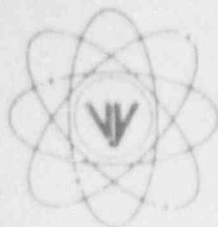


VERMONT YANKEE NUCLEAR POWER CORPORATION



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

January 15, 1993

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 93-001

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached
Reportable Occurrence as LER 93-001.

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

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NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION (6-89)										APPROVED OMS NO. 3150-0104 EXPIRES 4/30/92 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)										DOCKET NO. (2)					PAGE (3)				
VERMONT YANKEE NUCLEAR POWER STATION										0 5 0 0 0 2 7 1					0 1 OF 0 4				
TITLE (4) Degraded Vital Fire Barriers																			
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)					
1 2	1 7	9 2	9 3	- 0 0 1	- 0 0	0 1	1 5	9 3						0 5 0 0 0					
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO REQ'TS OF 10 CFR 5: CHECK ONE OR MORE (11)																	
N		20.402(b)				20.405(c)				50.73(a)(2)(iv)					73.71(b)				
POWER LEVEL (10) 1 0 0		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)				XX 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.									
DONALD A. REID, PLANT MANAGER										ARIA CODE 6 0 2 2 5 7 - 7 7 1 1									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																			
CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPRDS	CAUSE	SYST	COMPONENT	MFR	REPORTABLE TO NPRDS								
N/A												
												
SUPPLEMENTAL REPORT EX. CTED (14)										EXPECTED SUBMISSION DATE (15)					MO DAY YR				
XX YES (If yes, complete EXPECTED SUBMISSION DATE, NO															0 3 0 1 9 3				

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

On 12/17/92 when the insulation was removed from a piping penetration (RA-515-SF), an indeterminate fire penetration seal configuration was identified. The piping penetration was only partially filled with the expected fire barrier material. This configuration was determined to be different than expected and potentially not in compliance with design requirements. The penetration was repaired to conform with the sealing requirements for penetrations specified in the original design change, PDCR 79-05.

The root cause of this event has not yet been determined. There is no documentation found to date that clearly documents the reason for the difference in the as found configuration and the design details.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION			
FACILITY NAME (1)	DOCKET NO (2)	LER NUMBER (6)	
VERMONT YANKEE NUCLEAR POWER STATION	05000271	YEAR 93	SEQ # - 001 - 00
		REV # 00	PAGE (3) 02 OF 04

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

DESCRIPTION OF EVENT

On 12/17/92 when the insulation was removed from piping penetration (RA-515-SF), an indeterminate fire penetration seal configuration was identified. The piping penetration was only partially filled with the expected fire barrier material and partially filled with insulation. This configuration was determined to be different than expected and potentially not in compliance with design requirements. The penetration was repaired to conform with the sealing requirements for penetrations specified in the original design change, PDCR 79-05.

After review of the issue, an additional penetration RA-519-CA, was inspected and also found to have an indeterminate seal. This line was also an insulated line and was found to have some insulation in the penetration and a fire caulking material sealing the space between the wall and the pipe sleeve.

On 12/22/92, upon discovery of the second indeterminate penetration seal, a group was formed to review the as-found conditions, licensing bases documentation, the design documentation, and to develop the appropriate course of action.

A review of the design basis revealed that as part of Vermont Yankees commitments to address Appendix A to BTP 9.5-1, Vermont Yankee made commitments to upgrade certain penetrations to a rating equivalent to the barrier rating. Plant Design Change Request (PDCR) 79-05 was developed to make the required modifications. Subsequent to this Vermont Yankee took credit for certain barriers for separation of fire zones in support of the Safe Shutdown Capabilities Analysis.

Discussions with cognizant plant personnel, associated with the 1979/80 sealing effort, indicated that a decision was made to not remove pipe insulation during the sealing effort and to seal between the insulation and the pipe sleeve/wall interface. A review of the design documentation by our Fire Protection Specialist has not revealed documentation indicating that this was an acceptable alternative installation nor did it identify any qualification documentation for that type of installation.

On 12/23/92, as a result of the above information, all fire penetration seal barriers containing insulated lines were considered indeterminate and therefore declared inoperable. Vermont Yankee Engineering immediately began a review of all fire barriers which contained insulated lines and appropriate compensatory measures were taken. The compensatory measures will be continued until an engineering evaluation is completed for each installation and an approved seal is installed if required.

On 12/24/92 a Nuclear Network entry was made to alert other nuclear utilities of this condition and to recommend that they review their records for any similar condition. In addition to the Nuclear Network entry, on 12/28/92 the Potential Reportable Occurrence report was evaluated and determined to be reportable as an LER per 50.73(a)(2)(ii) as a condition outside of the design basis. In addition a recommendation was made to evaluate the event for 10 CFR Part 21 implications.

On 1/2/93, during inspections of insulated fire barriers, concerns were raised regarding the adequacy of three nearby un-insulated penetrations through the west wall of the "A" Diesel Generator room (TG-0304SF, TG-0305SF, and TG-0310CA).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				
FACILITY NAME (1)	DOCKET NO (2)	LER NUMBER (6)		PAGE (3)
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TEXT (If more space is required, use additional NRC Form 366A) (17)

Investigation into the noted condition of these seals concluded that they also were not installed in accordance with the design details specified in the original design change "typical details" nor were they consistent with current requirements for a 3 hour fire barrier.

Recognizing this additional potential problem, on 1/5/93, a decision was made to require a continuous fire watch for these 3 additional penetrations. Since this wall was already being continuously watched, due to conditions previously identified with insulated lines, this watch was simply an extension to the existing watch. On January 6, 1993 a task team headed by the Vice President, Engineering was formed to investigate the entire situation, to assess the status of fire barriers in the plant and to initiate additional corrective actions as appropriate.

On 1/12/93 an additional Tech Spec area which contained insulated fire penetrations was identified as requiring a continuous fire watch. This area was also compensated with a continuous fire watch.

CAUSE OF EVENT

The root cause of this event has not yet been determined. There is no documentation found to date that clearly documents the basis for the differences between the as found configuration and the design details.

ANALYSIS OF EVENT

Fire Protection systems are Non-Nuclear Safety but protect various areas containing safety related safe shutdown equipment to ensure that the plant can shutdown and be maintained shutdown given an in-plant fire. Discussions with cognizant plant personnel have revealed that the "as found" condition (insulation left on pipes and butted against the wall and sealant material around the insulation/wall interface where any small gaps may have been) was a conscious decision made during the effort to identify which penetrations require sealing. This type of installation provides some protection of equipment in the event of a fire however, absent a qualified fire test report or assessment by a Fire Protection Specialist the rating is considered indeterminate.

Other fire detection and suppression systems are installed to alert the operator of any potential fires as well as normal operator rounds and normal fire protection walkdowns which would identify any area not maintained to Vermont Yankee's fire standards.

CORRECTIVE ACTIONS

IMMEDIATE CORRECTIVE ACTIONS

1. Immediate corrective actions were to establish compensatory fire watches where needed as well as identifying all potentially impacted areas.
2. Installation of new seals was begun where needed following an engineering review.
3. All insulated lines will be repaired to an acceptable barrier or verified to be in conformance with design requirements.
4. A special Task Force has been developed with outside consultants employed to address this issue and assure appropriate actions are taken in a timely manner.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION															
FACILITY NAME (1) VERMONT YANKEE NUCLEAR POWER STATION	DOCKET NO (2) 0 5 0 0 0 2 7 1	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4">LER NUMBER (6)</th> </tr> <tr> <td style="width: 25%;">YEAR</td> <td style="width: 25%;">SEQ #</td> <td style="width: 25%;">REV #</td> <td style="width: 25%;"></td> </tr> <tr> <td>9 3</td> <td>- 0 0 1</td> <td>- 0 0</td> <td></td> </tr> </table>	LER NUMBER (6)				YEAR	SEQ #	REV #		9 3	- 0 0 1	- 0 0		PAGE (3) 0 4 OF 0 4
LER NUMBER (6)															
YEAR	SEQ #	REV #													
9 3	- 0 0 1	- 0 0													

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LONG TERM CORRECTIVE ACTION

1. Long term corrective action will be discussed in the supplemental LER once the final root cause has been determined.
2. Further corrective action/root cause analysis will continue. Further information and conclusions will be submitted via a supplement to this LER.

ADDITIONAL INFORMATION

There have been no similar events of this type at Vermont Yankee reported to the commission in the past five years.