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

May 7, 1993
ST-HL-AE-4433
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 93-013
Technical Specification Violation due to
Performing Positive Reactivity Changes in Mode 5
Without an Operable Centrifugal Charging Pump

Pursuant to 10CFR50.73, Houston Lighting & Power (HL&P) submits the attached Unit 1 Licensee Event Report 93-013 regarding Technical Specification violation due to performing positive reactivity changes in Mode 5 without an operable Centrifugal Charging Pump. This event did not have an adverse effect on the health and safety of the public.

If you should have any questions on this matter, please contact Mr. J. M. Pinzon at (512) 972-8027 or me at (512) 972-7921.

W. H. Kinsey, Jr.
Vice President,
Nuclear Generation

JMP/sr

Attachment: LER 93-013 (South Texas, Unit 1)

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c:

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U.S. Nuclear Regulatory Comm.
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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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 (MNBB 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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
South Texas, Unit 1	05000 498	1 OF 05

TITLE (4) Technical Specification Violation due to Performing Positive Reactivity Changes in Mode 5 Without an Operable Centrifugal Charging Pump

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
0 4	0 8	9 3	9 3	- 0 1 3 -	0 0	0 5	0 7	9 3	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	5
POWER LEVEL (10)	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

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
20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
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 (Include Area Code)
Jairo Pinzon - Senior Engineer	(5 1 2) 9 7 2 - 8 0 2 7

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)	X	NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On April 8, 1993, Unit 1 was in Mode 5 at 0% power with the Reactor Coolant System (RCS) temperature and pressure at 192°F and 380 psig, respectively. Plant personnel completed a reportability review and determined that on April 1, 1993, during the time periods from 1305 to 1729 hours and from 1817 to 2058 hours (a total of seven hours, nine minutes), Technical Specification 3.1.2.1 and 3.1.2.3 were violated. Positive reactivity changes were made while operating a functional but administratively inoperable Centrifugal Charging Pump (CCP). The cause of this event was the use of an ineffective system for tracking inoperable Technical Specification equipment and actions during an outage. Corrective actions include placing temporary labels on the control board to remind personnel of important Technical Specification equipment status, and placing an information board in the control room highlighting key Technical Specification action times and dates. Additionally, this event will be included in Licensed Operator Requalification Training.

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DESCRIPTION OF EVENT:

On April 8, 1993, Unit 1 was in Mode 5 at 0% power with the Reactor Coolant System (RCS) temperature and pressure at 192°F and 380 psig respectively. Plant personnel completed a reportability review and determined that on April 1, 1993, during the time periods from 1305 to 1729 hours and from 1817 to 2058 hours (a total of seven hours, nine minutes), Technical Specifications 3.1.2.1 and 3.1.2.3 were violated. Positive reactivity changes were made while operating a functional but administratively inoperable Centrifugal Charging Pump (CCP).

On April 1, 1993, at 1246 hours, control rod testing was suspended and the reactor trip breakers opened to allow the manual start of the 1A Centrifugal Charging Pump (CCP). At 1248 hours, the 1A CCP was started and the 1B CCP was secured. At 1250 hours, the motor circuit breaker for the 1B CCP was secured in the open position and the pump was declared inoperable. Thus, the 1A CCP was operating and the 1B CCP was secured. Technical Specification (TS) 4.1.2.3.2 requires one, and only one, CCP in the Boron Injection Flowpath to be OPERABLE. The 1A CCP was in service to support the final calibration and stroke adjustment for its minimum flow recirculation valve (FCV-0201).

At 1305 hours, the reactor trip breakers were closed and control rod testing was re-initiated. At 1729 hours, control rod testing was secured for the night and at 1751 hours, the reactor trip breakers were opened.

At 1817 hours, the reactor trip breakers were closed to support testing of the Digital Rod Position Indication (DRPI) System. This test was completed at 2058 hours and the reactor trip breakers were opened.

At 2300 hours, while performing work package acceptance reviews, the control room staff recognized that the 1A CCP had been placed in operation at 1248 hours, prior to it being declared OPERABLE. The 1A CCP was listed in the Operability Tracking Log (OTL) as inoperable due to incomplete repair activities on FCV-0201. Positive reactivity additions were made (from 1305 to 2058 hours) without the TS required OPERABLE CCP in the Boron Injection Flowpath.

CAUSE OF EVENT:

The cause of this event was the use of a less than effective system for tracking inoperable Technical Specification equipment and actions during an outage. The 1A CCP had been inoperable for various preventative and corrective maintenance activities and was being administratively tracked in the OTL. The OTL for the 1A CCP was still in effect on April 1, 1993, when the 1A CCP was placed in service. The 1A CCP had not yet been declared OPERABLE due to its minimum flow recirculation valve (FCV-0201) requiring various post maintenance tests (PMTs) after maintenance to correct leakage past its seat.

Contributing causes were that the control room supervision determined that using the 1A CCP while adjusting and setting the stroke on the recirculation valve actuator met the Technical Specification requirement for an OPERABLE Boron Injection Flow Path in Mode 5. The basis for their thoughts were as follows: The recirculation valve is non-safety related and is not in the boration flow path, nor is it required to deliver borated water to the reactor. The CCP would have had adequate flow even if the discharge path (to the RCS cold leg) and the recirculation path (through FCV-0201) had been isolated because flow to the RCP seal packages is nominally adjusted to 32 gallons per minute (gpm). This flow path is a separate and parallel path. Thus, the CCP would have had adequate flow through it to prevent overheating (30 gpm minimum required).

Additionally, an inadequate review of the Operability Tracking Log (OTL) was performed prior to the CCP swap and later during the Control Room staff shift change.

ANALYSIS OF EVENT:

Failure to meet the requirements of the Technical Specifications is reportable pursuant to 10CFR.50.73 (a)(2)(i)(B). No adverse radiological or safety consequences resulted from this event. The 1A CCP was functionally operational during the time it had been used to fulfill the requirements of a Boron Injection Flow Path (Technical Specification 3.1.2.1 and 3.1.2.3).

ANALYSIS OF EVENT: (Con't)

The Boron Injection Flow Path was not impacted by the condition of the minimum flow recirculation valve; however, the minimum flow recirculation valve did in fact require post maintenance testing to demonstrate OPERABILITY after its repair in accordance with TS 4.0.5 and the STP Post Maintenance Testing Manual.

The CCP minimum flow recirculation valve (FCV-0201) is a non-safety related component. The purpose of this valve is to protect the CCP from a low flow or closed-discharge valve condition. This valve is not an ESF actuated component, nor is it required for the safe shutdown of the reactor. The valve is operated by Instrument Air (IA) and fails open upon loss of IA or loss of non-ESF 125 VDC control power.

CORRECTIVE ACTIONS:

1. The identification of this Technical Specification violation (positive reactivity addition without an OPERABLE CCP) occurred after the completion of the positive reactivity addition. The reactor trip breakers had already been opened after completion of control rod and DRPI testing. However, upon identification, the control room staff performed the required PMTs satisfactorily and declared the 1A CCP OPERABLE on April 2, 1993, at 0318 hours.

2. This event will be included in Licensed Operator Requalification. This action will be completed by August 31, 1993.

3. Temporary labels were fabricated and placed on the main control board to remind personnel of important Technical Specification equipment status. Additionally, an information board was placed in the control room highlighting key Technical Specification action times and dates, on a trial basis.

4. Additional actions will be taken to improve the OTL system. Evaluation of the actions will be completed and a schedule for implementation for these actions will be developed by November 30, 1993.

ADDITIONAL INFORMATION:

Within the last two years, the following events have been reported to the NRC as a result of ineffective use of the OTL:

- Unit 1 LER 91-020 Technical Specification violation due to failure to perform two rod position surveillances.
- Unit 1 LER 93-002 Technical Specification 3.0.3 entry due to two channels of power range nuclear instrumentation being inoperable.
- Unit 2 LER 93-007 Technical Specification violation due to the Control Room Envelope HVAC not in required mode of operation.