

The Light company

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

May 20, 1992
ST-HL-AE-4107
File No.: G20.01
G21.02
G20.02.01
G21.02.01
10CFR50.36
10CFR50.91
10CFR50.92

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

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, 50-499
Request For Temporary Waiver Of Compliance From
The Provisions Of Technical Specification 4.3.1.1
And Emergency Technical Specification Change

HL&P requests a temporary waiver of compliance from the provisions of Technical Specification (TS) 4.3.1.1 as it pertains to performing the Trip Actuating Device Operational Test (TADOT) for the manual reactor trip. The requested waiver is applicable to both STP Unit 1 and STP Unit 2. HL&P also requests an emergency change to TS 4.3.1.1 Table 4.3-1, Note 14. The duration of the waiver request is until the next shutdown for each unit, planned or unplanned, or until the NRC acts on the emergency technical specification change request, whichever is sooner.

Description of Conditions:

TS 4.3.1.1, Table 4.3-1, Item 1 Note 14 imposes a TADOT requirement on the manual reactor trip function. The TADOT requires independent verification of the operability of the manual undervoltage and shunt trip circuits. On May 19, 1992, during a regular biennial review of the STP procedures, an HL&P engineer found that the procedures do not adequately verify operability of the manual shunt trip function. The shunt trip function is actuated by either of two sets of contacts on the manual reactor trip switch. One set of contacts actuates both the shunt trip and the undervoltage trip; the other set directly actuates the shunt trip relay. The TADOT performed at STP Unit 1 and STP Unit 2 has adequately demonstrated operability of the undervoltage and shunt trip circuits by means of the first set of contacts; however, the

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TADOTs have not included the second set of contacts. (Attachment 3 provides a simplified depiction of the reactor trip circuitry). HL&P also determined that the procedure did not adequately verify the operability of the shunt trip portion of the bypass breaker trip circuits, as prescribed by Note 14.

HL&P consequently determined that the surveillance requirements of TS 4.3.1.1 have not been met. With inadequate surveillance, both channels of the manual trip function were considered inoperable. On May 19, 1992, TS 3.0.3 was entered for both Units and an Unusual Event was declared for a shutdown required by Technical Specifications.

The condition was discussed with the NRC on May 19, 1992, and HL&P initiated action to request a temporary waiver of compliance. The NRC subsequently provided verbal authorization for proceeding with the waiver and HL&P terminated the plant shutdown required by TS 3.0.3 and exited the Unusual Event.

In accordance with the guidance of Dr. T. E. Murley's memorandum of February 22, 1990, HL&P is providing the justification below which shows that continued operation of the units is consistent with protecting the health and safety of the public.

- 1) Requirements for which a waiver is requested: As stated in the description above, HL&P has determined that STP Units 1 and 2 have not complied with TS 4.3.1.1. HL&P's safety evaluations show that continued operation is safe and that a shutdown is not warranted.
- 2) Circumstances of the situation and need for prompt action: The description above explains how the condition was identified. HL&P had no advance knowledge of this condition. HL&P took prompt action to evaluate the condition and research past testing to determine if there was information which could demonstrate that adequate testing had been done. The NRC is requested to approve the change to the Technical Specifications.

HL&P will determine the root causes for the circumstances and provide that information in the Licensee Event Report (LER) to be submitted by June 18, 1992.

- 3) Compensatory Action: HL&P will brief each operating crew on the existence of the condition and the action required in the event that a manual reactor trip is necessary and does not function. These briefings will occur as the crew comes on shift.

3) Continued:

HL&P procedures provide for parallel operator action to drive the control rods in and to de-energize the control rod drive motor generator sets, which will cause the rods to insert.

HL&P found that adequate independent verification of the manual shunt trip was done during pre-operational testing. In addition, the regular Technical Specification required surveillance of the reactor trip breakers provides confidence in the operability of the shunt trip coil.

HL&P has reviewed the Table 4.3-1 surveillance procedures for the manual reactor trip function, safety injection (SI) input from the Engineered Safety Feature Actuation System (ESFAS), automatic trip and interlock logic, and reactor trip bypass breaker. No additional deficiencies were found. However, HL&P found that the TADOT performed on the reactor trip circuitry associated with manual SI actuation does not include independent verification of the shunt trip circuit. This requirement is not prescribed by the Technical Specifications. HL&P will enhance the SI manual actuation TADOT to include this independent verification in time for its use in the next scheduled refueling outage for each unit.

HL&P will expeditiously review the remaining ESFAS and reactor trip surveillances to confirm that they adequately implement Technical Specification requirements. HL&P will provide a schedule for this review in the LER to be submitted by June 18, 1992.

- 4) Evaluation of the safety significance:
See Attachment 1.
- 5) Duration of the request: HL&P has requested that operation continue under these conditions until the next planned or unplanned shutdown for each unit. With no unplanned shutdowns, Unit 1 will perform the required TADOT in its fourth refueling outage which begins in September 1992, and Unit 2 will perform the TADOT in its third refueling outage, which begins in February 1993. The safety evaluation in Attachment 1 demonstrates that there is no significant safety impact. If, in the course of performing periodic reactor protective system surveillances, HL&P encounters any conditions which reduces its confidence in the basis for this duration or analysis, HL&P will notify the NRC.

- 6) Basis for no significant hazards: See the evaluation in Attachment 1.
- 7) Environmental Consequences: The proposed waiver and change to the Technical Specifications involves no environmental consequences. There is no impact to accident analysis or consequences, nor does it impact systems associated with control of radiological or non-radiological effluents.

HL&P's Plant Operations Review Committee and Nuclear Safety Review Board have reviewed the proposed change and found it to be acceptable.

In accordance with 10CFR50.91, HL&P is providing the State of Texas with a copy of the proposed change.

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



D. P. Hall
Group Vice President,
Nuclear

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- Attachments:
1. No Significant Hazards Consideration Determination For The Proposed Change To Table 4.3-1, Note 14
 2. Proposed Change To Technical Specification Table 4.3-1, Note 14
 3. Auto/Manual Reactor Trip Circuit Typical Train S

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Revised 10/11/91


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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

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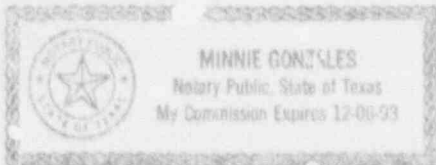
D. P. Hall being duly sworn, hereby deposes and says that he is Group Vice President, Nuclear, of Houston Lighting & Power Company; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached proposed change to Technical Specification Table 4.3-1, Note 14; is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge and belief.



D. P. Hall
Group Vice President, Nuclear

STATE OF TEXAS)
)
COUNTY OF MATAGORDA)

Subscribed and sworn to before me, a Notary Public in and for The State of Texas this 20th day of *May*, 1992.



Minnie Gonzales
Notary Public in and for the
State of Texas

ATTACHMENT 1

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION FOR THE
PROPOSED CHANGE TO TABLE 4.3-1, NOTE 14

ATTACHMENT 1

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION FOR THE PROPOSED CHANGE TO TABLE 4.3-1 NOTE 14

Background

HL&P has discovered that the STP procedures written to perform the trip actuation device operational test (TADOT) for the manual reactor trip circuitry are not adequate. The provisions for testing the shunt trip circuits do not confirm that each shunt manual actuation pathway is operable. This places STP out of compliance with the requirements of Note 14 of Technical Specification Table 4.3-1. The note prescribes that the TADOT verifies the operability of the manual shunt trip. HL&P has also determined that a similar test deficiency exists for the Note 14 operability test for the bypass breaker shunt trip.

HL&P is consequently requesting an emergency change to the STP Technical Specifications to revise Note 14 to allow a schedule delay in the implementation of the TADOT requirement so that STP can operate in conformance with the terms of its license. The proposed delay is until the next planned or unplanned shutdown of each unit. HL&P has evaluated the proposed change and determined that continued operation without performing the complete TADOT has no significant safety impact.

Proposed Change

The proposed change will add a note to Table 4.3-1 Note 14 which prescribes that complete verification of the manual shunt trip relay circuitry shall be initially implemented for each unit prior to that unit's startup from the first planned or unplanned shutdown occurring after May 19, 1992.

Safety Evaluation

HL&P has determined that there is no significant safety impact associated with the proposed change. Although the surveillance test has been incomplete, there is no reason to believe that any element of the manual trip function is not operable. The manual shunt trip circuitry was adequately and satisfactorily tested during pre-operational testing for each unit. HL&P has had no problems with the manual reactor trips which have occurred at STP.

The STP automatic trip/reactor protection system is highly reliable and it is unlikely that a manual reactor trip would be required to mitigate an event at STP. The manual reactor trip function is internally redundant with the capability to send a trip signal along two independent logic trains to separate shunt trip circuits and undervoltage relay trips.

HL&P postulated the unavailability of the shunt trip function and evaluated the impact using the STP Probabilistic Safety Assessment (PSA). The accident evaluated was Anticipated Transient Without Scram (ATWS) event in which the Solid State Protection System has failed, since it involves a transient where the automatic trip system fails and manual action is required. The core damage frequency contribution from an ATWS increased by only 7.6%, from 7.9E-08/yr to 8.5E-08/yr.

This safety evaluation demonstrates that the proposed change to the Technical Specification has no significant safety impact, even if loss of the manual actuation of the shunt trip is postulated. In the most likely case, where the function is available, there is no impact.

Determination Of No Significant Hazards Consideration

Pursuant to 10CFR50.91, HL&P has determined that the proposed change does not involve a significant hazards consideration as defined in 10CFR50.92:

- (1) The proposed change does not involve a significant increase in the probability or consequences of accidents previously evaluated.

Delaying implementation of the TADOT involves no physical modification of the facility, nor does it affect any operational parameters. Consequently, accident analyses are not impacted. The Safety Evaluation above shows that there is no significant impact to the probability of ATWS, which is the event of concern.

- (2) The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

No physical changes to the plant or changes to operating parameters are proposed. The plant will not be operated in any new configuration.

- (3) The proposed change does not result in a significant reduction in the margin of safety.

As described in the Safety Evaluation, it is likely that there is no impact involved in delaying implementation of the TADOT requirements. In the case where the manual shunt trip is assumed to be unavailable, the calculated change in core damage frequency is insignificant.

Conclusions

Based on the Safety Evaluation and Determination of No Significant Hazards Consideration above, HL&P has determined that the proposed change is acceptable for re-establishing STP's compliance with its technical specifications.