# VERMONT YANKEE NUCLEAR POWER CORPORATION



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June 21, 1996 BVY 96- 80

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

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

Subject: Reportable Occurrence No. LER 96-14

As defined by 10CFR50.73, we are reporting the attached Reportable Occurrence as LER 96-14.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

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Robert J. Wanczyk Plant Manager

c: USNRC Region 1 Administrator USNRC Resident Inspector - VYNPS USNRC Project Manager - VYNPS

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NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION (4-95) 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 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.													
FACILITY NAME (1) VERMONT YANKEE NUCLEAR POW							VER STATION				DOCKET NUMBER ( 05000271			) PAGE (3) 01 OF (				
TITLE	(4) Fai Report	lure to due to	provide unknown	tornado protec cause	tion for	diesel	gene	erator	room	s as s	pecif	ied in t	he Fina	l Safet	y Analy	sis		
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		20.2203(a)(2)(iv)			50.36(c)(2)				50.73(a)(2)			2)(vii) below or Form 366			r in NRC 6A)			
				LICE	NSEE CON	TACT FOR	R THI	IS LER	(12)	des sonner comme						and the solution		
NAME	RT J. WAN	CZYK, PL	ANT MAN	AGER								TELEPH 80	ONE NO. 2-257-7	(Inclue	de Area	Code)		
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On 6/4/96, while operating at 100% power, During a review of NRC Information Notice 96-06 Vermont Yankee identified that the Final Safety Analysis Report (FSAR) requirements for venting of the diesel generator rooms in the event of a tornado were not being met. FSAR section 12.2.1 states that large venting areas are provided to vent the diesel generator room walls to the turbine building in the event of a tornado. No dedicated venting areas are provided in the diesel generator room walls to the turbine building. Investigation to date has been unable to identify the exact method of venting assumed when the FSAR was written. Construction documents describe venting of the diesel day tank rooms through blowout panels to the A diesel generator room and the diesel generator rooms being vented through blowout panels in the outside walls. These documents predate the FSAR and since these panels were not installed and the FSAR describes a different means of venting the rooms, it is reasonable to assume that an alternate means of venting the rooms was intended however documentation of how this was to be accomplished has not been found. Investigations are in progress into the cause of this event and will be reported in a supplemental LER. Compensatory actions were put into place and temporary modifications are being installed to address this issue until a permanent solution is determined.

NRC Form 366 U.S. NUCLEAR REGULATORY COMMI (4-95) • 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 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.								
FACILITY NAME (1)	DOCKET NUMBER (2)			LER NUMBER (6)	PAGE (3)				
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

## DESCRIPTION OF EVENT

On 6/4/96, while operating at 100% power, during review of NRC Information Notice 96-06 Vermont Yankee identified that the Final Safety Analysis Report (FSAR) requirements for venting of the diesel generator (EIIS = EK) rooms in the event of a tornado were not being met. FSAR section 12.2.1 states that large venting areas are provided to vent the diesel generator rooms to the turbine building (EIIS = NM) in the event of a tornado. No dedicated venting areas are provided in the diesel generator room walls to the turbine building. Investigation to date has been unable to identify the exact method of venting assumed when the FSAR was written. Construction documents describe venting of the diesel day tank rooms through blowout panels to the A diesel generator room and the diesel generator rooms being vented through blowout panels in the outside walls. These documents predate the FSAR and since these panels were not installed and the FSAR describes a different method of venting the rooms, it is reasonable to assume that an alternate means of venting the rooms was to be provided. At this time VY has been unable to find documentation of the decision to provide a different method of venting the diesel rooms nor any of the specifics as to how it was to be accomplished.

### CAUSE OF EVENT

Investigation is ongoing into the cause of this event and the nature of the venting means which was to be provided. At the completion of the root cause investigation a supplemental LER will be submitted providing the results of the investigation and all corrective actions taken.

# ANALYSIS OF EVENT

The tornado design basis of the plant is that all structures and equipment necessary to initiate and maintain a safe plant shutdown are designed to withstand short term loading as a result of a tornado.

The plant is designed assuming a 3 psi pressure drop associated with the passage of a tornado. The diesel generator rooms and diesel day tank rooms are in the Turbine Building. In the wall of the diesel rooms to the turbine building there are large double doors. Large single doors exist in the wall to each diesel day tank room from the turbine building. Opening these doors provides large venting areas into the Turbine Building. Since the siding on the Turbine Building will blow off with winds such as those associated with a tornado, pressure equalization is accomplished by venting to the interior of the building.

An informal calculation was performed to estimate the pressure differential required to open the doors or ventilation dampers. These investigations cannot, with certainty, conclude that they are intended to, or in fact do, demonstrate compliance with the original design calculations. However it is recognized that the doors and dampers are not airtight and therefore do accommodate some amount of venting capability. Also, the structural capacity of the walls comprising the enclosures is inherently greater than either the doors or damper assemblies. Therefore, it is reasonable to expect that these structurally weaker elements would fail prior to a failure of the walls.

Immediate compensatory measures were taken to block open the diesel generator room and Diesel day tank room doors into the turbine building and station personnel at the doors to address security, fire, and environmental qualification (EQ) concerns. This provides venting such that the tornado design basis has been satisfied thereby mitigating any possible structural failures.

In addition to the compensatory measures taken to bring the enclosures to their tornado design basis, the Vernon tie line has recently been upgraded to demonstrate compliance with 10CFR50.63 - Station Blackout (SBO). This upgrade provides an alternate AC source equivalent to one diesel generator in the event of a loss of normal power in conjunction with the loss of both diesel generators. Therefore, this feature provides an available redundant power source which incorporates severe weather related events into its design.

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Additionally there have been no identified occurrences of tornados in the immediate vicinity of the plant since construction.

Based upon the above it is determined that there has been no threat to public health or safety as a result of this event.

### CORRECTIVE ACTIONS

1. Immediate compensatory measures were taken to block open the doors between the affected rooms and the turbine building and station personnel at the doors to address security, fire, and environmental qualification concerns.

2. On 6/14/96 a temporary modification was installed to block the exhaust fan louvers in the normally open position to provide a vent path for the diesel generator rooms in the event of a tornado and the doors were reclosed.

3. A Basis for Maintaining Operation (BMO) evaluation was performed, reviewed and approved to demonstrate that continued operation in the existing configuration was justified.

4. Long term solutions to address tornado venting of the rooms are being investigated. The results of these investigations and any modifications made or planned will be reported in a supplemental LER. This is expected to be completed by 11/30/96.

## ADDITIONAL INFORMATION

There have been no previous LER's reported to the NRC regarding a failure to satisfy design basis tornado protection requirements in the past five years.