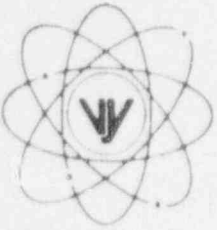


# VERMONT YANKEE NUCLEAR POWER CORPORATION



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

March 11, 1996  
BVY 96-25

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 96-002

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 96-002.

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

180084

9603180260 960311  
PDR ADOCK 05000271  
S PDR

IE22  
11

NRC Form 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION  <b>LICENSEE EVENT REPORT (LER)</b>	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 20566-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.											
<b>FACILITY NAME (1)</b> VERMONT YANKEE NUCLEAR POWER STATION		<b>DOCKET NUMBER ( )</b> 05000271	<b>PAGE (3)</b> 01 OF 03									
<b>TITLE (4)</b> Containment Spray Header in the Torus not Tested in accordance with ASME Section XI due to Personnel Error												
<b>EVENT DATE (5)</b>			<b>LER NUMBER (6)</b>		<b>REPORT DATE (7)</b>			<b>OTHER FACILITIES INVOLVED (8)</b>				
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NO. (S)		
02	09	96	96	-- 002 --	00	03	11	96	N/A	05000		
<b>OPERATING MODE (9)</b>		<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: CHECK ONE OR MORE (11)</b>										
N		20.2201(b)		20.2203(a)(2)(v)		X		50.73(a)(2)(i)		50.73(a)(2)(viii)		
<b>POWER LEVEL (10)</b>		20.2203(a)(1) 20.2203(a)(3)(i) 50.73(a)(2)(ii) 50.73(a)(2)(x)										
100		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)				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)				
<b>LICENSEE CONTACT FOR THIS LER (12)</b>												
<b>NAME</b> ROBERT J. WANCZYK, PLANT MANAGER								<b>TELEPHONE NO. (Include Area Code)</b> 802-257-7711				
<b>COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)</b>												
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	.....	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		
NA					.....	NA						
NA					.....	NA						
<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>								<b>EXPECTED SUBMISSION DATE (15)</b>		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 2/9/96, during In-Service Inspection Program (ISI) preparations for the 1996 Refueling Outage, it was determined that the required ASME Section XI examinations had not been completed for the Containment Spray Header in the Torus. Vermont Yankee (VY) Technical Specifications (TS), Section 4.6.E.1, requires in-service inspection of safety related components in accordance with ASME Section XI as required by 10CFR50.55a. This requires that an open flow path be demonstrated for open ended portions of discharge lines.

The original VY ISI Program was based on ASME Section XI (1974 ) and exempted Vermont Yankee from testing the Containment Spray Header in the Torus. The 1980 edition of ASME Section XI, applicable during the second interval ISI Program, was changed requiring the header to be tested. Contrary to this requirement, the Containment Spray Header in the Torus was not tested during the second interval ISI period, but will be tested in the third interval during the 1996 outage. The root cause of this event is personnel error. When the ISI Program was revised for the second interval, the new requirement was overlooked and was not included in the testing requirements.

A visual inspection and review of past water inventory records of Torus level showed that the spray header was clean with no leakage past the inlet valves into the system.

The immediate corrective action is the scheduled completion of the open flow path test during the 1996 refueling outage. Long term corrective actions will include a third party independent review of the ISI Program and inclusion of this event report into the Engineering Training program.

LICENSEE EVENT REPORT (LER)

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 20566-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REV #		
VERMONT YANKEE NUCLEAR POWER CORPORATION	05000271	96	-- 002	-- 0	02 OF 03	

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

DESCRIPTION OF EVENT

On 2/9/96, with the plant at 100% power, during ISI Program preparations for the 1996 Refueling Outage, it was determined that the required ASME Section XI examinations had not been completed for the Containment Spray (EHS=BO) Header in the Torus. The Containment Spray Header in the Torus, a subsystem of the Residual Heat Removal System (RHR), is designed to remove heat from the buildup of non-condensable gases in the Torus. This system is manually initiated, as needed, depending on Torus pressure following a design basis accident.

During the first ISI interval, the 1974 edition of the ASME Section XI code provided a specific exemption for the testing of open ended discharge lines. Based on the exemption, the Containment Spray Header in the Torus was not tested during this interval. In 1980, prior to the second ISI interval, which began on May 1, 1983, the ASME Section XI code was revised. This change specified that a demonstration of an open flow path for open-ended piping be conducted. When the ISI Program was revised for the second interval testing, the requirement for testing the Containment Spray Header in the Torus was overlooked and not included in the procedure. As a consequence of this, no demonstration of an open flow path was completed during the second interval.

Interval three of the ISI Program began on September 1, 1993. At this time the ASME Section XI 1986 edition of the code, the code of record for Vermont Yankee, also requires that an open flow path be demonstrated for open ended portions of discharge lines. During the initial development and review of the third interval ISI Program the requirements that the Containment Spray header in the Torus be tested was also overlooked.

Following the discover of the omission, the test of the Containment Spray Header in the Torus was included in the ISI Program and will be conducted during the 1996 refueling outage.

CAUSE OF EVENT

The root cause of this event is attributable to personnel errors of utility and outside contractor personnel. When the ASME code changed, neither the personnel completing the changes nor the reviewers realized that the testing requirements had changed. The reviewers included plant personnel, the Authorized Nuclear In-service Inspector, and third party personnel retained by the NRC to review the program for final approval and acceptance.

These errors were cognitive errors in that personnel revising the program and those reviewing the program failed to recognize the changes in the ASME code.

ANALYSIS OF EVENT

The Containment Cooling Subsystem, a subsystem of the Residual Heat Removal System (RHR), is used to limit the temperature of the water in the Torus following a design basis accident. This system takes suction from the Torus and pumps water through the RHR heat exchangers where it is cooled before being discharged back to the Torus. Another portion of this system is designed to spray water into the primary containment as an augmented means of removing energy from the containment following a design basis accident. The water pumped through the RHR heat exchangers may be diverted to the spray headers in the drywell and the Torus.

The Containment Spray Header in the Torus is not relied upon for mitigation of any design basis accidents. In accordance with the Final Safety Analysis Report (FSAR) the containment spray would normally not be activated at all and the containment cooling mode need not be placed into service for several hours following a design basis accident. The Drywell Spray Header has been tested at ten year intervals in accordance with TS 4.6.E.1 and ASME Section XI requirements.

The Torus spray header was initially tested during pre-operational testing while in the construction phase. Further, during the 1995 Refueling Outage the spray header was examined by Operations Department Personnel. The physical condition of the header and spray nozzles was good with no apparent indication of nozzle plugging or visible signs of corrosion or corrosion products. A review of the past operating history of the Torus spray subsystem components and Torus water inventory

NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION (4-95)		APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98			
LICENSEE EVENT REPORT (LER)		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 20566-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.			
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
VERMONT YANKEE NUCLEAR POWER CORPORATION	05000271	YEAR	SEQUENTIAL NUMBER	REV #	03 OF 03
		96	-- 002 --	0	

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

indicates that there has been no indication of significant leakage past the isolation valves. Furthermore, the spray header has been in an inert environment since 1982 and is constructed such that it is self draining thus preventing the accumulation of standing water which could cause corrosion and corrosion products that could potentially clog the spray nozzles. An operability evaluation of the Containment Spray header in the Torus was written and concluded that the spray header is operable. As the system is operable and is not relied upon to mitigate any design basis accidents, there is no danger to the health and safety of the public and no safety consequences resulted from this event.

#### CORRECTIVE ACTIONS

##### Immediate Corrective Actions

- 1) An Event Report was immediately written on this event which provided a follow-up investigation.
- 2) An open flow path test has been scheduled for the Containment Spray Header in the Torus and will be completed during the 1996 refueling outage.

##### Long Term Corrective Actions

- 1) A third party independent review of the ISI program will be performed by the Quality Assurance/Quality Services Group. This will be completed by December 31, 1996.
- 2) This event will be factored into the 1996 Engineering Support Personnel Continuing Training. This training will be completed by December 31, 1996.
- 3) A copy of the Event Report, including the corrective action investigation, will be provided for the Authorized Nuclear In-Service inspectors to allow them to benefit from the investigation. This will be completed prior to the 1996 Refueling Outage.
- 4) A review will be completed to ensure that all applicable systems with open ended spray headers are included in the ISI Program. This will be completed prior to the 1996 Refueling Outage.

#### ADDITIONAL INFORMATION

Similar events were reported as LER's 95-017, 95-018, 96-001, and 96-004.