The Light company
Houston Lighting & Power

P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

August 14, 1989
ST-HL-AE-3198
File No.: G26
10CFR50.73

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

South Texas Project Electric Generating Station
Unit 1
Docket No. STN 50-498
Licensee Event Report 89-016 Regarding
a Technical Specification Violation Due to
Inadequate Procedural Control Over a Plant Modification

Pursuant to 10CFR50.73, Houston Lighting & Power (HL&P) submits the attached Licensee Event Report 89-016 regarding a Technical Specification violation due to inadequate procedural control over a plant modification. This event did not have any adverse impact on the health and safety of the public.

If you should have any questions on this matter, please contact Mr. C. A. Ayala at (512) 972-8628.

G.E. Vaughn by D.H. Hunsaker

G. E. Vaughn
Vice President
Nuclear Operations

GEV/BEM/eg

Attachment: LER 89-016, South Texas, Unit 1

NL.LER89016.U1

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cc:

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
South Texas, Unit 1	0 5 0 0 0 4 9 8	1 OF 0 4

TITLE (4) Technical Specification Violation Due to Inadequate Procedural Control Over a Plant Modification

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 NAMES	DOCKET NUMBER(S)
0 7	1 3	8 9	8 9	—	0 1 6	—	0 0	0 8	1 4	8 9		0 5 0 0 0
												0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Charles Ayala - Supervising Licensing Engineer	AREA CODE 5 1 1 2 — 9 7 2 - 8 1 6 2 8

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	
E											

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On July 13, 1989 with Unit 1 in Mode 1 at 100 percent power, it was discovered that the Rod Position Deviation Monitor, which is derived from the plant computer, had not been capable of alarming in the control room since May 11, 1989. The Rod Position Deviation Monitor was immediately restored to the control room alarm CRT. When this monitor is inoperable the surveillance frequency of the Digital Rod Position Indication System and the Demand Position Indication System must be increased. Because the inoperable status of the monitor was not known, the increased surveillance frequencies were not applied which resulted in a violation of Technical Specifications. The cause of this event was inadequate procedural control of a design change to the plant computer software. Additionally, no explicit method existed to determine the operability of the Rod Position Deviation Monitor. The procedure which controls changes to the plant computer will be revised. A method to verify operability of the Rod Position Deviation Monitor will be developed. Other plant computer points which are required to satisfy Technical Specification will be reviewed to ensure that their operability is adequately verified.

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

DESCRIPTION:

On July 13, 1989 with Unit 1 in Mode 1 at 100 percent power it was discovered that the Rod Position Deviation Monitor, which is derived from the plant computer, had not been capable of alarming in the control room since May 11, 1989. The Rod Position Deviation Monitor was immediately restored to the control room alarm CRT. In order to satisfy the surveillance requirements of Technical Specifications 3.1.3.1 and 3.1.3.2 the Digital Rod Position Indication (DRPI) System and Demand Position Indication (DPI) System readings are required to be compared every twelve hours to ensure that the indicated control rod position is within twelve steps. When the Rod Position Deviation Monitor is inoperable, this surveillance must be performed every four hours. Since the Rod Position Deviation Monitor was effectively out of service since May 11, 1989, without the knowledge of the control room operators, the increased surveillance frequency of control rod position indication was not performed. This was a violation of Technical Specifications. The NRC was notified of this Technical Specification violation on July 13, 1989.

On April 21, 1989, a plant modification was prepared to relocate the Rod Position Deviation Monitor alarm from the plant computer control room CRT to a control room annunciator. The modification package was forwarded to the plant engineering group for a review for impact on plant systems. On May 11, 1989, during the modification review process, the plant computer engineering group implemented the software portion of the modification which removed the Rod Position Deviation Monitor from the alarm CRT in the control room. This occurred prior to approval of the modification for implementation on June 8, 1989. The procedure which controls changes to the plant computer software was originally written to control changes made during the construction and startup phases. When the plant became operational, it was not revised to interface with the plant modification control program. As written, it did not contain adequate controls to prevent the plant computer changes from being implemented out of sequence.

The operability status of the Rod Position Deviation Monitor is used to determine the frequency of control rod position surveillances required by Technical Specifications 3.1.3.1 and 3.1.3.2. No surveillance requirements exist in Technical Specifications to verify the operability of the Rod Position Deviation Monitor or its inputs. As it is currently designed, any of the inputs can be disabled and the monitor rendered inoperable without indication to the operator.

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

CAUSE OF EVENT:

The cause of this event was inadequate procedural control over changes to the plant computer database. The procedure allowed changes to the plant computer to be implemented outside the control of the plant modification program.

A contributing factor was that no means existed for the detection of an inoperable Rod Position Deviation Monitor.

ANALYSIS:

Failure to compare the Digital Rod Position Indication to the Demand Position Indication every four hours with the Rod Position Deviation Monitor inoperable is a violation of Technical Specifications 3.1.3.1 and 3.1.3.2. The surveillance frequency with the Rod Position Deviation Monitor operable is once every twelve hours. HL&P had been performing this surveillance once every eight hours.

Actuation of the Rod Position Deviation Monitor alarm is not an indication that the control rods are mispositioned such that core design limits are exceeded. It is prompt indication that the rod position, as seen by the DRPI system, does not agree closely with the demand position from the DPI system. Inoperability of the Rod Position Deviation Monitor does not result in entry into a Technical Specification action statement.

CORRECTIVE ACTION:

The following corrective actions are being taken as a result of this event:

1. The procedure which controls implementation of plant computer database changes has been revised to interface with the plant modification program.

2. The design and operation of the Rod Position Deviation Monitor will be reviewed to identify a method to determine its operability to ensure Technical Specification compliance. This action will be completed by November 30, 1989. In the interim, the monitor has been declared inoperable and the surveillances required by Technical Specifications 3.1.3.1 and 3.1.3.2 will be performed every four hours, when applicable.

3. Other plant computer points which are required to satisfy Technical Specifications will be reviewed to determine if their operability is adequately verified. This action will be completed by September 15, 1989. If further corrective action is required, it will be identified and scheduled at that time.

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

ADDITIONAL INFORMATION

There have been no previous events reported regarding failure to adequately control implementation of changes to the plant computer.