

The Light company

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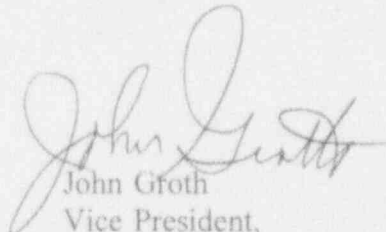
March 25, 1994
ST-HL-AE-004737
File No.: G26
10CFR50.73

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

South Texas Project
Unit 1
Docket No. STN 50-498
Licensee Event Report 94-007
Reactor Trip Bypass Breaker Testing Not in Accordance
with Technical Specifications

Pursuant to 10CFR50.73, Houston Lighting & Power (HL&P) submits the attached Unit 1 Licensee Event Report 94-007 regarding Reactor Trip Bypass Breaker testing which was not in accordance with Technical Specifications. This event did not have an adverse effect on the health and safety of the public but clearly does not meet the standards for expected operational performance.

If you should have any questions on this matter, please contact Mr. J. M. Pinzon at (512) 972-8027 or me at (512) 972-8664.


John Groth
Vice President,
Nuclear Generation

GSC/esh

Attachment: LER 94-007 (South Texas, Unit 1)

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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) South Texas Unit 1	DOCKET NUMBER (2) 05000 498	PAGE (3) 1 OF 4
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TITLE (4) Reactor Trip Bypass Breaker Testing Not in Accordance with Technical Specifications

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
02	24	94	94	-- 007 --	00	03	25	94	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
POWER LEVEL (10) 7	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME Jairo Pinzon - Senior Engineer	TELEPHONE NUMBER (Include Area Code) (512) 972-8027
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE),	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On February 22, 1994 at 0930 hours, Unit 1 was in Mode 1 at 7% power when it was discovered that the station procedure for testing the Reactor Trip Bypass Breakers did not properly satisfy Technical Specification 4.3-1, item 22 which requires a test of the Bypass Breaker Local Manual Shunt Trip prior to placing the Bypass Breaker in service. The station procedure specified testing the Bypass Breaker after it had been racked in. Three other station procedures were identified with the same problem. These four procedures have been corrected.

The cause of this event was inadequate procedure preparation and review. The Technical Specification requirement was not properly incorporated into the procedure when it was written and reviewed.

Corrective actions include completion of the Surveillance Procedure Enhancement Program and development of a Basis Document for each procedure; establishing a "Procedure Ownership Triangle" to ensure that procedures are administratively and technically correct and are capable of being performed as written; and evaluating the adequacy of the 10CFR50.59 safety evaluation training course as it pertains to procedure development and review.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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South Texas, Unit 1	05000 498	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
		94	-- 007 --	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION OF EVENT

On February 22, 1994 at 0930 hours, Unit 1 was in Mode 1 at 7% power when it was discovered that the station procedure for testing the Reactor Trip Bypass Breakers did not properly satisfy Technical Specification 4.3-1, item 22 which requires a test of the Bypass Breaker Local Manual Shunt Trip prior to placing the Bypass Breaker in service. This event was determined to be reportable in accordance with 10CFR50.73 (a)(2)(i)(B) on February 24, 1994.

While reviewing the station procedure associated with the Technical Specification surveillance test of the Train R Reactor Trip Breaker for an unrelated change, the reviewer observed that the procedure specified testing the Bypass Breaker after the Bypass Breaker has been racked in and closed rather than prior to its being racked in. Technical Specifications require testing the Bypass Breakers prior to placing them in service and the Updated Final Safety Analysis Report describes testing the Bypass Breakers in the racked out position. Upon further review, it was discovered that Bypass Breaker testing was performed similarly in the Train S Reactor Trip Breaker test procedure and in the Logic Functional Test procedures for both trains. While testing in this manner demonstrated that the Bypass Breaker would have performed its intended function of opening upon receipt of the appropriate trip signal, uncertainty that this would occur did exist from the time the breaker was racked in until it was actually tested. The most recent testing of the Reactor Trip Bypass Breakers using the incorrect procedure prior to the identification of this problem was performed on December 23 and 24, 1993 during which the Reactor Trip Breakers tested satisfactorily and the Bypass Breakers tripped open when tested following their being racked in. All four procedures have been changed to satisfy Technical Specification 4.3-1 by requiring testing of the Bypass Breakers prior to their being racked in.

The S Train Reactor Trip Bypass Breaker was tested improperly again on March 10, 1994, while performing the S Train Logic Functional Test. The Field Change Request modifying the S Train Logic Functional Test procedure to test the Bypass Breaker prior to racking it in had not yet been incorporated into the procedure. The Bypass Breaker tripped properly when tested and the S Train Logic Functional Test procedure has since been field changed. This event occurred in Mode 5 and was thus not reportable.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CAUSE OF EVENT

The cause of this event was inadequate procedure preparation and review. The original wording in both the Technical Specifications and in the Final Safety Analysis Report clearly indicated that the Bypass Breakers were to be trip tested prior to their being racked in. This wording has not changed in either the Technical Specifications or in the Updated Final Safety Analysis Report. The Technical Specification requirement, however, was not properly incorporated into the procedure when it was first written and reviewed prior to initial criticality

Subsequent biennial reviews and a review specifically directed at identifying deficiencies in surveillance procedures performed in response to LER 92-004, "Shunt Trip Contacts for Manual Reactor Trip Breakers Not Tested per Technical Specifications", also failed to identify this particular discrepancy. This latter review was performed to identify any additional cases where Reactor Protection System and Engineered Safety Feature Actuation System surveillances might deviate from regulatory requirements or commitments. It resulted in the discovery of several other deficiencies but did not identify the specific deficiency described in this License Event Report.

ANALYSIS OF EVENT

The sole purpose of the Reactor Trip Bypass Breakers is to allow testing of the Reactor Trip Breakers without disrupting power operation. During normal operation, the Reactor Trip Breakers are in service (racked in and closed) while the Bypass Breakers are removed from the trip circuitry (racked out). Testing requires the Bypass Breakers to be racked in and closed, resulting in the Trip Breaker and the Bypass Breaker operating in parallel for the duration of the test. This arrangement allows tripping the Reactor Trip Breaker without causing a reactor trip.

The required method for performing this test is to trip test the Bypass Breaker prior to racking it in. Both Technical Specifications and the Updated Final Safety Analysis Report require the Bypass Breaker to be manually closed and tripped prior to being racked in to verify proper operation before placing it into the trip circuitry. The procedure, as written prior to the identification of this problem, allowed the Bypass Breaker to be racked in and closed for a short period of time prior to its being trip tested by depressing the local Trip pushbutton. The procedure did require the Bypass Breaker to be trip tested prior to initiating testing of the Reactor Trip Breaker itself, however. There is no evidence that a Bypass Breaker has ever failed to open when tested after being racked in. Additionally, because the Bypass Breaker for the R train Trip Breaker opens on an S train actuation signal, failure of the Bypass Breaker to open would not prevent the trip from occurring. The S train Trip Breaker would still open. Therefore, the methodology used in the past for testing the Bypass Breakers did not adversely affect the validity of the Reactor Trip Breaker testing nor did it call into question the operability of the Reactor Trip Breakers. Although this event is reportable in accordance with 10CFR50.73 (a)(2)(i)(B), there was no threat to public health or safety.

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TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTIONS

The following corrective actions either have or will be taken:

1. The Surveillance Procedure Enhancement Program currently underway will result in the review of all Technical Specification surveillance procedures to ensure that they adequately perform the testing that is required. Key to this project is the compilation of a Basis Document for each procedure to ensure that all Technical Specification and Updated Final Safety Analysis Report requirements are identified and are readily available to the personnel writing and reviewing surveillance procedures. This is scheduled for completion by December, 1998.
2. A "Procedure Ownership Triangle" concept is being implemented for surveillance procedures to have an assigned Writer, an Engineer and a User who will be responsible for ensuring that their assigned procedures are administratively and technically correct, and that they are capable of being performed as written.
3. The adequacy of the 10CFR50.59 safety evaluation training course as it pertains to procedure development and review will be evaluated.

ADDITIONAL INFORMATION

LER 92-004 described a previous, similar event in which a surveillance test procedure did not adequately perform the testing required by Technical Specifications. Reviews performed as a result of LER 92-004 identified several deficiencies; however, they did not identify this particular problem with testing of the Reactor Trip Bypass Breakers. The previous ineffective corrective actions have been recognized and are being dealt with under the Surveillance Procedure Enhancement Program.

A pilot project to enhance 51 high impact procedures, determined to be the most problematic by Licensee Event Reports, Station Problem Reports and experience has been completed. This project yielded 211 discrepancies, only 37 of which were technical in nature. An additional nine required further review to ensure Technical Specification compliance. None of the problems were determined to be safety significant, and the lessons learned have been incorporated into the ongoing Surveillance Procedure Enhancement Program. While additional discrepancies are expected to be discussed during the course of the remainder of the Surveillance Procedure Enhancement Program, the results of the pilot project, as well as the manner in which the pilot project procedures were chosen, gives confidence that the discrepancies that may be found should also be of low significance.