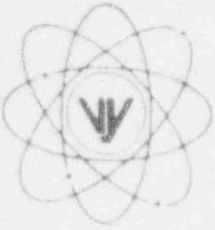


VERMONT YANKEE NUCLEAR POWER CORPORATION



P.O. Box 157, Governor Hunt Road
Vernon, Vermont 05354-0157
(802) 257-7711

September 9, 1994
BVY 94-93

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

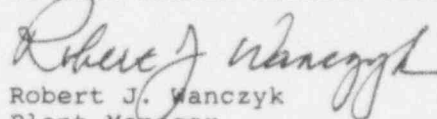
REFERENCE: Operating License DPR-28
Docket No. 50-271
Reportable Occurrence No. LER 94-010

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 94-010.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION


Robert J. Wanczyk
Plant Manager

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

9409150131 940909
PDR ADOCK 05000271
S PDR

150000

IE22
11

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-530), 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)																					
FACILITY NAME (1)										DOCKET NO. (2)					PAGE (3)						
VERMONT YANKEE NUCLEAR POWER STATION										0 5 0 0 0 2 7 1					0 1 OF 0 4						
TITLE (4) NNS Components Acting as a Primary Containment Boundary																					
EVENT DATE (5)				LER NUMBER (6)				REPORT DATE (7)				OTHER FACILITIES INVOLVED (8)									
MONTH	DAY	YEAR	YEAR	SEQ #	REV#	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NO. (S)								
0 8	1 1	9 4	9 4	0 1 0	0 0	0 9	0 9	9 4	N/A				0 5 0 0 0								
								N/A				0 5 0 0 0									
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO REQ'MTS OF 10 CFR §: CHECK ONE OR MORE (11)																			
N		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		1 0 0				20.405(a)(1)(i)				50.36(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)											
		20.405(a)(1)(iv)				X 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										TELEPHONE NO.											
ROBERT J. WANCZYK PLANT MANAGER										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 NPD	CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPD	CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPD	CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPD		
N/A				No	N/A				No	N/A				No	N/A				No		
N/A				No	N/A				No	N/A				No	N/A				No		
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)											
YES (If yes, complete EXPECTED SUBMISSION DATE)										MO DAY YR											
X NO																					

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

On August 11, 1994, as a result of an engineering review performed by the Yankee Atomic Electric Company (YAEC), it was determined that a condition existed with two primary containment penetrations (X-52E and X-52F) which did not meet the required safety class design. The Vermont Yankee Safety Classification Manual in section 2.2.3.2.d, specifies that the classification of systems, components and structures, which are required to provide or maintain primary containment integrity be built to Safety Class 2 standards. The identified Non-Nuclear Safety (NNS) portions of these penetrations were isolated on August 11, 1994 and a reportability determination was completed on August 25, 1994. This event was reported to the USNRC as a non-emergency notification within one hour pursuant to 10CFR50.72 (b)(1)(ii).

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-530), 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)	
VERMONT YANKEE NUCLEAR POWER STATION	05000271	YEAR 1994	SEQ # - 010 REV # - 000
			PAGE (3) 02 OF 04

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

DESCRIPTION

This LER describes an event that occurred at Vermont Yankee on August 11, 1994. This event evolved as a result of an engineering evaluation performed in response to another potentially reportable event that occurred at Vermont Yankee on March 17, 1994. This event involved the determination that portions of two primary containment penetrations did not meet Safety Class 2 requirements as required by the design specified in the Vermont Yankee Safety Classification Manual (SCM). This event was reported to the USNRC on August 25, 1994 pursuant to 10 CFR 50.72 (a)(2)(ii) as a condition outside of the design basis.

The engineering review was initiated as a result of an event that occurred on March 17, 1994. During that event, a Non-Nuclear Safety (NNS) pressure gauge and recorder were connected and left unattended for a period of 1.5 hours to the pressure retaining portion of a pressure switch that is used as a part of a primary containment boundary (X-49). This work was done as part of an I&C troubleshooting effort to determine the cause of a bellows leakage alarm for Safety/Relief Valve (SRV) RV-2-71C.

DETAILS OF EVENT

On August 11, 1994, based on an analysis of a PRO submitted on March 17, 1994, an additional PRO was written to perform a reportability evaluation of the design of two additional primary containment penetrations (X-52E and X-52F). The Vermont Yankee Safety Classification Manual in section 2.2.3.2.d, specifies that the classification of systems, components and structures, which are required to provide or maintain primary containment integrity be built to Safety Class 2 standards. Contrary to this requirement, it was determined that portions of these penetrations were not designed and built to Safety Class 2 standards.

At 1728 on August 11, 1994, the NNS portions of primary containment penetrations (X-52E and X-52F) were isolated by the closure of Safety Class 2 isolation valves AC-37A and AC-1.

At approximately 1530, on August 25, 1994, an evaluation of the PRO was completed and it was determined that event was reportable.

At 1538, on August 25, 1994, a one hour non-emergency notification was made to the NRC, regarding this event, pursuant to the requirements of 10CFR50.72 (b)(1)(ii) for a condition that existed outside of the plant design basis. (Event #22708)

CAUSE OF EVENT

1. The original design safety classification for penetrations X-52E and X-52F, performed in 1980, was not correct. The YAEC Operational Quality Assurance Manual specified the use of ANS-22 draft 4, revision 1, May 1973 "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants" when determining the safety classification of plant component, systems and structures. ANS-22 did not provide clear guidance for determining the safety classification for instrumentation components that perform both electrical and mechanical functions.

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-530), 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)	
VERMONT YANKEE NUCLEAR POWER STATION	05000271	YEAR	REV #
		1994	00
		SEQ #	PAGE (3)
		010	03 OF 04

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

ANALYSIS OF EVENT

On August 11, 1994, as a result of an engineering evaluation, it was determined that two primary containment instrument penetrations (X-52E and X-52F) did not meet the necessary design requirements. Vermont Yankee penetration and safety class designs are specified in the Vermont Yankee Safety Classification Manual (SCM). The SCM in section 2.2.3.2.d specifies that the classification of systems, components and structures which are required to provide or maintain primary containment integrity be built to Safety Class 2 standards.

The primary containment boundary of penetration X-52E contains a test connection that isolates two NNS isolation valves (AC-37B and AC-37C) that are downstream of a normally open Safety Class 2 isolation valve (AC-37A). Valve AC-37A is a Safety Class 2 to NNS interface. The SCM identifies in section 2.3.1.1.d) that a Safety Class 2 to NNS interface can only be made at one of the following:

1. A normally closed valve
2. A check valve or excess flow check valve, or
3. A normally open valve which can be remotely closed.

Contrary to the design requirements of the SCM, a portion of the containment pressure boundary for this penetration was extended out to NNS valves AC-37B and AC-37A and the Safety Class 2 to NNS interface was not isolated or capable of being isolated without local manual action.

The primary containment boundary of penetration X-52F, contains one normally open isolation valve (AC-1) extending out to a NNS pressure transmitter (PT-1-156-3) which is used to provide low range indication of drywell pressure to the main control room. Although, the indication of this transmitter provides no safety function, it is directly connected to the drywell atmosphere and forms a part of the containment pressure boundary. Contrary to the design requirements of the SCM as detailed above, a portion of the containment pressure boundary was extended to NNS components.

From an operational standpoint the valve configuration of these penetrations was not significant because the NNS portion of each of the penetrations had been exposed to the required test pressure of the Integrated Leakage Rate Test and its leak tight integrity was therefore confirmed.

Although the integrity of these penetrations has been verified during the performance of previous Integrated Leakage Rate Tests, this event is considered reportable pursuant to the requirements of 10CFR50.73 (a)(2)(ii), since these penetrations did not meet the required Vermont Yankee design specified in the SCM. The Vermont Yankee FSAR (section 5.2) describes the safety objective of the containment system is as follows: "The safety objective of the primary containment system in conjunction with the core standby cooling system is to provide the capability, in the event of the postulated loss-of-cooling accident, to limit the release of fission products to the plant environs so that off-site doses would be well below the values specified in 10CFR100". Since these penetrations did not meet the required design, the capability of the primary containment to perform its intended function may have been limited.

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-530), 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)	LOCKET NO (2)	LER NUMBER (6)	PAGE (3)
VERMONT YANKEE NUCLEAR POWER STATION	05000271	YEAR 94 SEQ # 010 REV # 00	04 OF 04

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

CORRECTIVE ACTIONS

Short Term Corrective Actions -

1. Close penetration X-52E test connection isolation valve AC-37A and maintain it closed under administrative controls. This action was completed on 08/11/94.
2. Close penetration X-52F isolation valve AC-1 and maintain it closed under administrative controls. This action was completed on 08/11/94.
3. A review of all existing primary containment instrument lines that are open to the containment atmosphere has been performed to verify that the applicable primary containment design provisions are included. This action was completed on 08/11/94 and it was concluded that there were no other primary containment penetrations that utilize NNS components as a part of the pressure boundary.

Long Term Corrective Actions -

1. Upgrade the NNS components downstream of penetration X-52F isolation valve AC-1 to Safety Class 2. This action is expected to be completed by 11/1/94.
2. Revise the Vermont Yankee Safety Classification Manual to more clearly specify the design requirements for instrument lines penetrating the primary containment and open to the containment atmosphere. This action is expected to be completed by 12/01/94.
3. Maintain penetration X-52E isolation valve AC-37A in the closed position.
4. Piping and Instrument Diagram G191175 will be updated to properly classify the penetration design requirements and to properly identify the normal position of the penetration isolation valves. This action is expected to be completed by 04/01/95.
5. Engineering personnel will be trained on using the Vermont Yankee Safety Classification Manual to classify instrumentation lines penetrating the primary containment and open to the containment atmosphere. This action is expected to be completed by 04/01/95.

ADDITIONAL INFORMATION

1. This event was not previously identified in any other LER.