VERMONT YANKEE
NUCLEAR POWER CORPORATION

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February 13, 1992

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 92-003

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 92-003.

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

IE22

NRC Form 366 U.S. NUCLEAR REGULATORY COMMISSION (6-89)

LICENSEE EVENT REPORT (LER)

APPROVED OMB 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 3

TITLE (4)

AOG RUPTURE DISK TEMPORARY REPAIR NOT WITHIN SYSTEM DESIGN BASES

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. (8)
0 1	1 3	9 2	9 2	- 0 0 3	- 0 0	0 2	1 3	9 2		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO REQ'MTS OF 10 CFR §: CHECK ONE OR MORE (11)					
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	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)	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.
DONALD A. REID, PLANT MANAGER	AREA CODE 8 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					N/A				
N/A					N/A				

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MO	DAY	YR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

From 01/13/92 at 1335 until 01/15/92 at 2006, with the reactor operating at 100% power, the Steam Jet Air Ejectors (SJAE) (EIIS=SH) were operated with the Advanced Off-Gas (AOG) (EIIS=WF) system inlet rupture disk ruptured. The rupture disc ruptured on 01/13/92 at 1330 after both AOG Recombiner inlet valves were isolated as a result of a deficient preventive maintenance procedure step. On 1/16/92 at 0515 the turbine was taken off-line and the rupture disc was replaced when it was identified that neither a temporary or on-line repair could be made to the rupture disk.

A release of noble gasses and associated particulates occurred as a result of the AOG Recombiners isolating and the rupture disc bursting. The release was evaluated and found to not exceed any limits. No release occurred while the system was operated with the rupture disc ruptured. The AOG inlet pipe was operated at a vacuum with inleakage being controlled with a metal cover.

The root cause of the Recombiner inlet valve closure was a procedure deficiency. The preventive maintenance procedure is being revised to prevent recurrence. In addition, a task team is evaluating the disc rupture.

DESCRIPTION OF EVENT

From 01/13/92 at 1335 until 01/15/92 at 2006, with the reactor operating at 100% power, the Steam Jet Air Ejectors (EIIS=SH) were operated with the Advanced Off-Gas (AOG) (EIIS=WF) system inlet rupture disk ruptured. The rupture disc ruptured on 01/13/92 at 1330 after both AOG Recombiner inlet valves were isolated as a result of a deficient preventive maintenance procedure step. On 1/16/92 at 0515 the turbine was taken off-line and the rupture disc was replaced when it was identified that neither a temporary or on-line repair could be made to the rupture disk.

The turbine was returned to the electrical grid on 01/16/92 at 1708.

CAUSE OF EVENT

The root cause of the closure of both Recombiner inlet valves was a deficient preventive maintenance procedure. While the "A" Recombiner was isolated for maintenance the procedure required an air supply valve to be closed that isolated cooling to the "B" Recombiner. The "B" Recombiner inlet valve "Tripped Closed" on low cooling flow. The SJAE discharge was dead-headed and system pressure exceeded the rupture disc burst pressure. The preventive maintenance procedure had already been identified as being deficient and was in the process of being revised. The applicable procedure is normally performed during the refueling outage and not during operation. It was not identified that the procedure was being revised and shouldn't be used until it was revised.

A decision was made to continue operating the plant with the rupture disc ruptured. The SJAE discharge piping/AOG inlet line was administratively controlled to maintain the line at a negative pressure. Inleakage into the line was controlled by placing a metal bucket over the rupture disc outlet. In this configuration, the AOG system was considered operable but degraded. The SJAE effluent was processed by AOG as long as the line was maintained at a negative pressure. If the line had become pressurized, an uncontrolled release could have occurred.

The decision to continue to operate the plant with the burst rupture disc was made to allow time to evaluate:

1. if a temporary repair could be made to prevent cycling the plant through a shutdown and startup,

2. if the rupture disc could be repaired on-line, and

3. why the rupture disc burst.

ANALYSIS OF EVENT

There were no adverse safety affects or significant releases of gaseous effluent to unrestricted areas as a result of this event.

ANALYSIS OF EVENT (continued)

A release of noble gasses and associated particulates occurred as a result of the rupture disc bursting. The Chemistry and Radiation Departments were contacted after the disc burst to sample and evaluate the release. It was determined that:

1. A ground level release did not occur,

2. The release resulted in general area levels of approximately 25% of the Maximum Permissible Concentrations, and

3. No Federal, State or Technical Specification limits for whole body, skin or organ limits were exceeded.

No release occurred while the system was operated with the rupture disc burst. The AOG inlet line was operated at a sufficient negative pressure to assure that leakage was always into AOG. Had the line become pressurized it had already been demonstrated that Operations personnel could take action to return the line to a negative pressure. Thus, the subsequent release would not have been significant.

CORRECTIVE ACTIONS

Immediate Corrective Actions

1. Take the turbine off-line and replace the rupture disc, and

2. Revise the deficient preventive maintenance procedure to prevent reoccurrence of the Recombiner inlet isolation.

ADDITIONAL INFORMATION

Since the affected equipment is non-nuclear safety, subsequent design/equipment corrective action will be reported via NPRDS.