

# The Light company

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

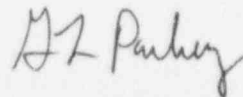
December 20, 1995  
ST-HL-AE-5258  
File No.: G26  
10CFR50.73

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 95-011  
Failure to Fully Meet the Requirements of  
Technical Specifications Due to An Inoperable Control Room  
Makeup and Cleanup Filtration System Exceeding An Allowed Outage Time

Pursuant to 10CFR50.73, South Texas Project submits the attached Unit 1 Licensee Event Report 95-011 regarding a failure to fully meet the requirements of Technical Specifications due to an inoperable Control Room Makeup and Cleanup Filtration System exceeding an allowed outage time. 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. S. M. Head at (512) 972-7136 or me at (512) 972-7800.



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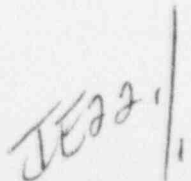
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Attachment: LER 95-011 (South Texas, Unit 1)

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Project Manager on Behalf of the Participants in the South Texas Project



Houston Lighting & Power Company  
South Texas Project Electric Generating Station

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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 MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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

TITLE (4)

Failure to fully meet the requirements of Technical Specifications due to an inoperable Control Room Makeup and Cleanup Filtration System exceeding an allowed outage time.

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
11	21	95	95	-- 011	-- 00	12	20	95		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)			
1	100	20.2201(b)	20.2203(a)(1)	20.2203(a)(2)(i)	20.2203(a)(2)(ii)
				20.2203(a)(2)(iii)	20.2203(a)(2)(iv)
				20.2203(a)(2)(iii)	20.2203(a)(4)
				20.2203(a)(2)(iv)	50.36(c)(1)
					50.36(c)(2)

LICENSEE CONTACT FOR THIS LER (12)

NAME: Scott M. Head - Sr. Consulting Engineer  
TELEPHONE NUMBER (include Area Code): (512) 972-7136

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

On November 21, 1995, Unit 1 was in Mode 1 at 100% power. On November 21, 1995, it was determined that the Train B Control Room Makeup and Cleanup Filtration System carbon filters had not met Technical Specification surveillance requirements for a period of 14 days between November 1, 1995 and November 14, 1995 rendering this system inoperable for a period of 14 days. The actions of Technical Specification 3.7.7.1 had not been taken after 7 days of inoperable condition because the condition was not recognized until after the Train B Control Room Makeup and Cleanup Filtration System had been restored to OPERABLE condition. The causes of this event are inadequate design of the deluge system serving the Control Room Makeup and Cleanup Filtration System and human performance not meeting management expectations when unexpected conditions were found during testing of the deluge system. Corrective actions include restoring the Train B Control Room Makeup and Cleanup Filtration System carbon filters to operable condition, completing a design change to the deluge system, and training regarding lessons learned from this event and management's expectations concerning evaluation of unexpected conditions.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
South Texas, Unit 1	05000 498	95	-- 011	-- 00	2 OF 4

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

DESCRIPTION OF EVENT:

On November 21, 1995, Unit 1 was in Mode 1 at 100% power. On November 21, 1995, it was determined that the Train B Control Room Makeup and Cleanup Filtration System carbon filters had not met Technical Specification surveillance requirements during Mode 1 operation for a period of 14 days between November 1, 1995 and November 14, 1995. This condition caused the Train B Control Room Makeup and Cleanup Filtration System to be inoperable for a period of 14 days.

Technical Specification 3.7.7.1 states:

"With one Control Room Makeup and Cleanup Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

Since the inoperable Train B Control Room Makeup and Cleanup Filtration System was not recognized until after the system was restored to an OPERABLE status, the action of the Technical Specification was not taken.

On October 31, 1995, leak-by of a test alarm valve into the dry portion of the deluge system serving the Train B Control Room Makeup and Cleanup Filtration System carbon filter housing was detected. The function of the deluge system is to provide protection for the carbon filter housing in the event of a fire. Collection of the leakage was initiated and a Condition Report was written.

On November 1, 1995, an air flow test was performed to verify that the dry pipe portion of the deluge system was free of obstructions. This air flow test was unrelated to the leakage noted the previous day. When a plug was removed from the dry portion of the deluge system piping to connect the air flow test rig, water drained out of the system. When water stopped draining out of the dry side of the system piping, the air flow test proceeded. No blockage was indicated in the piping and the test was completed satisfactorily.

On November 6, 1995, a representative carbon sample of the Train B Control Room Makeup and Cleanup Filtration System filters was obtained to perform the Adsorbent Test required by Technical Specification Surveillance Requirement 3/4.7.7.c(2). This test verifies a methyl iodide penetration of less than 1.0% for established conditions to meet charcoal filter performance criteria. On November 13, 1995, laboratory test results indicated a methyl iodide penetration at 2.25%. The Train B Control Room Makeup and Cleanup Filtration System was determined inoperable and Technical Specification 3.7.7.1 was entered.

On November 14, 1995, water was discovered in the Train B Control Room Makeup and Cleanup Filtration System cleanup filter unit housing when the housing was opened to replace the degraded charcoal filters indicated by the failed Adsorbent Test results. An inspection of the filter housing deluge system found the leakage past the test alarm valve noted on October 31, 1995 still being collected, deluge system valves in proper position, and water dripping from the spray nozzles inside the carbon filter housing.

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

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		95 --	011 --	00	

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

DESCRIPTION OF EVENT (CONTINUED):

The leaking test alarm valve was replaced. The water was removed and the carbon filter housing was dried. No indication of further leakage was noted from the spray nozzles. The carbon filters were replaced and the Adsorbent Test criteria was met on November 14, 1995. The Train B Control Room Makeup and Cleanup Filtration System was declared OPERABLE and Technical Specification 3.7.7.1 was exited.

CAUSE OF EVENT:

The root causes of this event are:

1. The design of the dry portion of the deluge system serving the Control Room Makeup and Cleanup Filtration System carbon filter housing did not provide adequate isolation.
2. Human performance not meeting management's expectations. When water was discovered in the dry portion of the deluge piping during the performance of the air flow test on November 1, 1995, the unexpected condition was not fully evaluated.

ANALYSIS OF EVENT:

Failure to meet the requirements of Technical Specifications is reportable pursuant to 10CFR50.73 (a)(2)(i)(B).

Engineering analysis concluded the following:

1. The water in the bottom of the carbon filter housing covered an insignificant portion of the cleanup filter flow area and would not affect air flow rates.
2. The removal efficiency of the wet cleanup filter during post-accident operation would be restored due to air flow drying out the wet carbon filter conditions. Regulatory Guide 1.52 prescribes reduced filter efficiencies for an environment at 100 percent humidity in a condensing environment. The spray nozzles at the charcoal filter beds are designed to provide a fine mist. The conditions in the carbon filter housing due to the amount of water there are considered bounded by the design post accident conditions of humidity and moisture condensation.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

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

ANALYSIS OF EVENT (CONTINUED):

3. The Train B Control Room Makeup and Cleanup Filtration System remained capable of meeting design basis functions of maintaining Control Room dose limits within the bounds of 10CFR50 Appendix A, General Design Criteria 19.

There were no adverse safety or radiological consequences from this event.

CORRECTIVE ACTIONS:

1. The Train B Control Room Makeup and Cleanup Filtration System carbon filters were replaced and the Adsorbent Test criteria were met.
2. Double valve isolation of the dry portion of the deluge system piping serving the Train B Control Room Makeup and Cleanup Filtration System carbon filters was established.
3. Double valve isolation of the dry portion of the deluge system piping serving all other carbon filter deluge systems in both units will be established by February 1996. A design change for this double valve isolation condition will be completed by March 1996.
4. Training will be conducted by February 1996 for fire protection personnel regarding the lessons learned from this event and management's expectation concerning evaluation of unexpected conditions.

ADDITIONAL INFORMATION:

There were no previous events reported by the South Texas Project to the Nuclear Regulatory Commission within the last three years regarding an inoperable Control Room Makeup and Cleanup Filtration System caused by the charcoal filters not meeting Adsorbent Testing criteria.