VERMONT YANKEE NUCLEAR POWER CORPORATION



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

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 Sire:

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

Very truly yours,

VERMONT VANKEE NUCLEAR POWER CORPORATION

Donald A. Reid

Plant Manager

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

9202190198 920213 PDR ADDCK 05000271 B PDR

JE23

DOCRET NO. (2) VERMONT YARKEE NUCLEAR FOWER STATION DOCRET NO. (2) TITLE (4) AGG RUFTURE DISK TEMFORARY REPAIR NOT WITHIN BYSTEM DESION DATE EVENT DATE (5) LER NUMBER (6) REFORT DATE (7) OTHER FACILITIES INVOL NONTH DAY YEAR YEAR SEQ N REVS MONTH DAY YEAR FACILITY NAMES 0 J J THIS REPORT IS SUBMITTED FURSUANT TO REQ'MTS OF 10 CFR \$: CHECK C OFERATING THIS REPORT IS SUBMITTED FURSUANT TO REQ'MTS OF 10 CFR \$: CHECK C OPERATING THIS REPORT IS SUBMITTED FURSUANT TO REQ'MTS OF 10 CFR \$: CHECK C OPERATING N 20,402(b) 20,405(c)(1) 50.73(a)(2)(iv) 50.73(a)(2)(iv) 50.73(a)(2)(iv) 50.73(a)(2)(vii) 50.73(a)(2)(0 VED (PAGE	(3) 07 0	
VERNONT VANNEEL NUCLEAR FOWER STATION 0 5 0 0 2 7 1 TITLE (4) AGG RUFTURE DIEK TEMPORARY REFAIR NOT WITHIN BYSTEM DESION BASES EVENT DATE (5) LER NUMBER (6) REFORT DATE (7) OTHER FACILITIES INVOL MONTH DAY YEAR YEAR SEQ N REFORT DATE (7) OTHER FACILITY NAMES 0 1 1 3 2 9 2 0 0 2 1 3 9 2 OFERATINO MODE (9) THIS REFORT IS SUDMITTED FURSUART TO REQ'MES OF 10 CFR §: CHECK O MODE (9) POWER 1000 20.405(s)(1)(1) 50.36(c)(2) 50.73(s)(2)(1V) 20.405(s)(1)(1) 50.73(s)(2)(1V) 20.405(s)(1)(1) 50.73(s)(2)(1) 50.73(s)(2)(VIII)(A) LICENBEE CONTACT FOR THIS LER (12) N LICENBEE CONTACT FOR THIS LER (12)	UED (1	07 0	-
TITLE (4) AGG RUFTURE DISK TEMPORARY REPAIR NOT WITHIN BYSTEM DESIGN BASES EVENT DATE (5) LER NUMBER (6) REPORT DATE (7) OTHER FACILITIES INVOL NONTH DAY YEAR SEQ N REVEN MONTH DAY YEAR FACILITY NAMES 0 1 1 3 2 9 2 0 0 3 0 0 2 1 3 9 2 OFERATING THIS REPORT IS SUBMITTED FURSUANT TO REQ'MIS OF 10 CFR \$: CHECK C 50.73(8)(2)(iV) 50.73(8)(2)(iV) FOWER 20.402(b) 20.405(c) 50.73(8)(2)(VII) 50.73(8)(2)(VII) 50.73(8)(2)(VII) LEVEL (10) 100 20.405(8)(1)(1)(1) 50.36(c)(2) 50.73(8)(2)(VIII) 50.73(8)(2)(VIII)	VED (3
AGG RUFTURE DISK TEMPORARY REPAIR NOT WITHIN BYSTEM DESION BARS EVENT DATE (5) LER NUMBER (6) REFORT DATE (7) OTHER PACILITIES INVOL NONTH DAY YEAR YEAR SEQ % REV% MONTH DAY YEAR FACILITY NAMES 0 1 3 J 2 9 2 -0 0 2 1 3 9 2 OFERATING MODE (6) THIS REFORT IS SUBMITTED FURSUANT TO REQ'MES OF 10 CFR §! CHECK C POWER 20.402(b) 20.405(a)(1)(1) 50.36(c)(1) 50.73(a)(2)(1V)	VED (
EVENT DATE (5) LER NUMBER (6) REFORT DATE (7) OTHER FACILITIES INVOI OTHER FACILITIES INVOI PACILITY NAMES 0 1 3 J 2 9 2 0 0 3 0 0 1 3 J 2 9 2 0 0 0 1 3 9 2 0 0 0 1 3 9 2 0 <td>VED (</td> <td></td> <td></td> <td></td>	VED (
NONTH DAY YEAR SEQ R REVA MONTH DAY YEAR FACILITY NAMES 0 1 3 J 2 9 2 0 0 0 2 1 3 9 2 OFERATING MODE THIS REPORT IS SUBMITTED FURSUART TO REQ ⁺ MTS OF 10 CFR §: CHECK OF FOWER LEVEL 1 0 20.402(b) 20.405(a)(1)(1) 50.36(c)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 20.405(a)(1)(1)(1) 50.73(a)(2)(1) 50.73(a)(2)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1) 50.73(a)(2)(1)(1)	5	(8)		-
0 1 1 3 7 2 9 2 - 0 0 2 1 3 9 2 OFERATING HODE (9) THIS REFORT 16 SUBMITTED FURSUANT TO REG'MTS OF 10 CFR 5: CHECK C POWER LEVEL (10) 20.402(b) 20.405(s)(1)(i) 50.36(c)(1) 50.73(s)(2)(v)	0	OSOCKET NO.		
OFERATING MODE (9) THIS REPORT IS SUBMITTED FURSUANT TO REQ'MTS OF 10 CFR \$: CHECK C 20.402(b) 20.402(b) 20.405(c) 50.73(a)(2)(iv) 50.73(a)(2)(iv) 50.36(c)(1) 50.73(a)(2)(iv) 100 20.405(a)(1)(1) 50.36(c)(2) 50.73(a)(2)(vii) 20.405(a)(1)(11) 50.73(a)(2)(1) 50.73(a)(2)(vii) 20.405(a)(1)(11) 50.73(a)(2)(1) 50.73(a)(2)(vii) 20.405(a)(1)(11) 50.73(a)(2)(1) 50.73(a)(2)(vii) 20.405(a)(1)(11) 50.73(a)(2)(11) 50.73(a)(2)(viii)(A) 20.405(a)(1)(1)(1) 50.73(a)(2)(11) 50.73(a)(2)(viii)(A) 20.405(a)(1)(11) 50.73(a)(2)(11) 50.73(a)(2)(viii)(A) 20.405(a)(1)(1)(10) X 50.73(a)(2)(11) 50.73(a)(2)(viii)(B) 20.405(a)(1)(1)(1) X 50.73(a)(2)(11) 50.73(a)(2)(viii)(B) 20.405(a)(1)(1)(1) X 50.73(a)(2)(11) 50.73(a)(2)(viii)(B) 20.405(a)(1)(1)(1) X 50.73(a)(2)(11) 50.73(a)(2)(VIII)(B) 20.405(a)(1)(1)(1)(1) X 50.73(a)(2)(11) 50.73(a)(2)(VIII)(B) X X X X<	0	5 0	0 0	
MODE (9) N 20.402(b) 20.405(c) 50.73(a)(2)(iv) FOWER LEVEL (10) 100 20.405(a)(1)(1) 50.36(c)(2) 50.73(a)(2)(vii)	NE OF	R MOR	B (11)
FOWER 20.405(s)(1)(1) 50.36(c)(1) 50.73(s)(2)(V) LEVEL (10) 100 20.405(s)(1)(11) 50.36(c)(2) 50.73(s)(2)(V11)		73.71(b)		
LEVEL (10) 1 0 0 20.405(a)(1)(11) 50.36(c)(2) 50.73(a)(2)(V11) 20.405(a)(1)(11) 50.73(a)(2)(1) 50.73(a)(2)(V11)(A) 20.405(a)(1)(1V) x 50.73(a)(2)(11) 50.73(a)(2)(V111)(B) 20.405(a)(1)(1V) x 50.73(a)(2)(11) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 50.73(a)(2)(V111)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(2)(V11)(B) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D) 10.73(a)(D)		73.71(0)		
20.405(a)(1)(11) 50.73(a)(2)(1) 50.73(a)(2)(viii)(h) 20.405(a)(1)(1V) X 50.73(a)(2)(1) 50.73(a)(2)(viii)(h) 20.405(a)(1)(1V) X 50.73(a)(2)(11) 50.73(a)(2)(VIII)(h) 1LICENSEE CONTACT FOR THIS LER (12) ARE ARE ARE ARE ARE		OTHER:		
20.405(a)(1)(iv) x 50.73(a)(2)(ii) 50.73(a)(2)(viii)(B) 20.405((v) 50.73(a)(2)(iii) 50.73(a)(2)(v) IICENSEE CONTACT FOR THIS LER (12) NAME				
LICENSEE CONTACT FOR THIS LER (12)				
NAME				
ARE	TELE	EFHON	E NO.	
1999	A			
BIG	22	5 7	- 17 9	111
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)	de carde ande		dereden
CAUSE SYST COMPONENT MFR REPORTABLE CAUSE SYST COMPONENT MFR	1	REPORTABLE		
N/A TO NFRDE N/A		7.0 K	F BOUD	1.1.1
N/A				***
BUPFLEMENTAL REPORT EXPECTED (14)	der er er der der	MO	DAY	YR
YES (IF YES, CONDICTO EXPECTED SUBMISSION DATE) X NO	ON	Π		

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 becombiner 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.

NRC FOIR 366A U.S. NUCLEAR REGULATORY CO (6+89) ICENSEE EVENT REPORT (LER) TEXT CONTINUATION	APPROVED OMS NO. 3150-0104 EXFIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD CLAMENTS REGARDING BURDEN ESTIMATE TO THE RECORD: AND REFORTS MANAGEMENT BRANCH (P-530), U.S. MUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFIC OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603												
FACILITY NAME (1) VERMONT YANKEE NUCLEAR FOWER STATION	DOCKET	NO (2)	O (2) LER NUMBER (6)								(1) SDA4		
	- I COLORADO		YEAR		BEQ 8			REV	1		1		
	0 5 0 0	0 2 7 1	9 2	+	0	0 3		0 0	0 2	OF	0		

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

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 AOC Recombiner inlet valves were isolated as a result of a deficient preventive maintenance pricedure 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 deadheaded 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.

NRC FOIR 366A U.S. NUCLEAR REGULATORY COR (6-89) LICENSEE EVENT REPORT (LER) TEXT CONTINUATION	APPROVED ONE NG. 3150-0104 EXPIRES 4/30/92 RETIMATED BURDEN FER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING DURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEME BRANCH (P=530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFF OF MARAGEMENT AND BUDGET, WASHINGTON, DC 206								NT 2 CE 0 3.	
FACILITY NAME (1)	DOCKET NO 11		(Q (2) LER NUMBER (6)					PAGE (3)		
	1111	YEAR	YEAR		880 8		REV #	6 j		1
VERMONT VANKEE NUCLEAR POWER STATION	0 5 0 0	0 2 7 1	9 2	-	0 0 1		0 0	6 3	OF	0 1

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