# VERMONT YANKEE NUCLEAR POWER CORPORATION



P.O. Box 157, Governor Hunt Road Vernon, Vermont 05354-0157

May 20, 1994

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 94-007

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 94-007.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

1.h. lancant

Robert J. Wanczyk Plant Manager

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

9405260104 940520 ADOCK 05000271 PDR PDR

9

260021

TEDD

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (6-89).								ESTIN INFOR COMMI REPOR COMMI REDUC BUDGE	MATE RMAT ENTS RTS ISSI CTIO ET,	D BU ION REG MANA ON, N PR WASH	AF RDEP COLL ARDI GEME WASH OJEC INGI	PPROV N PER LECTI ING E ENT B HINGT CT (3 TON,	VED C EXPI RESION R BURDE BRANC ON D S160- DC 2	MS N RES PONSI EQUE N ES H (P C 20 0104 0603	0. 3 4/30 E TC ST: TIMA -350 555, ), C	5150 )/92 ) CON 50 (TE 1 )), U AND () AND	-010 MPL1 .0 I U.S. 0 TO CE 0	Y WIT HRS. THE R. NUC D THE DF MA	H TH FOR ECOR LEAR PAF NAGE	IS WARD DS A REG ERWO MENT	ND JLAT RK AND	ORY				
FAC	ILI	TY NAM	E (1)												DO	OCKET	NO.	(2)					F	AGE	(3)	
	VERI	MONT Y	ANKEE N	UCLEAR	POWE	R 57/	ATION							0	5	0	0	0	2	7	1	0	1	OF	0	4
TIT	ĻΕ	(4) IN RA	ADVERTE DIATION	NT PRI MONIT	MARY DR.	CONT	A I NME	NT 1	SOLAT	ION SYS	TEM	CTUA	T I ON	DUE	TO	A SP	PUR I C	IUS SI	PIKE	ON	A	REFUE	L FL	OOR		
ΕV	ENT	DATE	(5)			LER	NUMB	ER (	6)			REF	PORT	DAT	E (7	7)	01	HER	FACI	LIT	IES	INVO	LVED	(8)		
MONTH		DAY	YEAR	YEA	R		SEQ	#		REV #	M	нтис	D	AY	YE	EAR	FA	CILI	TYN	AMES	s		0	OCKE	NO 00	. (s)
0 4		0 5	9 4	9	4	- 1	0 0	7	+	0 0	0	5	2	0	9	4	-		-				0	50	0 0	1
OPERA	TIN	G		THIS	REPO	RT L	S SUB	MITT	ED PUI	RSUANT	TO RI	Q'MTS	S OF	10	CFR	§ :	CHEC	K ON	E OR	MOR	RE (	(11)		dede-		- denider
MODE	(9)		N	2	0.402	(b)		parts and		20.40	5(c)				X	50.7	3(a)	(2)(	iv)					73.	71(b	)
POWER			11010	2	0.405	(a)(	1)(i)			50,36	(c)(	5				50.7	3(a)	(2)(	V)			[		73.	71(c	)
LEVEL	(1)	0)	100	5	0.405	(a)(	1)(ii	)		50.36	(c)(	2)				50,7	3(a)	(2)(	vii)					отн	ER:	
			****	-2	0,405	(a)(	1)(11	i )		50.73	(a)(	2)(i)				50.7	3(a)	(2)(	viii	)(A	)					
*****	5 K R.	1.1.2.2.2.2		2	0.405	(a)(	1)(iv	)		50.73	(a)(	2)(11)	)			50.7	3(a)	(2)(	91 ( I	)(B	2					
1	1 4 H -		1 A 4 A	S	0.405	(a)(	1)(v)			50.73	(a)(	2)(11	i)			50.7	3(a)	(2)(	x)							
								LICE	NSEE	CONTACT	FOR	THIS	LER	(12	>				1							
NAME														elen en de d			-			1			TELE	PHON	E NO	
ROB	ERT	J. WA	NCZYK,	PLANT	MANAG	ER																AREA CODE 8 0	2 2	5   7	- 171	7 1 1
			COMPLE	TE ONE	LINE	FOR	EACH	COM	PONEN	T FAILU	RE DI	SCRI	BED	IN T	HIS	REPO	ORT (	13)				L	- Lui			
CAUSE	SY	ST	COMPO	NENT		M	FR		REPOR TO N	TABLE PRDS .		AUSE	SY	ST	-	COMP	ONEN	T		,	<b>MFR</b>		RE	PORT O NP	ABLE	
X	1	L		H S	G	0	8	0	Y	*	* * *				-	1	-	1			1	1	-			* * * *
			11												1	1	1	r i		1	1	1.				****
		hire an de se	SUPP	LEMENT	AL RE	PORT	EXPE	CTED	(14)		artanaka				EXF	PECTE	D	de marcara		-	-		-	MO	DA	YYR
Y	ES	(îf ye	s, comp	lete E	KPECT	ED SI	JBMIS	SION	DATE	) X	N	)			DAT	SMISS TE (1	10N 5)							1		1

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

At approximately 1521 hours on 04/20/94, with the reactor operating at approximately 100% power, a Standby Gas Treatment System (SBGTS) initiation and Reactor Building Ventilation isolation occurred concurrent with a Primary Containment Isolation System (PCIS) Group III isolation. These isolations and the initiation of SBGTS were caused by a spike on the "B" Refuel Floor Radiation Monitor.

The cause of the event was dirty/oxidized contacts on the function switch for the radiation monitor.

Corrective actions consisted of cleaning the function switch contacts on the subject monitor and the other three radiation monitors that initiate a PCIS Group III isolation.

NRC Form 366A U.S. NUCLEAR REGULATORY COMMI (6-89) LICENSEE EVENT REPORT (LER) TEXT CONTINUATION	SSION	ESTI INFO COMP REPO COMP REDU BUDO	IMATE DRMAT MENTS DRTS 41SS1 JCT10 GET,	D BL ION REC MANA ON, N PF WASP	A IRDE COL IARD IGEM WAS IOJE ITNG	PPROV N PER LECTI ING E ENT E HINGI CT (3 TON,	VED ( EXP RES ION I BURDI BRANI ION I BIANI ION I BIANI ION I	XMS I RES SPONS REQUE EN ES CH (F DC 20 -0104 20603	NO. 3 4/30 SE TO EST: STIMA 9-350 0555, 4), 0 3.	150- /92 CON 50. TE 1 ), L AND FFIC	0104 IPLY I O HR IO TH J.S. D TO CE OF	WITH S. F E REC NUCLE THE P MANA	THIS ORWARI ORDS AR RE APERW GEMEN	) AND SULATORY DRK T AND
FACILITY NAME (1)	DOCKET NO (2)			LE	RN	UMBER	(6	)				P	AGE (	5)
		YE/	R			SEQ #	\$		REV	#				
VERMONT YANKEE NUCLEAR POWER CORPORATION	0 5 0 0 2 7 1	9	4	1	0	0	7		0	0	0	2	OF	0 4

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

# DESCRIPTION OF EVENT

At approximately 1521 hours on 04/20/94, with the reactor operating at approximately 100% power, a Standby Gas Treatment System (SBGTS) (EIIS = BH) initiation and Reactor Building Ventilation (EIIS = VA) isolation occurred concurrent with a Primary Containment Isolation System (PCIS) (EIIS = JM) Group III isolation. These isolations and the initiation of SBGTS were caused by a spike on the "B" Refuel Floor Radiation Monitor (EIIS = IL). The monitor was observed to be intermittently spiking high and was bypassed and declared inoperable.

At approximately 1645 hours, after verification of normal area radiation levels, Control Room personnel reset the isolation and returned the ventilation systems to normal operation.

During the following 18 hours, with the radiation monitor still bypassed, 14 additional spikes with a magnitude greater than the monitor's trip setpoint were recorded. Technicians investigated and found the contacts of the radiation monitor's function switch dirty and oxidized. These contacts were cleaned on 04/22/94 and the radiation monitor was left in bypass with its output trended.

At approximately 0815 on 04/25/94, after verification that no spiking had been observed since the switch contacts were cleaned, the radiation monitor was declared operable and returned to service. Work Orders were initiated to clean the associated switch contacts on the other three radiation monitors that initiate a PCIS Group III isolation (ie. the "A" Refuel Floor Radiation Monitor and the "A" and "B" Reactor Building Ventilation Radiation Monitors).

There are two radiation detectors monitoring the Refuel Floor. A signal from either detector will cause the system to trip, isolate Reactor Building Ventilation, generate a PCIS Group III isolation signal, and start the Standby Gas Treatment System.

After the occurrence of the isolation there was some discussion as to whether the event was reportable under 10CFR50.73(a)(2)(iv) as an Engineered Safety Feature (ESF) actuation. In 1992, 10CFR50 parts 72 and 73 were revised to relax reporting requirements for certain ESF actuations which were determined to be of little or no safety significance. The revision relaxed the reporting requirements for invalid actuation of a limited set of ESF's. The Reactor Building Ventilation and Standby Gas Treatment Systems were specifically exempted but, since the Vermont Yankee Group III signal also actuates isolation valves for Primary Containment ventilation, inerting and gaseous sampling systems, interpretation was required to determine if the VY Group III isolation, when initiated by an invalid signal, was reportable. The issue was discussed with the NRC and personnel from other similar plants. On May 04, 1994, the NRC advised that the event should be reported.

In determining the reportability of this event, it was also noted that a previous Group III isolation resulting from an invalid signal occurred on 09/14/93. That event was determined to be not reportable based on the code changes previously described. The event occurred while the plant was shutdown for refueling and was caused by a loss of power to one side of the PCIS logic. All equipment operated as expected.

# CAUSE OF EVENT

The cause of the spiking was a discontinuity between the radiation monitor's function switch contacts when selected to "Operate". This discontinuity was attributed to the contacts being dirty and oxidized.

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMI (6-89) LICENSEE EVENT REPORT (LER) TEXT CONTINUATION	SSION	EST INFI COM REPI COM REDI BUD	IMATE ORMAT MENTS ORTS MISSI JCTIO GET,	ED BL TON REC MANA ON, DN FF WASH	A IRDE COL ARD GEM WAS IOJE	PPRO N PEI LECT ING I ENT I HING CT ( TON,	VED EXP R REI ION I BURDI BRAN TON I 3160 DC	DMS 1 IRES SPONS REQUE EN ES CH (F DC 20 -0104 20603	NO. 3 4/3( SE T( EST: STIM/ 2-35( 0555, 4), ( 3,	3150 0/92 0 COI 50 ATE 0), I , ANI 0FFII	MPLY O HR TO TH J.S. D TO CE OF	WITH S. FI E RECI NUCLE THE PI MANA	THIS ORWARI ORDS AR REI APERW GEMEN	D AND GULAT ORK T AND	FOR Y
FACILITY NAME (1)	DOCKET NO (2)	ired success		LE	RN	UMBE	R (6	)				P	AGE (	3)	
		YE	AR			SEQ I	H.		RE	/ #					
VERMONT YANKEE NUCLEAR POWER CORPORATION	0 5 0 0 0 2 7 1	9	4		0	0	7		0	0	0	3	OF	0	4

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

# ANALYSIS OF EVENT

The PCIS, SBGTS, and Reactor Building Ventilation system operated as designed and successfully isolated the Primary and Secondary Containment ventilation. A PCIS Group III isolation, SBGTS initiation, and Reactor Building Ventilation system isolation are the expected results of a trip of one side of the Refuel Floor Radiation Monitoring system.

Although the event did result in actuation of ESF equipment, there was no adverse safety implications to plant equipment or the public because the isolation of the ventilation systems and initiation of SBGTS are conservative system actuations with respect to protection of the public.

No surveillances or unusual activities were in progress at or near the radiation detector nor the panel that houses the radiation monitor electronics.

The radiation monitor and PCIS Group III instrumentation Technical Specification operability requirements were satisfied at all times.

## CORRECTIVE ACTIONS

#### Immediate

- Once radiological conditions were determined to be normal, the isolations were reset and ventilation systems were returned to normal operation.
- The radiation monitor connections were checked and no apparent problems were found. The connections were cleaned and the unit was functionally tested.
- The radiation monitor function switch contacts were cleaned and no further spiking of the radiation monitor was observed.

## Short Term

- I&C technological and the function switch contacts on the other three radiation monitors associated with PCIS Group III isolatic i logic.
- An evaluation by I&C determined that the subject function switches are also utilized on the plant's 26 non-Tech. Spec. Area Radiation Monitors (ARM)(EIIS=IL). 1&C will initiate work orders to clean the respective switch contacts during one of the next scheduled ARM surveillances.
- The NRC position that the event was reportable has been documented and the appropriate personnel were made aware of the position.

#### Long Term

 The I&C Department will evaluate the need to periodically perform switch contact cleaning preventative maintenance (PMs).

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMI (6:89)" LICENSEE EVENT REPORT (LER) TEXT CONTINUATION	SSION	ESTI INFO COMM REPO COMM REDU BUDO	IMATE DRMAT MENTS DRTS MISS JCTIC DET,	ED BU FION S REG MANJ ION, DN PI WASI	A JRDE COL GARD GEM WAS ROJE	PPRO N PEI LECT ING I ENT I HING CT ( TON,	VED ( EXP R RE ION I BURDI BRAN TON I 3160 DC I	CMS I IRES SPONS REQUE EN ES CH (F CC 20 -0104 20603	NO. 3 4/30 SE TO STIMA -350 0555, ), O S.	150- /92 50. TE 1 ), L ANC FFI(	0104 0 HR 0 HR 0 TH 0.5. 0 TO 2 OF	WITH S. F E REC NUCLE THE P MANA	THIS ORWAR ORDS AR RE APERW GEMEN	D AND GULATORY ORK T AND
FACILITY NAME (1)	DOCKET NO (2)			L	RN	UMBE	R (6	)				P	AGE (	3)
		YE/	AR			SEQ	#		REV	V #				
VERMONT YANKEE NUCLEAR POWER CORPORATION	0 5 0 0 0 2 7 1	9	4	÷	0	0	7	-	0	0	0	4	OF	0 4

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

# ADDITIONAL INFORMATION

Similar events which resulted in PCIS Group III isolations were reported to the Commission in LER 89-03 and LER 89-26. These events were not attributable to dirty/oxidized function switch contacts but were determined to be similar as they involved spurious radiation monitor spikes.