

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Shoreham Nuclear Power Station Unit #1										DOCKET NUMBER (2) 0 5 0 0 0 3 2 2				PAGE (3) 1 OF 03										
TITLE (4) Update on LLRTs which exceeded the Allowable Tech.Spec. limits																								
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)														
MONTH	DAY	YEAR	YEAR	SEQUENT AL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER (S)											
1	0	0	9	8	5	8	5	0	4	9	0	1	1	2	8	5	0	5	0	0	0	0	0	0
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																						
5		20.402(b)				20.406(c)				80.73(a)(2)(iv)				73.71(b)										
POWER LEVEL (10)		20.406(a)(1)(i)				80.38(c)(1)				80.73(a)(2)(v)				73.71(c)										
0.1010		20.406(a)(1)(ii)				80.38(c)(2)				80.73(a)(2)(vi)				OTHER (Specify in Abstract Below and in Text: NRC Form 366A)										
		20.406(a)(1)(iii)				80.73(a)(2)(i)				80.73(a)(2)(viii)(A)														
		20.406(a)(1)(iv)				80.73(a)(2)(ii)				80.73(a)(2)(viii)(B)														
		20.406(a)(1)(v)				80.73(a)(2)(iii)				80.73(a)(2)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																								
NAME Robert W. Grunseich, Operational Compliance Engineer										TELEPHONE NUMBER 5116 912191-8131010														
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					
B	BIN	IISIV	V101815	NO																				
SUPPLEMENTAL REPORT EXPECTED (14)																								
YES (If yes, complete EXPECTED SUBMISSION DATE:)										NO		EXPECTED SUBMISSION DATE (15)		MONTH		DAY		YEAR						
X												0.2		0.1		8.6								

ABSTRACT (Limit to 1400 spaces - ie approximately fifteen single space typewritten lines) (16)

On October 9, 1985 and October 10, 1985, two Local Leak Rate Tests (LLRT) showed leakage to exceed the allowable values as required by Technical Specifications. Both tests were performed during Operational Condition 5 for both events, while the plant was in a source replacement outage. On October 9 a LLRT was performed on penetration X-17 (RCIC Steam Exhaust line). The leakage, when combined with all Type B and C penetration leakages, exceeded the allowable limit (0.6 La) as required by Technical Specification 3.6.2.1.b. From October 10th through the 14th, during the performance of LLRTs on the four Main Steam Line penetrations, the leakage measured was found to have excessive leakage beyond the allowable value (11.5 SCFH) as required by Tech. Spec. 3.6.1.2.c. Upon completion of all repairs, the penetrations subsequently passed their respective LLRTs. The two RCIC check valves in penetration X-17 were removed and are currently being replaced. The valves were disassembled and found to have damaged internals. The cause of the damage is currently being investigated and will be identified in a supplemental report, along with any corrective action taken or planned to prevent recurrence. In addition, details of subsequent failures will be submitted in the report.

Note - This revision is being provided in the interim to report the new information discovered upon disassembly of the RCIC check valves.

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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 (3):

PAGE (3):

Shoreham Nuclear Power Station Unit #1

0 5 0 0 0 3 2 2 8 5 - 0 4 9 - 0 1 0 2 OF 0 3

TEXT (If more space is required, use additional NRC Form 200A's (17).

On - October 9, 1985 and October 10, 1985, two Local Leak Rate Tests (LLRT) showed leakage to exceed the allowable values as required by the Technical Specifications. Both tests were performed while the plant was in Operational Condition 5 during a source replacement outage.

From October 10th through the 14th, LLRTs were performed on the four Main Steam Line penetrations with each line consisting of an inboard and outboard isolation valve (1B21-MOV-081A-D and 082A-D). All four penetrations were found to have excessive leakage beyond the allowable value (11.5 SCFH) for each valve as required by Tech. Spec. 3.6.1.2.C. On November 29, 1985 after the four inboard valves were reworked, the penetrations were retested and the leakage values for all valves were within the allowable limits. There was minimal safety significance to the event. An engineering evaluation concluded that had a LOCA occurred during 5% power operation with excessive MSIV leakage, the integrated radiation doses would have been well below the limits as required by 10CFR100 and the General Design Criterion 19 of Appendix A of 10CFR50.

On October 9th, 1985 a LLRT was performed on penetration X-17 (RCIC Steam Exhaust Line), which consists of the RCIC Steam Exhaust Isolation Valves (1E51*MOV-045, and swing check valves 1E51*08V-0020 and 0021). The leakage, when combined with all type B and C penetration leakages, exceeded the allowable limit (0.6La) as required by Tech. Spec. 3.6.2.1.b. The source of the leakage was identified as being through the two check valves which were scheduled to be replaced with new lift check valves during this outage. When the valves were removed from the line and disassembled, damage to valve bodies and their internals was identified. Upon inspection of the valve internals of Check Valve 1E51*08V-0020, it was discovered that the disc retaining nut, washer, and cotter pin were missing. An examination of the threads on the disc retention boss indicated that the nut had been pulled off. The three bolts retaining the disk support ring of the same valve were broken. Two of the bolts were broken in the plane of the bottom of a hole that had been drilled through the bolt head. This hole was being used to retain the lock wire. There is evidence on one of the bolts that the bolt failure had started at the lock wire hole and worked its way out. The holes that were drilled through the heads of the bolts appear to be oversized and reduced the strength of the bolts and therefore contributed to their failure. Two of three bolt holes drilled in the second valve were also oversized.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Shoreham Nuclear Power Station Unit #1	05000322	85	049	01	03	OF	03

TEXT (If more space is required use additional NRC Form 256A's (17))

A review of the manufacturer's drawing of these valves revealed that they were originally supplied with bolts that had been drilled; however, the design called for these bolts to be restrained using tab washers or cotter pins, not lock wire. The manufacturer of the valve, the Velan Valve Company, has been requested to determine whether or not these bolts were supplied with lock wire when they were delivered to the Licensee.

In addition, indentations in both valve bodies were found due to repeated hanger arm impact. The indentation size in valve 0020 was approximately 3/8" deep x 1 1/4" long x 1" wide, and in valve 0021, 5/16" x 1 1/4" long x 1" wide. Cracks appear to be present in the hanger arm near the valve body impact point for valve 0020. Preliminary studies have strongly indicated that the slamming of the disks may have been attributed to the preoperational testing that was performed on the valves. This required the use of low pressure steam to run the RCIC Turbine at low steam flow conditions. These tests were performed in accordance with approved plant procedures.

There was minimal safety significance to the event. Had an isolation signal occurred while the plant was at 5% power, any leakage through the penetration would have been contained in a safety system (RCIC).

The cause of the damage is currently being investigated and will be identified in a supplemental report, along with any corrective action taken or planned to prevent recurrence. In addition, details of subsequent failures will be submitted in the report.

Note - This revision is being provided in the interim to report the new information discovered upon disassembly of the RCIC check valves.



LONG ISLAND LIGHTING COMPANY

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TEL. (516) 929-8300

December 19, 1985

PM-85-291

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

In accordance with 10CFR50.73, enclosed is a copy of Shoreham Nuclear Power Station Unit #1's Licensee Event Report 85-049 revision 1. This revision is being submitted to include new information that is available as a result of the disassembly of the RCIC check valves.

Sincerely yours,

William E. Steiger, Jr.
Plant Manager

WES/rg

Enclosure

cc: Dr. Thomas E. Murley, Regional Administrator
John Berry, Senior Resident Inspector
Institute of Nuclear Power Operations, Records Center
American Nuclear Insurers

SR.A21.0200

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