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ACCESSION NBR: 8801270121 DOC. DATE: 88/01/21 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moho 05000410
 AUTH. NAME AUTHOR AFFILIATION
 JENKINS, R.E. Niagara Mohawk Power Corp.
 LEMPGES, T.E. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-079-00: on 871222, ESF acutation caused by dropped lead due to design deficiency.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: 21

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INTERNAL:	ACRS MICHELSON	1		1	ACRS MOELLER	2		2	
	AEOD/DOA	1		1	AEOD/DSP/NAS	1		1	
	AEOD/DSP/ROAB	2		2	AEOD/DSP/TPAB	1		1	
	ARM/DCTS/DAB	1		1	DEDRO	1		1	
	NRR/DEST/ADS	1		0	NRR/DEST/CEB	1		1	
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	NRR/DLPQ/QAB	1		1	NRR/DOEA/EAB	1		1	
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	<u>REG FILE</u> 02	1		1	RES TELFORD, J	1		1	
	RES/DE/EIB	1		1	RES/DRPS DIR	1		1	
	RGN1 FILE 01	1		1					
EXTERNAL:	EG&G GROH, M	5		5	FORD BLDG HOY, A	1		1	
	H ST LOBBY WARD	1		1	LPDR	1		1	
	NRC PDR	1		1	NSIC HARRIS, J	1		1	
	NSIC MAYS, G	1		1					

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 410	PAGE (3) 1 OF 04
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TITLE (4)
Emergency Safety Feature Actuation Caused by a Dropped Lead Due to Design Deficiency

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		
12	22	87	87	079	00	01	21	88	N/A		
									DOCKET NUMBER(S)		
									0 5 0 0 0		

OPERATING MODE (9) 2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) 001	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
	20.405(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.405(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
	20.405(a)(1)(iii)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)						
	20.405(a)(1)(iv)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)						
	20.405(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)

NAME Robert E. Jenkins, Assistant Supervisor Technical Support	TELEPHONE NUMBER AREA CODE 315 349-4220
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

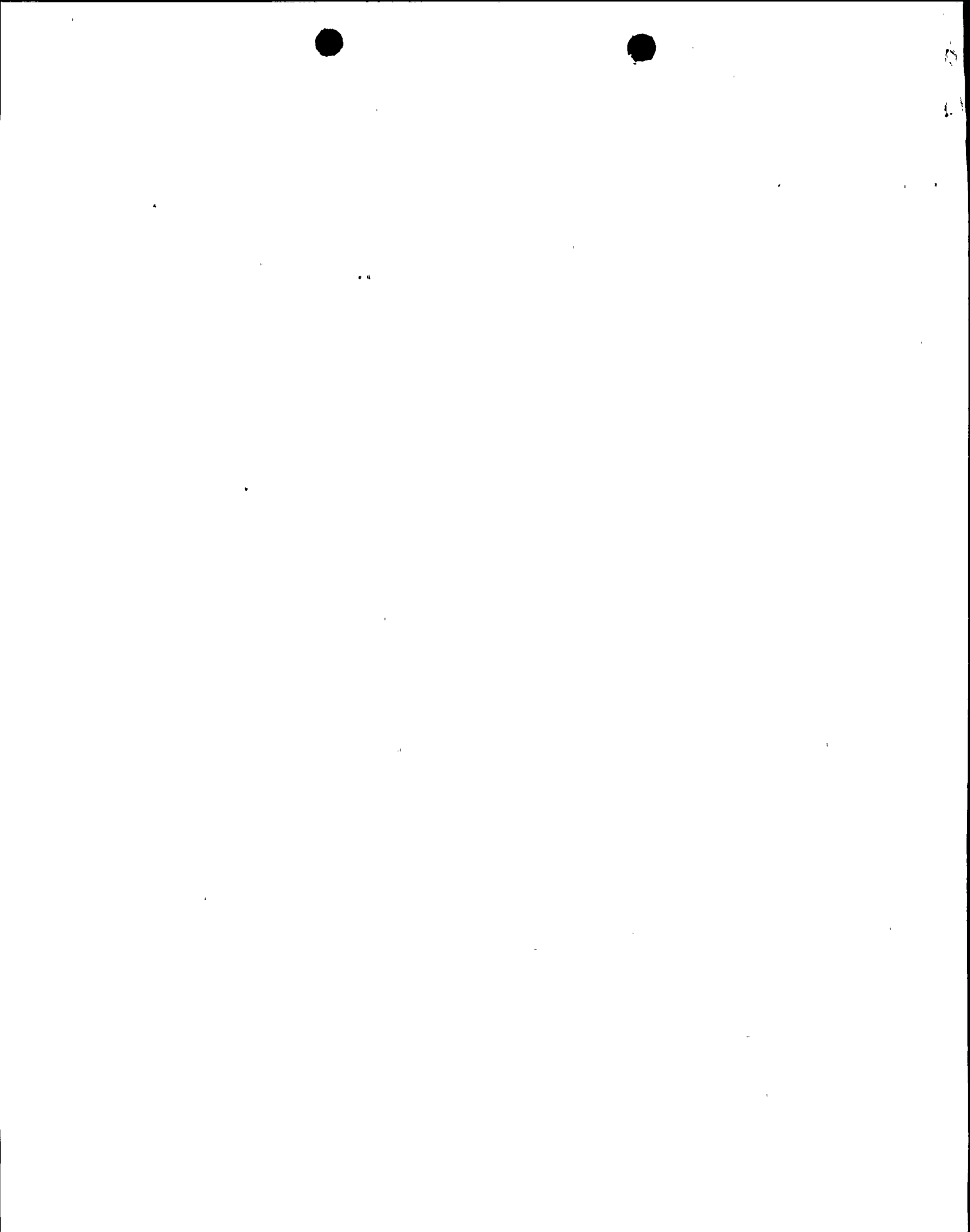
On December 22, 1987 at 1048 hours with the reactor at approximately 1% power and the mode switch in the "STARTUP" position, Nine Mile Point Unit 2 experienced an Engineered Safety Feature (ESF) actuation. At the time of the event reactor temperature and pressure were approximately 326°F and 85 pounds per square inch gauge, respectively. This event consisted of a Secondary Containment Isolation and the initiation of the Standby Gas Treatment (GTS) system, Reactor Building (HVR) unit coolers, and Emergency Recirculation system. Per procedure, an Instrument and Control (I&C) technician was placing a jumper (maintaining positive control with both hands) when the open end of the lead slipped from his hand and shorted to ground. This short to ground caused a reactor building ventilation supply damper 2HVR*AOD1A to close. The closed damper prohibited flow initiating the secondary containment isolation and actuating the HVR unit coolers, Train B of both GTS, and the emergency recirculation system.

The root cause was difficulty in establishing jumper connections at the panel.

CORRECTIVE ACTIONS

1. The immediate corrective action was to restore normal reactor building ventilation.
2. A Modification Request (I20205) has been initiated to install hard wire test switches, which will eliminate the use of jumpers in this surveillance test.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 410	LER NUMBER (6)			PAGE (3)	
		YEAR 87	SEQUENTIAL NUMBER 079	REVISION NUMBER 00	02	OF 04

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

I. DESCRIPTION OF EVENT

On December 22, 1987 at 1048 hours with the reactor at approximately 1% power and the mode switch in the "STARTUP" position, Nine Mile Point Unit 2 experienced an Engineered Safety Feature (ESF) actuation. At the time of the event reactor temperature and pressure were approximately 326°F and 85 pounds per square inch gauge, respectively. This event consisted of a Secondary Containment Isolation and the initiation of the Standby Gas Treatment (GTS) system, the Reactor Building (HVR) unit coolers, and Emergency Recirculation system.

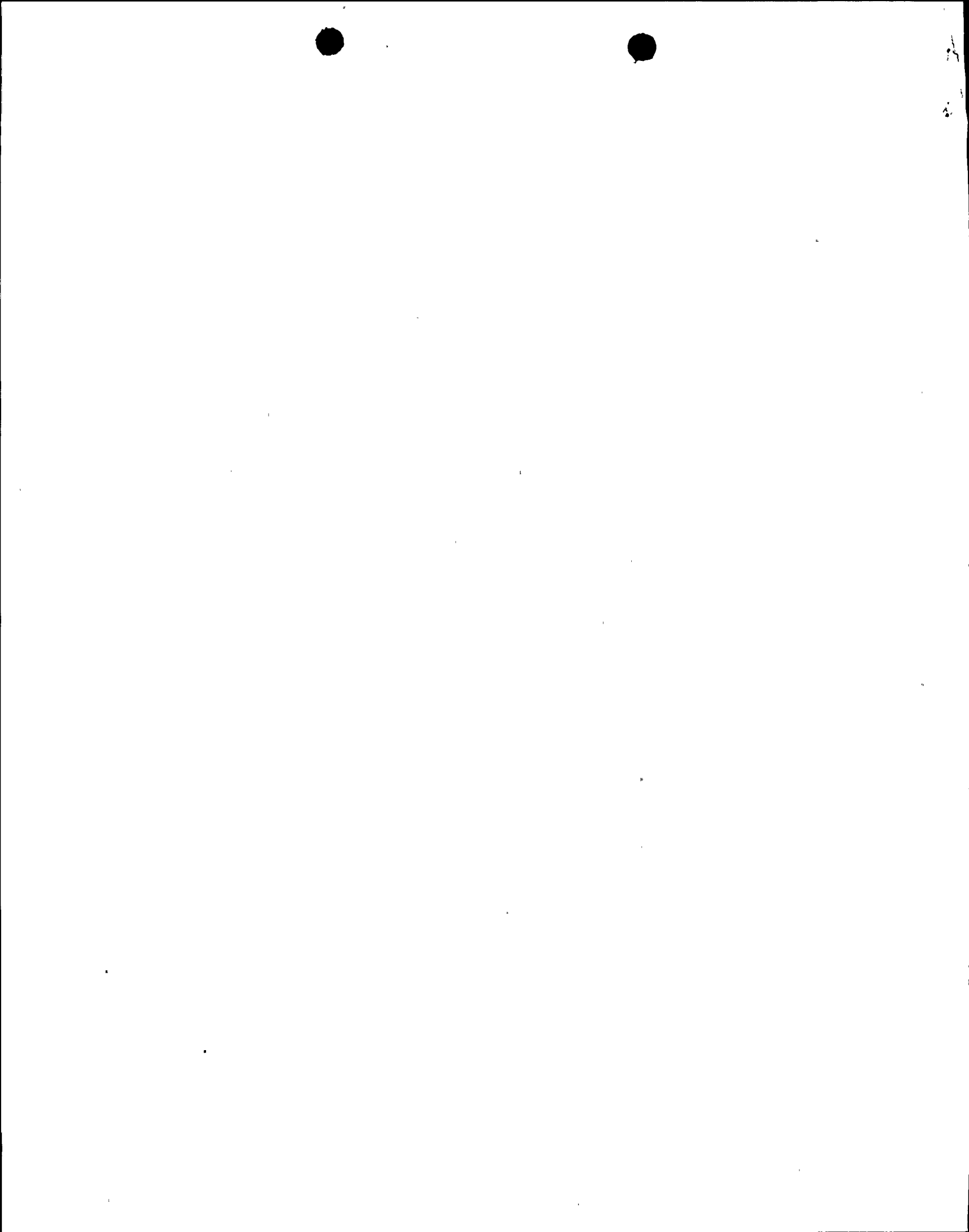
Surveillance procedure N2-RSP-RMS-M107, "Channel Functional Test of the Reactor Building Below the Refuel Floor Process Radiation Monitors" was being performed to comply with Technical Specifications. The test performs a channel functional test of the reactor building process radiation monitors. This is accomplished by verifying the energizing/deenergizing of primary relays for the automatic trip function. In accordance with procedure, jumpers were being installed to prevent reactor building intake and exhaust dampers from closing during the test. An Instrument and Control (I&C) technician was placing a jumper, (maintaining positive control with both hands) when the open end of the lead slipped from his hand and shorted to ground. This short to ground caused a control power fuse (2HVRA89-F1) to blow resulting in a reactor building ventilation supply damper (2HVR*AOD1A) closure. This closure of the supply damper caused the HVR supply fans to trip. The HVR exhaust fans continued to run until reactor building differential pressure reached -3.0 inches water gauge, causing exhaust fans to trip. Low exhaust flow signals initiated Secondary Containment Isolation and actuated HVR unit coolers and Train B of both the GTS and Emergency Recirculation system (2HVR*UC413B).

Approximately 2 hours and 40 minutes after the initiating event, normal reactor building ventilation was restored.

There were no components or systems which were inoperable and/or out of service which contributed to the event.

II. CAUSE OF EVENT

A root cause analysis for this event has been completed per Site Supervisory Procedure No. S-SUP-1, "Root Cause Evaluation Program". The root cause has been determined to be design deficiency in that the panel is not designed to facilitate surveillance testing. The I&C technician performing the jumper placement was aware of previous problems concerning jumper installation, and attempted to exercise extreme caution when installing the jumper.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 87	SEQUENTIAL NUMBER 079	REVISION NUMBER 00	03	OF 04

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

III. ANALYSIS OF EVENT

An undesirable challenge to a plant ESF system occurred due to a shorted jumper lead. However, a secondary containment isolation is a conservative ESF response, and does not have an adverse impact on plant or public safety.

A shorted jumper can be postulated to occur during any surveillance procedure or plant condition. This can lead to one of two situations described below:

- A. A shorted jumper can render a single safety system inoperable. In accordance with 10CFR50 Appendix A, Nine Mile Point 2 is designed to withstand a single component or system failure. Hence, this fault would not place the plant in an unanalyzed condition.
- B. A shorted jumper can lead to a spurious initiation of a plant safety system. In NMP2 Final Safety Analysis Report (FSAR) Chapter 15 the events of anticipated process disturbances and postulated component failures are examined to determine their consequences and to evaluate the capability built into the plant to control or accommodate such failures and events.

FSAR Chapter 15, Section 15.0.3.2.1 specifically addresses the consequences of single failures or operator errors.

IV. CORRECTIVE ACTIONS

- 1. The individual involved with this event was aware of the transient and participated in the LER investigation and follow-up report.
- 2. Immediate corrective action was for a Licensed Operator to replace the blown control power fuse 2HVRA89-F1 per Work Request 130095.
- 3. A Modification Request (I20205) has been initiated to install hard wire test switches, which will eliminate the use of jumpers in this surveillance test.
- 4. This event will be reviewed during ongoing I&C training.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 410	LER NUMBER (6)			PAGE (3)	
		YEAR 87	SEQUENTIAL NUMBER 079	REVISION NUMBER 00	04	OF 04

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

V. ADDITIONAL INFORMATION

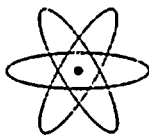
Identification of Components Referred to in this LER

Component	IEEE 803 EIIS Funct	IEEE 805 System ID
Reactor Building Ventilation System	N/A	VA
Standby Gas Treatment System	N/A	BH
Emergency Recirculation System	N/A	VA
Secondary Containment Isolation System	N/A	JE
Reactor Building	N/A	NG
Radiation Monitor	MON	VA
Fuse	FU	VA

There have been three previous similar events discussed in LERs 86-09, 87-03, and 87-36.



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NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

301 PLAINFIELD ROAD
SYRACUSE, NY 13212

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

January 21, 1988

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

RE: Docket No. 50-410
LER 87-79

Gentlemen:

In accordance with 10 CFR 50.73, we hereby submit the following Licensee Event Report:

LER 87-79 Is being submitted in accordance with 10 CFR 50.73 (a) (2) (iv), "Any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)."

A 10 CFR 50.72 (b) (2) (ii) report was made at 1208 hours on December 22, 1987.

This report was completed in the format designated in NUREG-1022, Supplement 2, dated September 1985.

Very truly yours,

Thomas E. Lempges
Vice President
Nuclear Generation

TEL/SCN/mjd

Attachments

cc: Regional Administrator, Region 1
Sr. Resident Inspector, W. A. Cook

IE22
1/1

