VERMONT YANKEE
NUCLEAR POWER CORPORATION

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October 28, 1999
BVY 99-138

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

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Reportable Occurrence No. LER 99-04, Rev. 0

As defined by 10CFR50.73, we are reporting the attached Reportable Occurrence as LER 99-04, Rev. 0.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Michael A. Balduzzi
Plant Manager

cc: USNRC Region I Administrator
USNRC Resident Inspector – VYNPS
USNRC Project Manager – VYNPS
VT Dept. of Public Service

IE22

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION
(6-1998)

LICENSEE EVENT REPORT (LER)

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)

INADEQUATE COMMUNICATION RESULTS IN A WORK TEAM RENDERING HPCI SYSTEM INOPERABLE DURING MINOR MODIFICATION INSTALLATION

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 NUMBER
10	05	99	99	004	00	10	28	99	N/A	

OPERATING MODE (9)	N
POWER LEVEL (10)	99

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
	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)		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	TELEPHONE NUMBER (Include Area Code)
Michael A. Balduzzi, Plant Manager	(802) 257-7711

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (12)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
E	BT	TBG	UNK	Y		N/A				
N/A						N/A				

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	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 10/05/99, while performing pre-outage work in the vicinity of the High Pressure Coolant Injection (HPCI) System, a technician leaned upon a HPCI control oil line, causing the line to leak. The leak was immediately reported to the station Shift Supervisor. The magnitude of the leak was sufficient to render the HPCI system inoperable. The operating crew Shift Supervisor declared the HPCI system inoperable and took actions per the Plant Technical Specifications. Vermont Yankee (VY) technicians were dispatched to repair the leaking line. The repair was made, HPCI tested, and declared operable in approximately 11 hours. VY Technical Specifications allow reactor operation for 7 days without HPCI available. This event was caused by inadequate communication regarding the sensitivity of work on or near operable plant equipment, and the need to reevaluate work plans if unforeseen difficulties are encountered. VY management expectations related to work in the vicinity of operable plant equipment have been clearly communicated to the applicable members of the VY work force. Meetings have been conducted, and procedure changes are being prepared to enhance personnel sensitivity while working in the vicinity of operable plant equipment, and to enforce the need to reevaluate work plans should unforeseen difficulties be encountered during work activities. The damage to the HPCI control oil line was recognized immediately, and actions were promptly taken to restore the system to service in accordance with VY Technical Specifications. Therefore this event presented no significant increase in risk to public health and safety.

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

EVENT DESCRIPTION

On 10/05/99, while operating at 99% of rated power, VY contracted technicians were performing work in the vicinity of the HPCI System (EIIS=BT). The work involved the installation of enhanced anchorage (EIIS=SPT) on the HPCI system gland sealing steam line (EIIS=PSF). The anchorage was being installed consistent with VY's Seismic Quality Utility Group (SQUG) upgrade program under VY's minor modification process.

While drilling into the concrete, as required per the minor modification scope, the installation technician encountered reinforcement steel (rebar). The contracted technician obtained the appropriate approvals and tools, and proceeded to cut through the rebar. The increased vigor required to drill, after the steel was contacted, necessitated the technician climbing onto the HPCI skid. Although drilling through rebar is not uncommon for such installations, the need to climb onto the skid had not been foreseen by VY management when the risk associated with the work effort was assessed.

After climbing onto the skid, the technician leaned upon a HPCI control oil line. The force applied to the line caused a leak. The leak was immediately reported to the station Shift Supervisor. The HPCI System Engineer evaluated the condition. The magnitude of the leak was sufficient to render the HPCI system inoperable. The operating crew Shift Supervisor, after consultation with the System Engineer, declared the HPCI system inoperable and took actions per the Plant Technical Specifications (TS).

Required actions include verifying that the low pressure Emergency Core Cooling and the Reactor Core Isolation Cooling (RCIC, EIIS=BN) systems are operable. VY Technical Specifications also require that the Automatic Depressurization System (ADS, EIIS=JE) be demonstrated to be operable within 24 hours of the discovery that HPCI is inoperable.

A work order was generated and VY technicians were dispatched to repair the leaking line.

At 1845, on 10/05/99, the required ADS testing was completed, demonstrating the system to be operable.

At 1850, on 10/05/99, the HPCI system repairs were completed, including post-maintenance testing. The HPCI system was declared operable 11 hours and 5 minutes after the line was damaged. VY Technical Specifications allow reactor operation for 7 days without HPCI available.

CAUSE

1. Inadequate communication regarding the sensitivity of work in the vicinity of operable plant equipment.
2. Inadequate communication regarding the need to reevaluate work plans when unforeseen difficulties are encountered.

It is VY management's responsibility to ensure that; VY and contracted personnel working in the vicinity of operable plant equipment understand the sensitivity of such work, and that such work is conducted consistent with that sensitivity.

ANALYSIS

The HPCI system provides and maintains an adequate coolant inventory inside the reactor vessel to prevent fuel clad conditions from exceeding 10CFR50.46 criteria as a result of postulated small breaks in the Nuclear System process barrier. A high-pressure system is needed for such breaks because the reactor vessel depressurizes slowly, preventing low-pressure systems from injecting coolant. The HPCI system includes a turbine-driven pump (EIIS=P) powered by reactor steam. The system is designed to accomplish its function on a short-term basis without reliance on station auxiliary power supplies other than the dc power supply.
The HPCI system is also capable of providing emergency make-up water under a variety of postulated conditions that would render the normal reactor feed water system unavailable.

TS testing, combined with the other TS required verifications, provides assurance that the low pressure Emergency Core Cooling, ADS, and the RCIC system were available to provide the functions performed by HPCI, were those functions necessary.

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

The damage to the HPCI control oil line was recognized immediately, and actions were promptly taken to restore the system to service in accordance with VY Technical Specifications. Therefore this event presented no significant increase in risk to public health and safety.

CORRECTIVE ACTIONS

1. A VY internal event report was initiated. A formal cause determination was performed.

2. A review of pre-outage work was conducted by VY Project Engineering to determine the potential for impact on plant equipment. As a result of the meeting, some work was moved into the outage.

3. A stand-down meeting of applicable personnel was conducted to discuss the sensitivity of working near plant equipment.

4. The incident has been addressed at the appropriate supervisors' daily meetings to heighten awareness regarding this issue.

5. Additional job walk downs have been conducted with implementing engineers and appropriate craft supervisors.

6. The item has been addressed in a Project Engineering project leads meeting.

7. The Plant Manager discussed the issues associated with this event at outage meetings and in an outage communication publication for discussions at all department meetings.

8. The contractor pre-job briefing procedure is being enhanced to better emphasize the need to consider and communicate the sensitive nature of working in the vicinity of plant equipment, and better delineate expected work crew actions should unforeseen difficulties be encountered during the work activity.

ADDITIONAL INFORMATION

Vermont Yankee reported the following similar events during the past five years.

LER 98-04	03/28/98	Seven Day LCO Exceeded Due to Inadequate Instructions in the Work Control Process Regarding Block Walls.
LER 94-14	10/30/94	Fire Suppression Sprinkler System Head Obstructed Due to Inadequate Evaluation of Scaffold Installation.