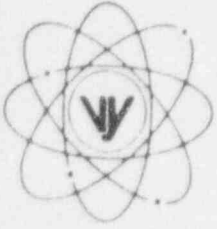


VERMONT YANKEE NUCLEAR POWER CORPORATION



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Vernon, Vermont 05354-0157
(802) 257-7711

May 16, 1996
BVY 96-65

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 96-012

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 96-012.

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

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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 F-3), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20566-0001, 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) Low Pressure Coolant Injection Flow Could Potentially be Diverted due to an Inadequate Design Review prior to Proceduralizing the use of this System											
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.(S)	
04	16	96	96	-- 012 --	00	05	16	96	N/A	05000	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: 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)		100		20.2203(a)(1)		20.2203(a)(3)(i)		X 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)		OTHER			
		20.2203(a)(2)(iii)		50.36(c)(1)		X 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)		MO	DAY	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 4/16/96, with the plant at 100% power, Vermont Yankee (VY) determined from a self-assessment that the Residual Heat Removal (RHR) Low Pressure Coolant Injection (LPCI) Subsystem flow could have been partially diverted through the Condensate Water Transfer System (CST); an alternate keep-fill system for maintaining the LPCI Subsystem full of water. Normally, the Condensate System is used to maintain the water inventory in the LPCI Subsystem. The supply lines from the Condensate System are equipped with check valves which prevent any diversion of the LPCI flow when the system is initiated. The alternate CST keep-fill system taps into the RHR System through connections designated for flushing. The use of this system as an alternate to the Condensate System was proceduralized, and has only been used during shutdowns. The alternate CST System has no check valves or automatic isolation valves in its supply line and could have allowed LPCI flow to be diverted to the CST System. This is contrary to 10CFR50.73(a)(2)(v) in that with the LPCI Subsystem supplied from the CST System, its ability to fulfill its function to mitigate the consequences of an accident would be degraded. This is also reportable under 10CFR50.73(a)(2)(ii) as operation in a condition outside the design basis.

The apparent cause of this event is an inadequate review of design information prior to proceduralizing the use of this system. Immediate corrective action was initiated to revise the RHR procedure to prohibit use of the CST System to fill the RHR System. Vermont Yankee has not experienced any events that required the use of the LPCI Subsystems with the alternate fill system in use. Therefore, there was no danger to the health and safety of the public.

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

DESCRIPTION OF EVENT

On 4/16/96, with the plant at 100% power, Vermont Yankee determined, through the self-assessment process, that some of the Residual Heat Removal (RHR) Low Pressure Coolant Injection (LPCI) Subsystem (EHS=BO) flow could have been partially diverted when using the Condensate (EHS=KA) Water Transfer (CST) System as a keep-fill system to maintain the water inventory and static pressure in the LPCI Subsystem. The use of this system as an alternate to the Condensate System was proceduralized, and has only been used during shutdowns. Normally, the Condensate System (EHS-SD) is used as a keep-fill system, to maintain the water inventory and static pressure of the LPCI Subsystem. The supply lines from the Condensate System to the LPCI Subsystem are equipped with check valves which prevent any backflow and subsequent diversion of LPCI flow when the system is initiated. Conversely if the alternate supply, the CST System, is used to maintain the water inventory and static pressure of the LPCI Subsystem, then the LPCI flow could have been partially diverted to the CST System as this system is not equipped with check valves or valves which automatically isolate to prevent backflow into the system. This is contrary to the system design in that flowpaths that have the potential to divert LPCI flow, automatically reposition in the event of a LPCI injection signal. Therefore, this is a condition outside the design basis and reportable under 10CFR50.73(a)(2)(ii). Further, since the condition could have prevented the RHR Systems from fulfilling its function to mitigate the consequences of an accident it is also reportable under 10CFR50.73(a)(2)(v).

CAUSE OF EVENT

The root cause of this event is under investigation. The apparent cause of this event is an inadequate review of the design requirements prior to the proceduralizing the use of this system as a keep-fill system. If the investigation provides a different cause, it will be provided in a supplemental LER.

ANALYSIS OF EVENT

The LPCI portion of the RHR System is designed to operate automatically to restore and maintain the coolant inventory in the reactor vessel, in combination with other core standby cooling systems, so that the core is adequately cooled to limit fuel cladding damage following a design basis loss-of-coolant accident.

The CST System was not used for maintaining water inventory in the LPCI Subsystem while the plant was at power but is used as an alternate source during shutdown conditions when the Condensate System is not available. During these periods, if a LPCI injection was initiated, some LPCI flow could be diverted to the CST System through the fill lines which have no check valves. This diverted flow would not be sufficient to prevent the core from being adequately cooled as redundant systems are available to provide the required amount of core cooling.

Vermont Yankee Technical Specifications (TS) 3.5.H.4 allows both LPCI Subsystems or both Core Spray Systems or one Diesel Generator to be inoperable during refueling conditions provided that a source of water greater than 300,000 gallons is available. This is permissible during shutdown/refueling conditions as the heat load is low and other systems are available to cool the core. Therefore, adequate core cooling was available and there was no danger to the health and safety of the public.

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

CORRECTIVE ACTIONS

IMMEDIATE CORRECTIVE ACTION

A revision to the RHR procedure to remove the section that allowed the use of the CST System for maintaining water inventory and pressure in the LPCI Subsystem was made.

LONG TERM CORRECTIVE ACTIONS

- 1) A valve line-up has been proposed that can utilize the CST System via the Condensate System keep-fill lines to supply the LPCI Subsystem. This will maintain the integrity of the LPCI Subsystem by using the existing check valves in the Condensate System supply to the keep-fill system.
- 2) Design change options are being investigated as part of the Event Report/Root Cause Process. Should a design change be performed to address this issue it will be reported in a supplemental LER.

ADDITIONAL INFORMATION

No similar events have been reported to the Commission in the last five years.