

The Light company

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

May 10, 1991
ST-HL-AE-3765
File No.: G26
10CFR50.73

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

South Texas Project Electric Generating Station
Unit 2
Docket No. STN 50-499
Licensee Event Report 91-005
Engineered Safety Features (ESF) Actuation of Control
Room Envelope HVAC Trains B and C Due to Unknown Cause

Pursuant to 10CFR50.73, Houston Lighting & Power Company (HL&P) submits the attached Licensee Event Report (LER 91-005) regarding an Engineered Safety Features (ESF) Actuation of Control Room Envelope HVAC Trains B and C due to unknown cause.

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

William J. Jump
William J. Jump
Manager,
Nuclear Licensing

AMR/amp

Attachment: LER 91-005 (South Texas, Unit 2)

Houston Lighting & Power Company
South Texas Project Electric Generating Station

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Revised 01/29/91

L4/NRC/

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)										PAGE (3)												
South Texas, Unit 2										0 5 0 0 0 4 9 9 1										1 OF 0 3												
TITLE (4) Engineered Safety Features (ESF) Actuation of Control Room Envelope HVAC Trains B and C Due to Unknown Cause																																
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 (9)										
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0 4	1 1	9 1	1 9	1	0 0	5	0 0	0	5	1	0 9	1											0 5 0 0 0									
OPERATING MODE (8)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50 (Check one or more of the following) (11)																													
1			20 402(h)					20 405(i)					X					60 734(i)(2)(v)					73 71(b)									
POWER LEVEL (10)			20 406(k)(1)(ii)					60 361(i)(1)										60 734(i)(2)(v)					73 73(p)									
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			20 406(k)(1)(iv)					60 734(i)(2)(ii)										60 734(i)(2)(vii)(A)														
			20 406(k)(1)(v)					60 734(i)(2)(iii)										60 734(i)(2)(vii)(B)														
			20 406(k)(1)(vi)					60 734(i)(2)(iv)										60 734(i)(2)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																																
NAME																				TELEPHONE NUMBER												
Charles Ayala - Supervising Licensing Engineer																				AREA CODE 5 1 2 9 7 2 - 8 6 2 8												
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC			
SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (15)												
X YES (If yes, complete EXPECTED SUBMISSION DATE:)																				MONTH DAY YEAR												
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ABSTRACT (Is this to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)																																

On April 11, 1991, Unit 2 was in Mode 1 at 100 percent power. At 1130, an automatic Engineered Safety Features (ESF) actuation of GRE HVAC Trains B and C to emergency mode occurred. Control Room Envelope (CRE) HVAC Train A had been manually actuated to the emergency mode in support of a surveillance procedure. No indication of a high radiation or safety injection signal was found. There has been no cause established for this actuation.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMR NO. 3150-0104

EXPIRES 5/31/86

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
South Texas, Unit 2	05000499	91	006	00	02	of	03

TEXT (If more space is required, use additional NRC Form 365A's) (17)

DESCRIPTION OF EVENT:

On April 11, 1991, Unit 2 was in Mode 1 at 100 percent power. At 1130, Control Room Envelope (CRE) HVAC trains B and C received an Engineered Safety Features (ESF) actuation signal and automatically shifted to the emergency (recirculation with filtered makeup) mode. Train A had been manually actuated to the emergency mode prior to the event in support of a surveillance procedure in progress at the time. All systems responded to the actuation as designed. Trains B and C were subsequently restored to their normal mode of operation.

Automatic actuation of the CRE HVAC to the emergency mode occurs upon receipt of a high radiation or safety injection (SI) signal. No indication of a high radiation signal was present on the Emergency Response Facilities Data Acquisition and Display System (ERFDADS) or the radiation monitoring system computer (RM-11). No ESF monitoring indications (SI High Radiation, LOOP) were illuminated in the control room at the time of the actuation. Review of ERFDADS and RM-11 data did not indicate that there was any momentary loss of power to the system which may have caused an actuation.

At the time of the event, a technician was present at the radiation monitoring panel (RM-23), located in the control room. He was performing a surveillance associated with the Spent Fuel Pool Exhaust monitor. The controls for this monitor and one of the two Control Room Intake Air Radioactivity Monitors are contained within the same panel. The technician stated that there was no indication of panel malfunction during the time preceding the actuation. A second surveillance of the Control Room A Train Emergency Ventilation System was also being performed at the time. A portion of the procedure requiring operation of the ventilation system for ten hours was in progress. Portions of the procedure concerning actuation of the Control Room Intake Air Radioactivity Monitor are performed after the ten hour run.

A detailed review of the surveillance procedures which were being performed at the time of the event showed no problems or inconsistencies which could have caused the actuation. The surveillance test to verify operability of the Control Room Intake Air Radiation Monitors was completed with satisfactory results on April 12, 1991.

CAUSE OF EVENT:

No cause has been established for this actuation of the CRE HVAC system to the emergency mode.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/21/85

FACILITY NAME (1) South Texas, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 9 9	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (if more space is required, use additional NRC Form 365A's) (17)

ANALYSIS OF EVENT:

The CRE HVAC system was actuated to the emergency mode. While any unnecessary challenge to an Engineered Safety Feature is undesirable, actuation of the Control Room ventilation to the recirculation mode represents a minimal hazard since it could not cause, exacerbate or prevent mitigation of an accident. This item is reportable pursuant to 10CFR50.73(a)(2)(iv) since actuation of the Control Room ventilation system to the recirculation mode is an Engineered Safety Feature actuation.

CORRECTIVE ACTIONS:

- 1) Additional root cause analyses using change analysis techniques will be performed for this and similar actuations in an attempt to identify other potential root causes. The results of this review and any subsequent corrective actions will be reported in a supplemental report by November 12, 1991.

ADDITIONAL INFORMATION:

Two LERs documenting spurious actuations of CRE HVAC with no determined cause have been submitted. They are LER 89-021 (Unit 1) and LER 88-025 (Unit 1).

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