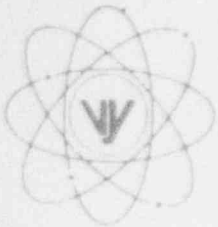


# VERMONT YANKEE NUCLEAR POWER CORPORATION



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October 7, 1993

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

REFERENCE: Operating License DPR-28  
Docket No. 50-271  
Reportable Occurrence No. LER 93-012

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 93-012.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

*Robert J. Wanczyk*

Robert J. Wanczyk  
Plant Manager

cc: Regional Administrator  
USNRC  
Region I  
475 Allendale Road  
King of Prussia, PA 19406

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NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION (6-89)										APPROVED OMS NO. 3150-0104 EXPIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-350), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.														
FACILITY NAME (1)  VERMONT YANKEE NUCLEAR POWER STATION										DOCKET NO. (2)  0 5 0 0 0 2 7 1							PAGE (3)  0 1 OF 0 3							
TITLE (4) Appendix J Type B and C Failure Due to Seat Leakage																								
EVENT DATE (5) MONTH DAY YEAR 0 9 0 8 9 3					LER NUMBER (6) YEAR SEQ # REV # 9 3 - 0 1 2 - 0 0					REPORT DATE (7) MONTH DAY YEAR 1 0 0 7 9 3					OTHER FACILITIES INVOLVED (8) FACILITY NAMES DOCKET NO. (S) 0 5 0 0 0 0 0 0									
OPERATING MODE (9)  N		THIS REPORT IS SUBMITTED PURSUANT TO REQ'TS OF 10 CFR §: CHECK ONE OR MORE (11)																						
POWER LEVEL (10) 0 0 0		20.402(b) 20.405(a)(1)(i) 20.405(a)(1)(ii) 20.405(a)(1)(iii) 20.405(a)(1)(iv) 20.405(a)(1)(v)					20.405(c) 50.36(c)(1) 50.36(c)(2) 50.73(a)(2)(i) 50.73(a)(2)(ii) 50.73(a)(2)(iii)					50.73(a)(2)(iv) 50.73(a)(2)(v) 50.73(a)(2)(vii) 50.73(a)(2)(viii)(A) 50.73(a)(2)(viii)(B) 50.73(a)(2)(x)					73.71(b) 73.71(c) OTHER:							
LICENSEE CONTACT FOR THIS LER (12)																								
NAME  ROBERT J. WANCZYK, PLANT MANAGER															TELEPHONE NO.  AREA CODE 8 0 2 2 5 7 - 7 7 1 1									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																								
CAUSE	SYST	COMPONENT			MFR			REPORTABLE TO NRPDS	....	CAUSE	SYST	COMPONENT			MFR			REPORTABLE TO NRPDS	....					
X	L F	I S V	C	3 3 9	YES	....												....						
X	I G	I S V	C	5 6 0	YES	....												....						
SUPPLEMENTAL REPORT EXPECTED (14)															EXPECTED SUBMISSION DATE (15)					MO DAY YR				
X YES (If yes, complete EXPECTED SUBMISSION DATE)															NO					1 1 0 8 9 3				

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

On 09/08/93 and 09/18/93 while performing Type C Leak Rate Testing with the Plant shutdown for the 1993 refuel outage, Containment Air check valve CA-89C (EHS=LF) and Traversing Incore Probe (TIP) Ball Valve #2 (EHS=IG) were found to have seat leakage above that permitted by Technical Specification 3.7.A.4.

On 09/08/93, the sum total as-found maximum pathway leakage for Type B (penetrations) and Type C (valves) exceeded that allowed by 10CFR50 Appendix J. The pathway leakage exceeded that allowed by Appendix J as a result of the leakage through check valve CA-89C. Appendix J limits the total B and C penetration leakage to 0.60 La.

Vermont Yankee will perform maintenance on the valves that were found to be leaking to determine and correct the cause of the failure. The valves will then be retested to verify that seat leakage is within allowable limits.

The root cause evaluation for the failure of the two valves is ongoing and the results will be reported in a supplement to this LER.

NRC Form 366A U.S. NUCLEAR REGULATORY COMMISSION (6-89)		APPROVED OMS NO. 3150-0104 EXPIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-350), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.	
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION			
FACILITY NAME (1)	DOCKET NO (2)	LER NUMBER (6)	
		YEAR	SEQ #
			REV #
VERMONT YANKEE NUCLEAR POWER CORPORATION	05000271	93	012
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TEXT (If more space is required, use additional NRC Form 366A) (17)

#### DESCRIPTION OF EVENT

On 09/08/93 and 09/18/93 while performing Type C Leak Rate Testing with the Plant shutdown for the 1993 refuel outage, Containment Air Valve CA-89C(EIIS=LF) and Traversing Incore Probe (TIP) Ball Valve #2(EIIS=IG) were found to have seat leakage above that permitted by Technical Specification 3.7.A.4.

The following information is for the affected valves:

CA-89C	1 1/2"	Circle Seal Check Valve
TIP Ball #2	3/8"	Consolidated Controls Solenoid Operated Ball Valve

The measured leakage for the valves were:

Penetration X-22	CA-89C	Leakage Exceeded Test Apparatus Capacity
Penetration X-35B	Tip Ball #2	Leakage = 0.623 pounds mass per hour

Allowable single valve leakage is limited to 0.522 pounds mass per hour.

On 09/08/93, the sum total as-found maximum pathway leakage for Type B (penetrations) and Type C (valves) exceeded that allowed by 10CFR50 Appendix J. The pathway leakage exceeded that allowed by Appendix J as a result of the leakage through check valve CA-89C. Appendix J limits the total B and C penetration leakage to 0.60 La.

#### CAUSE OF EVENT

To be determined after maintenance has been completed and reported in a supplement to this LER.

#### ANALYSIS OF EVENT

Vermont Yankee calculates total penetration leakage using the maximum pathway leakage method (summing the largest Type C valve leakage for each penetration). Due to the leakage through CA-89C, Vermont Yankee conservatively calculates that the Appendix J criteria of 0.6 La was exceeded.

Calculating total penetration leakage using the minimum pathway leakage method (the sum of the Type B and the smaller of the Type C) is currently yielding a total penetration leakage within the allowable limits.

For CA-89C, a second valve in the same line met the leakage criteria in the Technical Specifications and Appendix J.

TIP Ball Valve #2 is the only Appendix J tested valve in the line for penetration X-35B, but the leakage from that valve was quantifiable and only slightly greater than the acceptance criteria. In addition, an explosive isolation valve is also installed in the line downstream of the TIP ball valve. This valve is not leak tested, but will provide backup isolation.

Based on the above, the potential adverse effects on the public health and safety as a result of these events was minimal.

NRC Form 366A U.S. NUCLEAR REGULATORY COMMISSION (6-89)				APPROVED OMS NO. 3150-0104 EXPIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-350), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.					
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION									
FACILITY NAME (1)		DOCKET NO (2)		LER NUMBER (6)			PAGE (3)		
VERMONT YANKEE NUCLEAR POWER CORPORATION		05000271		YEAR 93	SEQ # 012	REV # 00	03	OF	03

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

### CORRECTIVE ACTIONS

Corrective Actions implemented prior to plant startup:

1. Repair and successfully retest failed valves CA-89C and TIP Ball Valve #2 prior to plant startup.

Long Term Corrective Action:

1. Identify root cause for the failures of the two valves prior to startup and report it in a supplement to this LER.

### ADDITIONAL INFORMATION

No similar events have been reported to the Commission for TIP Ball valves in the last five years.

A similar event was reported to the Commission for Containment Air Check Valve CA-89C in 1989 (LER 89-07).

A similar event was reported to the Commission for total as-found B & C leakage in 1989 (LER 89-07), 1990 (LER 90-12), and 1992 (LER 92-10).