

The Light company

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

February 25, 1993
ST-HL-AE-4347
File No.: G26
10CFR50.73

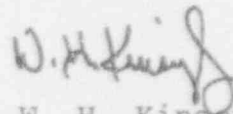
U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Unit 1
Docket No. STN 50-498
Revision 1 to Licensee Event Report 91-019
Regarding A Reactor Coolant System Leak Rate
Greater Than Technical Specification Limits

Pursuant to 10CFR50.73, Houston Lighting & Power (HL&P) submits the attached revision to Licensee Event Report (LER 91-019) regarding a Reactor Coolant System leak greater than Technical Specification Limits. This event did not have any adverse impact on the health and safety of the public.

The revision addresses the results of the disassembly and inspection of the Reactor Coolant System (RCS) Letdown Valve in an attempt to locate and repair the cause of the original packing failure. No additional corrective actions were identified.

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



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

JMP/sr

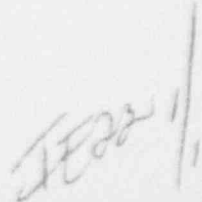
Attachment: LER 91-019 Revision 1 (South Texas, Unit 1)

050034

LER\91268001.U1

A Subsidiary of Houston Industries Incorporated

9303080068 930225
PDR ADDCK 05000498
S PDR



Houston Lighting & Power Company
South Texas Project Electric Generating Station

ST-HL-AE-4347
File No.: G26
Page 2

CC:

Regional Administrator, Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

Project Manager
U.S. Nuclear Regulatory Commission
Washington, DC 20555

J. I. Tapia
Senior Resident Inspector
c/o U. S. Nuclear Regulatory
Commission
P. O. Box 910
Bay City, TX 77414

J. R. Newman, Esquire
Newman & Holtzinger, P.C., STE 1000
1615 L Street, N.W.
Washington, DC 20036

D. E. Ward/T. M. Puckett
Central Power and Light Company
P. O. Box 2121
Corpus Christi, TX 78403

J. C. Lanier/M. B. Lee
City of Austin
Electric Utility Department
P.O. Box 1088
Austin, TX 78767

K. J. Fiedler/M. T. Hardt
City Public Service Board
P. O. Box 1771
San Antonio, TX 78296

Rufus S. Scott
Associate General Counsel
Houston Lighting & Power Company
P. O. Box 61867
Houston, TX 77208

INPO
Records Center
1100 Circle 75 Parkway
Atlanta, GA 30339-3064

Dr. Joseph M. Hendrie
50 Bellport Lane
Bellport, NY 11713

D. K. Lacker
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

U.S. Nuclear Regulatory Comm.
Attn: Document Control Desk
Washington, D.C. 20555

LICENSEE EVENT REPORT (LER)

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

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 (MNBR 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.

FACILITY NAME (1)

South Texas, Unit 1

DOCKET NUMBER (2)

05000 498

PAGE (3)

1 OF 4

TITLE (4)

Reactor Coolant System Leak Rate Greater Than Technical Specification Limits

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
09	05	91	91	019	01	02	25	93		05000
										05000

OPERATING MODE (9)

1

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)

50.30(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)

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

Jairo Pinzon - Senior Engineer

TELEPHONE NUMBER (Include Area Code)

(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 NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

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 September 5, 1991, Unit 1 was in Mode 1 at 100% power. At 1806 hours, the Control Room received a Reactor Coolant Drain Tank (RCDT) level HI-HI/LO-LO alarm. At 1838 hours, Reactor Coolant System (RCS) leakage was determined to be approximately 15 gallons per minute (GPM), which is greater than the Technical Specification 3.4.6.2 limits. As a result, the Plant declared an Unusual Event. At 1954 hours, plant personnel entered the Reactor Containment Building (RCB) to investigate. By isolating normal letdown with excess letdown in service and observing the leak rate decrease, the leakage was identified to be in the RCS letdown valve A1CVLCV0465. This event resulted from damaged valve packing. The valve was inspected and no evidence was found to indicate a cause for the packing failure. The valve was repacked and returned to an operable status. The RCS letdown valve was subsequently disassembled to attempt to locate and repair the cause for the two original packing failures. No specific causal factor was identified.

LER\91268001.U1

REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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 (MNBE 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
South Texas, Unit 1	05000498	91	- 019 -	01	02 OF 04

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

DESCRIPTION OF EVENT:

On September 5, 1991, at 1806 hours, with Unit 1 in Mode 1 at 100% power, the control room received a Reactor Coolant Drain Tank (RCDDT) level HI-HI/LO-LO alarm. The pressurizer level was observed to be decreasing and the charging flow increasing. Plant operators shifted Reactor Coolant System (RCS) charging normal lineup to RCS charging alternate lineup to shut valve A1CVM0V0003 and isolate its packing leak off line with no change in leak rate. At 1838 hours, the RCS leak rate was determined to be approximately 15 gallons per minute (GPM) which is greater than the Technical Specification 3.4.6.2 limits. As a result, the plant declared an Unusual Event. By isolating normal letdown with excess letdown inservice and observing the leak rate decrease, the operators identified the leakage to be in the RCS letdown. After further valve manipulations, including electrically backseating A1CVLCV0465 and C1CVLCV0468, the leak was suspected to be at A1CVLCV0465.

On September 5, 1991, at 2300 hours the plant commenced shutdown as required by Technical Specification 3.4.6.2 action statements. On September 7, 1991, corrective maintenance was performed on A1CVLCV0465. The valve was repacked per the appropriate procedure. The stem of the valve was found to have minor marks and scores, however the scoring was in a location which would be outside the packing when the valve is open (its normal position). Further inspection of the valve found no other significant abnormalities. On September 8, 1991, at 0819 hours, after post maintenance testing, A1CVLCV0465 was declared operable.

Valve A1CVLCV0465 has had a history of leakage problems. The gland packing fasteners were previously adjusted due to leaks identified in July 1988, and August 1988, and the valve was repacked in January 1989. Due to further leaking the valve packing was replaced again on February 18, 1991.

The RCS letdown valve was disassembled during the recently completed refueling outage in Unit 1. The inspection that was performed identified that the bonnet backseats and valve stem were worn and both were replaced. Additionally, the stuffing box was inspected and no discrepancies were noted. The packing was replaced by a live loaded design.

LER\91268001.U1

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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 (MNB 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
South Texas, Unit 1	05000498	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	03 OF 04
		9 1	- 0 1 9 -	0 1	

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

CAUSE OF EVENT:

This event resulted from damaged valve packing. Although no evidence was found to indicate a cause for the packing failure, the fact that this valve has had a history of packing failure and that other valves of similar design and application with similar packing arrangement have not failed would indicate that the probable cause of the event is a problem with the valve.

The disassembly of the RCS letdown valve, during the recently completed refueling outage, identified no specific causal factor for the original packing failure. The bonnet backseats and valve stems were found to be worn and both were replaced. Additionally, the stuffing box was inspected and no discrepancies were noted.

ANALYSIS OF EVENT:

Completion of a plant shutdown required by Technical Specifications is reportable pursuant to 10CFR50.73(a)(2)(i)(A). Excessive leakage is considered a precursor to a loss of coolant accident and warrants immediate attention to correct the problem. In this case, the potential leak rate was limited due to the source and did not represent a significant risk to degrade to a more severe condition. This event did not result in any safety concerns or risk of radiological release.

CORRECTIVE ACTIONS:

1. The valve was inspected and repacked on September 8, 1991.
2. The valve was disassembled during the recently completed Unit 1 Fourth Refueling Outage in an attempt to locate and repair the cause for packing failures. The inspection identified that the bonnet backseats and valve stem were worn. Both the bonnet backseat and the valve stems were replaced. The stuffing box was also inspected with no discrepancies found. No specific causal factor was identified for the original packing failure.
3. The packing on the valve was replaced by a live loaded design.

LER\91268001.U1

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
South Texas, Unit 1	05000498	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	04 OF 04
		9 1	- 0 1 9 -	0 1	

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

ADDITIONAL INFORMATION:

The valve that failed is a motor-operated 4 inch gate valve model number 04003GM88FNH0EG furnished by Westinghouse.

There have been no previous similar events reported at STPEGS.

LER\91268001.U1