine caused by rapid loading and prevent routine overloading of the generator prior to this test by using a load range. Industry experience has shown that a diesel generator operating at 90% of continuous design rating with temperatures, pressures, etc. within their normal ranges, will also operate at 100% of continuous design rating. These changes will improve the reliability and availability of the diesel engines.

Note (8) The change replacing the "*" with "(8)" on page 3/4 8-8 and moving the note to new page 3/4 8-8a.

Note (9) The change replacing the "**" with "(9)" on page 3/4 8-8 and moving the note to new page 3/4 8-8a.

No Significant Hazards Consideration Determination

Houston Lighting & Power (HL&P) has evaluated the proposed amendment against the criteria of 10CFR50.92 as follows:

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

   The proposed changes do not involve an increase in the probability or consequences of an accident previously evaluated. The Standby Diesel Generators do not initiate any accidents, therefore these changes do not increase the probability or an accident previously evaluated. The proposed changes will permit the elimination of the unnecessary mechanical stress and wear on the diesel engine and generator while ensuring that the diesel generators will perform their designed function. The elimination of this mechanical stress and wear will improve the reliability and availability of the Standby Diesel Generators which will have a positive effect on the ability of the diesel generators to perform their design function. Therefore, the consequences of an accident previously evaluated are not increased. The proposed changes are consistent with NUREG-1366, NUREG-1431, Generic Letter 93-05 and Generic Letter 84-15.

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

   The elimination of these unnecessary tests does not affect the design bases of the SDGs, or any of the accident evaluations involving the SDGs. The SDGs are designed to provide electrical power to the equipment important for safety during all modes and plant conditions following a loss of offsite power. The test schedule established in accordance with GL 84-15 assures that operable SDGs are capable of performing their intended safety function. The proposed changes to the surveillance requirements are consistent with NUREG-1431, NUREG-1366, Generic Letter 93-05, industry operating experience, and South Texas Project operating experience. These changes are intended to improve plant safety, decrease equipment degradation, and remove unnecessary burden on personnel resources by reducing the amount of testing that the Technical Specification requires during power operation. Relocating the diesel fuel oil testing requirements to the STP Fuel Oil Monitoring Program outside of the Technical Specifications is an administrative change consistent with NUREG-1431 and consequently has no effect on accident probability, consequences, or margin. Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

   The proposed changes extend testing frequency and eliminate unnecessary mechanical stress and wear on the diesel generator in an effort to improve plant reliability and safety. These changes are consistent with NUREG-1431, NUREG-1366, industry operating experience, and STP operating experience and do not adversely affect the design bases, accident analysis, reliability or capability of the SDGs to perform their intended safety function. Relocating the diesel fuel oil testing requirements to the STP Fuel Oil Monitoring Program outside of the Technical Specifications is an administrative change consistent with NUREG-1431 and consequently has no effect on accident probability, consequences, or margin. Therefore the proposed changes do not involve any reduction in a margin to safety.

Based on the reasoning stated above and the STP evaluation of the amendment request, HL&P has determined that the requested change does not involve a significant hazards consideration.

Implementation Plan

HL&P requests an implementation time of 60 days from the effective date to complete the necessary procedures changes and make the appropriate document distribution.

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATION CHANGES