

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): South Texas, Unit 1 DOCKET NUMBER (2): 050006198 PAGE (3): 1 OF 03

TITLE (4): Engineered Safety Features Actuations Due to Failure of Radiation Monitors

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		
08	27	88	88	050	00	09	26	88	DOCKET NUMBER(S): 050000		
									DOCKET NUMBER(S): 050000		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)

OPERATING MODE (9): <u>3</u>	<input type="checkbox"/> 20.402(a)	<input type="checkbox"/> 20.406(a)	<input checked="" type="checkbox"/> 50.72(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
POWER LEVEL (10): <u>0,0,0</u>	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(a)(1)	<input type="checkbox"/> 50.72(a)(2)(iv)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.38(a)(2)	<input type="checkbox"/> 50.72(a)(2)(iv)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	
	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iv)(B)	
	<input type="checkbox"/> 20.406(a)(1)(vi)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	

LICENSEE CONTACT FOR THIS LER (12):

NAME	TELEPHONE NUMBER
<u>Charles A. Ayala - Supervising Licensing Engineer</u>	<u>5112 917121-18161218</u>
AREA CODE	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC TURE	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFAC TURE	REPORTABLE TO NPROS
B									

SUPPLEMENTAL REPORT EXPECTED (14): YES (If yes, complete EXPECTED SUBMISSION DATE:) NO

EXPECTED SUBMISSION DATE (15): MONTH DAY YEAR

ABSTRACT (Limit to 1400 words; if approximately fifteen single space typewritten lines) (16)

On August 27, 1988, Unit 1 was in Mode 3 in preparation for reactor startup. At 1630 hours, Engineered Safety Features (ESF) actuation of all three trains of Heating Ventilating and Air Conditioning (HVAC) for the Control Room Envelope, Fuel Handling Building and Containment Building occurred simultaneously. Trouble alarms were also received on three of the radiation monitors which initiate these actuations and on the 480 Volt Load Center which powers the monitors' vital AC supply. It was subsequently determined that the load center trouble alarm was due to a ground fault on a feeder cable. The ground fault was located and cleared, and the HVAC systems and radiation monitors were returned to normal operation. Redundant monitors were available at all times to detect any high radiation. The cause of the radiation monitor actuation could not be traced directly to the ground fault. For this reason, the vital AC inverter system which feeds the radiation monitors is being evaluated for proper operation. The results of this evaluation will be included in a supplement to this LER. The faulted feeder cable has been repaired.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
South Texas, Unit 1	0500049888	88	050	00	02	03

TEXT (if more space is required, use additional NRC Form 266A) (17)

DESCRIPTION OF OCCURRENCE:

On August 27, 1988, Unit 1 was in Mode 3 in preparation for reactor startup. At 1630 hours, Engineered Safety Features (ESF) actuation of all three trains of Heating Ventilating and Air Conditioning (HVAC) for the Control Room Envelope, Fuel Handling Building and Containment Building occurred simultaneously. Trouble alarms were also received on three of the radiation monitors which initiate these actuations and on the 480 Volt Load Center which powers the monitors' vital AC supply. The Control Room Operators immediately determined that the load center trouble alarm was due to a ground fault. The connected loads were then individually secured in order to isolate the ground. When the Reactor Containment Fan Cooler (RCFC) 12C was secured, the ground fault cleared. The HVAC systems and radiation monitors were returned to normal operation. Redundant radiation monitors were available at all times to detect any high radiation. The ground fault was later found in Phase A of the feeder cable to the RCFC motor. This cable was repaired during a planned maintenance outage. The effect of this ground fault on the radiation monitors could not be immediately determined because the vital AC supply to the monitors should have isolated them from any 480 Volt system transients.

CAUSE OF OCCURRENCE:

The ESF actuations were caused by the failure of the three radiation monitors. Because the radiation monitors are powered from a vital AC inverter with battery backup, the effect of the ground fault on the 480 Volt system could not be tied directly to the failure of the radiation monitors. An investigation of the operation of the vital AC inverter system which powers the radiation monitors is underway. The results of this investigation will be included in a supplement to this LER.

ANALYSIS OF EVFNI:

ESF actuations of CRE HVAC, FHB HVAC and Containment Ventilation Isolation are reportable under 10CFR50.73(a)(2)(iv). There was no adverse affect on safety due to this event because each of these systems actuated to the safe mode. Had a radiological event occurred, any release would have been contained as designed. The redundant monitors were available at all times to detect any high radiation levels.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) South Texas, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 9 8 8 8	L/R NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	0 5 0	0 0 0	0 3	OF	0 3

TEXT (if more space is required, use additional NRC Form 368A's) (17)

CORRECTIVE ACTION:

The vital AC inverter system which feeds the radiation monitors will be evaluated for proper operation to ensure that it isolates it's connected loads from 480 Volt system transients. This evaluation will be completed by November 24, 1988.

ADDITIONAL INFORMATION:

Two other events have occurred which resulted in ESF actuations of HVAC systems due to equipment failures in the radiation monitoring system. These events were reported under LER 87-010 and LER 88-046.

NL.LER88050

The Light company

Houston Lighting & Power

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

September 26, 1988

ST-HL-AE-2789

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 88-050 Regarding Engineered
Safety Features Actuations Due to Failure of Radiation Monitors

Pursuant to 10CFR50.73, Houston Lighting & Power (HL&P) submits the attached Licensee Event Report (LER 88-050) regarding Engineered Safety Features actuations which were initiated when power to three radiation monitors was interrupted. 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 W.H. Kinsley
G. E. Vaughn
Vice President
Nuclear Plant Operations

GEV/BEM/nl

Attachment: LER 88-050

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