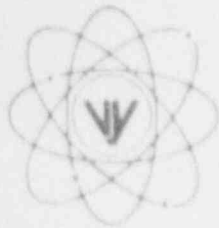


# VERMONT YANKEE NUCLEAR POWER CORPORATION



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

May 28, 1991  
VYV #91-128

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 91-11

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 91-11.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Donald A. Reid  
Plant Manager

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

9106050307 910528  
PDR ADOCK 05000271  
S PDR

1622

EXPIRES 4/30/92

## LICENSEE EVENT REPORT (LER)

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.

FACILITY NAME (1) VERMONT YANKEE NUCLEAR POWER STATION DOCKET NO. (2) 0500027101 OF 04 PAGE (3)

TITLE (4)  
Inadvertent Group Six Primary Containment Isolation System Actuation Due to an Incomplete Procedure

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	4	3	0	9	1	9	1	1	-0	0	0	5	2	8	9	1	0	5	0	0	0
OPERATING MODE (9) N										THIS REPORT IS SUBMITTED PURSUANT TO REQ'TS OF 10CFR §: <input checked="" type="checkbox"/> ONE OR MORE (11)											
POWER LEVEL (10) 0 0 2										20.402(b) 20.405(c) X 50.73(a)(2)(iv) 73.71(b)											
										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) 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 DONALD A. REID, PLANT MANAGER TELEPHONE NO. 802 257-7711 AREA CODE

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYST	COMPNT	MFR	REPORTABLE TO NPRDS	CAUSE	SYST	COMPNT	MFR	REPORTABLE TO NPRDS
N/A					N/A				
N/A					N/A				

## SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED SUBMISSION DATE (15) MO DA YR

☐ YES (If yes, complete EXPECTED SUBMISSION DATE) ☒ NO

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

On 04/30/91 at 0555, during plant heatup at approximately 2% power and with reactor pressure at 116 PSIG, operators unbypassed and returned to service the trip functions for the Group Six, Primary Containment Isolation System (PCIS)(EIIS=JM), trips of the High Pressure Coolant Injection System (HPCI)(EIIS=BJ) and the Reactor Core Isolation Cooling System (RCIC)(EIIS=BN) on low steam supply pressure. When the trips were returned to service, a PCIS Group Six Isolation occurred which isolated two steam supply valves in the HPCI system and two steam supply valves in the RCIC System. These trip signals are normally bypassed during plant start-up and before reactor pressure reaches 150 PSIG to allow warming the HPCI and RCIC steam lines.

The cause of this event is attributed to an incomplete procedure. The procedure which governs the operation of the bypass switches states that the trip functions are to be restored before exceeding 150 PSIG, however, it does not specify any minimum pressure above which the switches can be operated without incurring a PCIS Group Six isolation.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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20555, AND TO THE PAPERWORK REDUCTION  
PROJECT (3160-0104), OFFICE OF MANAGEMENT  
AND BUDGET, WASHINGTON, DC 20603.

UTILITY NAME (1)	DOCKET NO. (2)	LER NUMBER (3)			PAGE (4)	
		YEAR	SEQ. #	REV#		
VERMONT YANKEE NUCLEAR POWER STATION	051000271	91	-0111	-00	02	OF 04

TEXT (If more space is required, use additional NRC Form 366A) (1')

ABSTRACT (cont.)

The immediate corrective action was to return the bypass switches to the bypass position and restore the HPCI and RCIC valves to the open position.

The follow-up corrective action will require a revision to the procedure that governs the use of these switches to include a minimum pressure that will allow the bypasses to be removed without incurring a Group Six Isolation. Additional training will also be provided for the operators.

There were four ESF actuations due to inadequate or incomplete procedures reported to the Commission in the last five years.

DESCRIPTION OF EVENT

On 04/30/91 at 0555, during plant heatup at approximately 2% power and with reactor pressure at 116 PSIG, operators unbypassed and returned to service the trip functions for the Group Six Primary Containment Isolation System (PCIS), trips of the High Pressure Coolant Injection System (HPCI) Logic B and the Reactor Core Isolation Cooling System (RCIC) Logic A on low steam supply pressure. When these bypasses were removed, a PCIS Group Six Isolation occurred due to the low steamline pressure isolation signal being present as the reset setpoints had not been reached at 116 PSIG. This isolated two steam supply valves in the HPCI system and two steam supply valves in the RCIC System. These trip signals are normally bypassed during plant start-up and before reactor pressure reaches 150 PSIG to allow warming the HPCI and RCIC steam lines.

Following this isolation, the operators returned the bypass switches to the bypass position and restored the HPCI and RCIC steam supply valves to the open position.

On 04/30/91, at 0615 when the reactor pressure reached 132 PSIG, which is above the reset setpoints of the two logic systems, the operators returned the bypass switches to their normal positions which reinstated the isolation functions.

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UTILITY NAME (1)	DOCKET NO. (2)	LER NUMBER (6)						PAGE (3)		
		YEAR		SEQ. #		REV#				
VERMONT YANKEE NUCLEAR POWER STATION	0500027191	-	0	1	1	-	0	0	03 OF 04	

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

CAUSE OF EVENT

The immediate cause of this event is that the operators returned the HPCI and RCIC steam supply low pressure bypass switches to the normal position before the Group Six isolation logic signals had reached their reset setpoints.

The root cause of this event is an incomplete procedure. Procedure OP 0101, "Reactor and Generation Systems Heatup to Low Power" states that these bypass switches must be restored to the normal position prior to exceeding 150 PSIG, but it does not state a minimum pressure that must be achieved before operating the switches to allow the Group Six isolation signals to reach their reset setpoints.

ANALYSIS OF EVENT

The PCIS Group Six isolation occurred when the bypass switches were returned to their normal position at a reactor pressure of 116 PSIG. This pressure is below the reset setpoints of both the HPCI logic (B logic) and the RCIC logic (A logic), that senses the low steam line pressure, and therefore the logics operated to produce the isolation.

Tech. Spec. Section 3.5.E requires that the HPCI system be operable whenever irradiated fuel is in the vessel and reactor pressure is greater than 150 PSIG and prior to reactor startup from a cold shutdown. The HPCI System had been available prior to startup and had not been required to be operable during the time reactor pressure was below 150 PSIG, therefore this requirement was met. Additionally, Tech. Spec. Section 3.5.G requires that the RCIC System be operable when the reactor pressure is greater than 150 PSIG. As reactor pressure was less than 150 PSIG at the time of the event, this system was not required to be operable.

There were no adverse safety implications as a result of this event.



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UTILITY NAME (*)	DOCKET NO. (*)	LER NUMBER (*)			PAGE (*)	
		YEAR	SEQ. #	REV#		
VERMONT YANKEE NUCLEAR POWER STATION	0500027191	-	011	-	00	04 OF 04

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

CORRECTIVE ACTIONS

The immediate corrective action was that the operators returned the bypass switches to the bypass position and reopened the HPCI and RCIC steam supply isolation valves.

The subsequent corrective actions are as follows:

1. The Instrument & Control Department and the Operations Department will jointly determine the pressure reset setpoint at which both HPCI and RCIC low steamline pressure trip can be reset without actuating the Group Six isolation.
2. Procedure OP 0101, "Reactor and Generation Systems Heatup to Low Power" will be revised by June 28, 1991, or prior to the next use, to include the minimum pressure at which the Group Six isolation can be reset.
3. The above revision will be made a part of the Initial Licensed Operator Training Instructor Guide, LOT-07-003 and 004 by August 31, 1991.
4. This LER will be reviewed as part of Operator Response Training during the Refuel Cycle 3 and will be completed by September 20, 1991.

ADDITIONAL INFORMATION

There were four ESF actuations due to inadequate or incomplete procedures reported to the Commission in the last five years.

These events were reported as:

- 1) LER 90-18
- 2) LER 89-15
- 3) LER 89-05
- 4) LER 87-10

A review of these LER's does not indicate any developing trends as each event is an isolated incident.