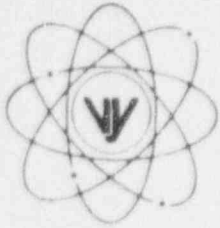


VERMONT YANKEE NUCLEAR POWER CORPORATION



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

December 18, 1996
BVY 96-162

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

Reference: (a) License No. DPR-28 (Docket No. 50-271)

Subject: Occurrence No. LER 96-024-01

As defined by 10CFR50.73, we are reporting the attached occurrence as a voluntary Licensee Event Report, LER 96-024.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Robert J. Wanczyk
Plant Manager

cc: USNRC Region 1 Administrator
USNRC Resident Inspector - VYNPS
USNRC Project Manager - VYNPS

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NRC Form 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION LICENSEE EVENT REPORT (LER)				APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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) VERMONT YANKEE NUCLEAR POWER STATION						DOCKET NUMBER (2) 05000271			PAGE (3) 01 OF 03		
TITLE (4) Incomplete design basis documentation results in failure to clearly describe Appendix J implementation methodology in the program description delivered to the NRC for evaluation.											
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 NAME	DOCKET NO.(5)	
10	02	96	96	-- 024 --	00	12	18	96	N/A	05000	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: CHECK ONE OR MORE (11)									
N		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)			
POWER LEVEL (10) 00		20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)			
		20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71			
		20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		X OTHER VOLUNTARY			
		20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		(Specify in Abstract below or in NRC Form 366A)			
		20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)					
LICENSEE CONTACT FOR THIS LER (12)											
NAME ROBERT J. WANCZYK, PLANT MANAGER								TELEPHONE NO. (Include Area Code) 802-257-7711			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	-----	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
NA					-----	NA					
NA					-----	NA					
SUPPLEMENTAL REPORT EXPECTED (14)						EXPECTED SUBMISSION DATE (15)		11 MO 30 DAY 96 YEAR			
YES (If yes, complete EXPECTED SUBMISSION DATE)				X NO							

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 2, 1996, while shutdown for refueling, Vermont Yankee (VY), during the performance of an Inservice Testing Program component safety function validation, determined that the control logic of the Core Spray (CS) minimum flow bypass valves prevented manual valve closure from the control room. This condition was not specifically addressed in VY design basis documentation. Investigation indicated that the original design intent of CS and Low Pressure Coolant Injection (LPCI) systems considered them to be "extensions of the primary containment." This position is taken in the VY Final Safety Analysis Report and reinforced by a 1984 General Electric Service Information Letter (SIL 414). However the extent to which that design intent superseded or negated containment isolation or testing requirements relative to 10CFR50 Appendix J was not documented. While the isolation function of these valves does not appear to have been part of the original design basis of the plant, and their isolation capability is not specifically cited in VY Technical Specifications, they were cited as isolation valves in the NRC Safety Evaluation Report which documents VY's conformance with 10CFR50 Appendix J requirements. This implied that VY had the ability to remotely operate these valves. This implication is in a licensing basis document, outside of plant Technical Specifications. As the CS system integrity was intact, providing a viable fission product barrier, consistent with the original plant design, the condition is considered to have presented significant risk to neither the health nor safety of the public. VY has installed a modification which establishes remote manual closure capability for the CS system minimum flow bypass valves. VY submits this voluntary report as a follow-up to the Emergency Notification System report made on 10/02/96.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION OF EVENT

On October 2, 1996, while in cold shutdown for refueling, VY, during the performance of an Inservice Testing Program component safety function validation, determined that the control logic of the CS (EIS=BM) minimum flow bypass valves prevented manual valve closure from the control room. This condition was not specifically addressed in VY design basis documentation. However, the CS minimum flow bypass valves are cited in the NRC Safety Evaluation Report which documents VY's conformance with 10CFR50 Appendix J requirements as primary containment isolation valves (EIS=ISV) with remote closure capability. VY therefore verified that primary containment was not required for ongoing plant activities and began preparations for establishing remote manual closure capability for the CS minimum flow bypass valves via a control logic design change. The design change was implemented on October 11, 1996.

CAUSES OF EVENT

The apparent cause was an inadequate technical review of the subject valve control circuitry which resulted in VY incorrectly identifying the CS minimum flow valves as isolation valves implying that they were capable of remote manual closure.

A contributing cause of the event was an inadequate review of industry operating experience. A comprehensive review of the cited SIL should have identified that VY CS minimum flow bypass valves were not capable of being manually closed from the control room. That same review could have identified the inconsistency between our NRC SER for Appendix J and the system operational capability.

ANALYSIS OF EVENT

Investigation concluded that the original design intent of CS and LPCI systems considered them to be "extensions of the primary containment." This position is taken in the VY Final Safety Analysis Report (FSAR) and reinforced by a 1984 General Electric Service Information Letter (SIL 414) which specifically identifies what it terms a "modification to enhance the core spray system." The enhancement is a modification which establishes manual closure capability for the CS minimum flow bypass valve. The SIL states, in regards to the lack of remote manual closure capability, "This is within the design basis of the plant as the core spray piping is considered an extension of the containment..."

While the isolation function of these valves does not appear to have been part of the original design basis of the plant, and their isolation capability is not specifically cited in VY Technical Specifications, the extent to which that design intent supersedes or negates containment isolation or testing requirements relative to 10CFR50 Appendix J was not documented. Originally, the affected Emergency Core Cooling Systems were truly considered to be extensions of primary containment. In docketed correspondence VY communicated that "These penetrations do not contain containment isolation valves per se, but contain system operating valves." This position was not challenged, and VY simply received recommendations that justifications for exempting the identified loop isolation valves from Appendix J requirements be changed, indicating that it was better expressed that the "valves in such lines do not have to close and outside loop is leak tested (loop made extension of containment)."

VY TS's list the valves in the ECCS systems which are subject to Local Leakrate Testing (LLRT), and those ECCS system primary containment penetrations not subject to LLRT. VY TS's are silent as to the status of the LPCI and CS loop isolation valves, including the minimum flow bypass valves, relative to containment penetration testing requirements. Thus the case for the affected loops being considered an integral portion of the primary containment is strengthened.

Although the preponderance of documentation indicates that the CS minimum flow bypass valves were not originally intended to support a containment isolation function, docketed correspondence relative to Appendix J compliance identifies these valves as containment isolation valves implying remote closure capability. VY recognizes that having remote manual closure capability for these valves is both prudent and desirable, however the remote manual closure capability is in addition to the original CS

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

system design basis.

VY has installed a modification which established remote manual closure capability for the CS system minimum flow bypass valves as implied in the NRC SER describing our method of Appendix J conformance.

Safety Significance

The manual closure capability of the subject valves is a feature considered to have impact upon one of VY's principle safety barriers, the primary containment.

However, since the CS systems were intact, providing a viable fission product barrier consistent with the original plant design the condition is considered to have presented significant risk to neither the health nor safety of the public.

CORRECTIVE ACTIONS

A design change was implemented to establish remote manual closure capability for the CS minimum flow bypass valves (complete 10/11/96).

ADDITIONAL INFORMATION

1. Three major projects currently in process at VY will improve component design basis documentation.
 - a. The Design Basis Documentation project.
 - b. The In-service Testing Program validation and upgrade project.
 - c. The Component Safety Classification project.
2. Technical Support Department will implement the Operating Experience Program upgrade currently in progress.

There have been no similar events reported over the past five years.