VERMONT YANKEE
NUCLEAR POWER CORPORATION

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

March 3, 1995
BVY 95-27

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

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

Dear Sir:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 95-003.

Very truly yours,

Robert J. Wanczyk

Robert J. Wanczyk
Plant Manager

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

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NRC Form 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)	DOCKET NUMBER (2)	PAGE (3)
VERMONT YANKEE NUCLEAR POWER STATION	05000271	01 OF 04

TITLE (4) FAILURE TO PROVIDE REQUIRED EMERGENCY LIGHTING IN AN AREA IN ACCORDANCE WITH 10 CFR 50 APPENDIX R, SECTION III.J DUE TO A FAILURE IN THE MANAGEMENT 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)
02	03	95	95	-- 003 --	0	03	03	95	N/A	05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: CHECK ONE OR MORE (11)							
			20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)	100		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)		(Specify in Abstract below and in Text, NRC Form 366A)
			20.405(a)(1)(iv)	X	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	TELEPHONE NO. (Include Area Code)
ROBERT J. WANCZYK, PLANT MANAGER	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

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 February 3, 1995 Vermont Yankee determined that 8-hour battery powered emergency lighting units, required by 10 CFR 50 Appendix R, Section III.J, were not provided in an area needed for operation of safe shutdown equipment and in access and egress routes thereto. This event was discovered while reviewing procedures to insure Operator actions necessary to prevent Service Water System water hammer during a fire in the control room or cable vault were adequately addressed. The plant was operating at 100% power at the time of the event and compensatory actions were immediately implemented. The cause of the event is determined to be a lack of comprehensive review of an emergent issue with regard to other system/program interactions. Procedure changes have been incorporated to address all required activities and emergency lighting meeting Appendix R requirements has been installed in the area.

DESCRIPTION OF EVENT

On February 3, 1995, with the plant operating normally at 100% power, Vermont Yankee (VY) identified that it was not in full compliance with 10 CFR 50 Appendix R, Section III.J, Emergency Lighting (EIIS=FH). This conclusion was reached after review of licensing documents and the Vermont Yankee Safe Shutdown Capability Analysis. The condition of non-compliance was discovered while reviewing procedures to insure Operator actions which could be required to be taken in response to fires disabling equipment in the Cable Vault or Control Room were adequately addressed.

During the Service Water (SW) System Self Assessment, performed in January 1994, a condition was identified which could cause a water hammer in the SW system during a delayed restart. At the time, the only scenario identified where this condition could occur was a station blackout event. Procedure changes were implemented to prevent a water hammer from occurring until a design change could be prepared and installed.

In December 1994, while performing additional reviews of the Service Water System, with respect to the ability to cross connect the SW system to provide water to the fire protection system, another scenario was identified. This scenario postulates that a fire in the cable vault or the control room, with a loss of off-site power, could also result in a delayed restart of the SW system and could cause a water hammer if not prevented by operator action. The evaluation performed upon discovery determined that the procedure changes made to the Loss of Normal Power procedure (OT3122) would be effective in preventing a water hammer when performed in conjunction with the procedure for Shutdown Using Alternate Shutdown Methods (OP3126). The evaluation concluded that Operators would recognize the loss of power condition, if it occurred, and based upon their training and use of symptom based emergency procedures would implement the two procedures together. However, the evaluation failed to identify that performance of these two procedures together would require that Operators take actions in the Intake Structure. At that time the Intake Structure had not previously been identified as an area requiring Operator entry to perform manual actions during a fire event, and therefore had not been provided with 8-hour battery powered emergency lighting.

Design changes had been prepared in November 1994 to upgrade the plant Appendix R emergency lighting due to an event which occurred in October 1994 that identified emergency lighting had not been provided for all areas where remote operations were required to be taken in support of fires. (Ref. LER 94-11) At the time these designs were prepared it had not been identified that Operator actions would be required in the Intake Structure for fire scenarios and therefore the emergency lighting in the Intake Structure was not considered. The evaluation performed in October/November did not include alternate shutdown scenarios as it was believed that the emergency lighting for these areas had been adequately addressed.

After additional review of the event and determination of reportability, a one hour notification was made to the NRC on February 17, 1995, per 10 CFR 50.72(b)(ii)B, since the plant was not in full compliance with 10 CFR 50 Appendix R, Section III.J, which is a part of the plant's design basis.

CAUSE OF EVENT

The root causes of this event are determined to be:

1. A lack of comprehensive review of an emergent issue with regard to other system/program interactions.

2. A cognitive human error contributed to by weak knowledge and a lack of comprehensive documentation of the Appendix R program.

ANALYSIS OF EVENT

While all events involving non-compliance with a regulatory licensing requirement are considered to be significant, this event had minimal safety implications. Procedures did exist that, in the event of a fire in the Control Room or Cable Vault, with a loss of normal power, would have been adequate to initiate the correct Operator actions. Battery powered Emergency lighting did exist in the Intake Structure, however the installed emergency lighting did not meet 10 CFR 50 Appendix R requirements. Security Lighting is available to provide lighting for the access route to the intake structure. An exemption request was recently

submitted to the NRC requesting authorization to take credit for security lighting for the access/egress route to the cooling towers for alternate cooling system operation. This exemption will be revised to also include the access route to the intake structure.

CORRECTIVE ACTIONS

Short Term:

1. When the SW water hammer/Appendix R concern was identified, an evaluation was performed which determined that based upon operator training and use of symptom based procedures, Operators would recognize the existence of a blackout condition and take the appropriate actions using both OT3122 and OP3126. (Completed 12/20/95)

2. A Potentially Reportable Occurrence (PRO) was initiated (Completed 2/3/95)

3. A Plant Operations Review Committee (PORC) meeting was held to review the condition identified and the proposed compensatory actions being implemented. (Completed 2/3/95)

4. Standing Order 13 was revised to insure Operators were aware of the situation and would take the appropriate actions. (Completed 2/3/95)

5. Portable lanterns were placed at the Intake Structure and daily operational checks of the portable lanterns with monthly battery replacement were instituted. Completed 2/3/95)

6. Revisions to OP3126 and OT3122 were initiated to incorporate the water hammer concern into the procedures for fire events. (Procedures approved and distributed 2/24/95)

7. 8-hour battery powered Emergency light units were installed in the Intake Structure. (Completed 2/10/95)

8. An additional Auxiliary Operator (AO) was assigned to each shift until a thorough review of manpower requirements could be performed. (Completed 2/3/95)

9. A comprehensive walkdown of OP3126 (Draft Rev. 11) to insure that appropriate emergency lighting was provided was performed. (Completed 2/17/95)

10. Operator training was conducted on the revised OT3122 and OP3126. (Completed 3/2/95)

11. A review of manpower requirements to perform the identified actions was performed to insure that they could be completed with the personnel normally assigned on shift. (Completed 2/17/95)

Long Term:

1. Existing processes will be reviewed/evaluated and appropriate changes made to insure that when new issues are identified that they receive a comprehensive review to identify all areas/programs where they are applicable. This is expected to be completed by 12/31/95.

2. Training for plant/YNSD staff will be improved such that personnel will be knowledgeable enough in the Appendix R program to recognize potential issues. (Also a corrective action from LER 94-11, due 12/31/95)

3. The Safe Shutdown Capability Analysis will be revised to provide a comprehensive document for control of all the interrelated requirements of Appendix R. (Also a corrective action from LER 94-11, due 9/30/95)

4. The exemption request submitted in 1994 for use of security lighting for access/egress routes in outdoor areas will be revised to include the route to the intake structure. This will be completed by 6/30/95.

ADDITIONAL INFORMATION

A similar event involving Appendix R emergency lighting was reported to the Commission in LER 94-11.