

The Light company

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

April 23, 1990

ST-HL-AE-3439

File No.: G26

10CFR50.73

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

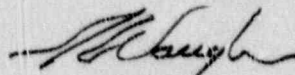
South Texas Project Electric Generating Station
Unit 1

Docket No. STN 50-498

Licensee Event Report 90-004 Regarding an Inadvertent
Engineered Safety Features Actuation
Due to Inadequate Control of Procedure Performance

Pursuant to 10CFR50.73, Houston Lighting & Power Company (HL&P) submits the attached Licensee Event Report (LER 90-004) regarding an inadvertent engineered safety features actuation due to inadequate control of procedure performance. 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 or myself at (512) 972-7921.



G. E. Vaughn
Vice President
Nuclear Generation

BEM/nl

Attachment: LER 90-004 (South Texas, Unit 1)

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PDR ADOCK 05000498
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A Subsidiary of Houston Industries Incorporated

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Houston Lighting & Power Company
South Texas Project Electric Generating Station

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Revised 12/15/89

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) South Texas, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 9 8 1 OF 0 3										PAGE (3) 1 OF 0 3	
TITLE (4) Inadvertent Engineered Safety Features Actuation Due to Inadequate Control of Procedure Performance																					
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	3	2	4	9	0	9	0	0	0	4	2	3	9	0	0 5 0 0 0						
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																			
1		20.402(b)				20.405(e)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)				73.71(e)							
0 9 1 0		20.405(a)(1)(ii)				50.36(e)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(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)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Charles A. Ayala - Supervising Licensing Engineer										TELEPHONE NUMBER 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							
SUPPLEMENTAL REPORT EXPECTED (14)													EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR				
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)													<input checked="" type="checkbox"/> NO								

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

On March 24, 1990, Unit 1 was in Mode 1 at 90 percent power. At 0735 hours, during preparation for the performance of a Technical Specification required surveillance test on Standby Diesel Generator (SDG) 13, it was inadvertently started when a maintenance technician connected a test instrument across an Engineered Safety Features Actuation System slave relay contact. This action was performed out-of-sequence with the surveillance procedure steps. The SDG started in the emergency mode and performed as expected. The cause of this event was lack of recognition of the potential for the test instrument to initiate an SDG start. The SDG surveillance procedures have been changed to identify the potential for unexpected starts. Other surveillance procedures which require relay contact status verification will be reviewed to determine if additional cautions are required to prevent inadvertent actuations. A training bulletin will be issued to maintenance personnel to reemphasize the potential effects of test instruments on plant systems during surveillance testing. Additional guidance to operations personnel is being provided to emphasize importance of controlling procedure performance in sequence.

A1/LER004U1.L01

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
South Texas, Unit 1	05000498	90	004	0	002	OF	03

TEXT (If more space is required, use additional NRC Form 308A's) (17)

DESCRIPTION OF EVENT:

On March 24, 1990, Unit 1 was in Mode 1 at 90 percent power. At 0735 hours during preparation for the performance of a Technical Specification required surveillance test on Standby Diesel Generator (SDG) 13, it was inadvertently started by a utility maintenance technician. The SDG started in the emergency mode and operated properly. The SDG was secured and the surveillance was then successfully performed at 1100 hours. The NRC was notified of this event at 1119 hours.

Under accident conditions, the SDGs are actuated through slave relay contacts by the Solid State Protection System (SSPS). During surveillance testing, SDG starting is initiated from the slave relays in order to test as much of the actuation circuit as possible. Because there are two independent starting circuits for each SDG, verification of the slave relay contact status during the test is required to ensure that both starting circuits actuate. This is performed by a maintenance technician under the direction of a plant operator. During the performance of this test, the maintenance technician assigned to verify the contact status prematurely placed a test instrument across the slave relay start contacts without being directed to by an operator. This resulted in the contact verification step being performed prior to the manual starting of the SDG and out-of-sequence with the surveillance procedure steps. The instrument allowed sufficient current flow to pick up the relay and start SDG 13. A caution was not provided in the surveillance procedure to emphasize that a contact status check before the manual SDG start would cause an inadvertent start, however the procedure steps were in the correct order. The procedure had been performed several times without an inadvertent start.

During the investigation of this event, a similar event was discovered which occurred on December 25, 1987 during the performance of the same surveillance test on a different SDG. The event occurred prior to initial criticality and, due to a misinterpretation, was not believed to be reportable at the time. Since then, operations personnel have had additional instruction on reporting requirements and now understand that the event was reportable.

CAUSE OF EVENT:

The event was caused by performance of surveillance procedure steps out-of-sequence. Deviation from procedure sequence was caused by failure of the test performers to recognize the potential for the test instrument to initiate an SDG start. Additionally, the emphasis on the significance of this sequence in the procedure was less than adequate.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) South Texas, Unit 1	DOCKET NUMBER (2) 05000498	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		90	004	00	03	OF	03

TEXT (If more space is required, use additional NRC Form 366A's) (11)

ANALYSIS OF EVENT:

Inadvertent actuation of an Engineered Safety Feature is reportable pursuant to 10CFR50.73(a)(2)(iv). The SDG started in the emergency mode as expected and no problems were noted. In the event of a loss of offsite power coincident with this SDG start, the Train C ESF bus would have sequenced onto the SDG as designed.

CORRECTIVE ACTION:

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

1. The SDG surveillance procedures have been changed to identify the potential for an inadvertent SDG start if relay contacts are verified out-of-sequence.
2. Other surveillance procedures which require similar relay contact verification will be reviewed to determine if additional cautions are required. This action will be completed by May 16, 1990.
3. A training bulletin will be issued to maintenance personnel describing this event and reemphasizing the potential effects of test instruments on plant systems during surveillance testing. This action will be completed by April 30, 1990.
4. Additional guidance will be given to operations personnel describing this event and emphasizing the importance of controlling the sequence of procedural steps. This action will be completed by April 30, 1990.

ADDITIONAL INFORMATION:

There have been no previous events reported regarding inadvertent Engineered Safety Features actuations due to the connection of test equipment.

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