

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8710140564 DOC. DATE: 87/10/09 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME AUTHOR AFFILIATION
 RANDALL, R. G. Niagara Mohawk Power Corp.
 LEMPGES, T. E. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-054-00: on 870909, MSIV isolation signal occurred. Caused by procedural deficiency. Isolation seal-in signal reset & changes incorporated into surveillance procedure N2ISP-RSP-R202. W/871009 ltr.

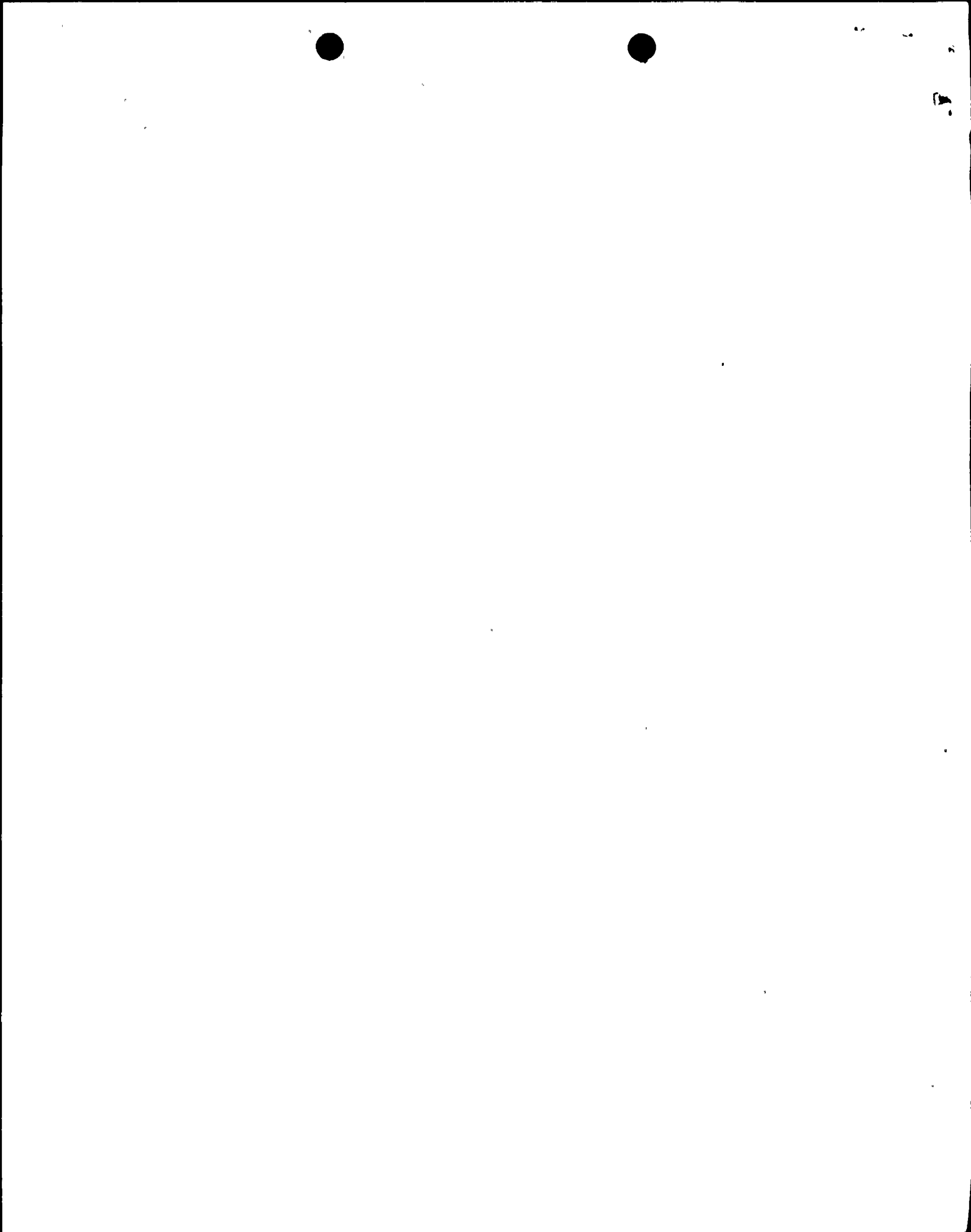
DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR (ENCL 1 SIZE: 4
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: 21

05000410

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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
	NRR/DEST/ELB	1	1	NRR/DEST/ICSB	1	1
	NRR/DEST/MEB	1	1	NRR/DEST/MTB	1	1
	NRR/DEST/PSB	1	1	NRR/DEST/RSB	1	1
	NRR/DEST/SGB	1	1	NRR/DLPQ/HFB	1	1
	NRR/DLPQ/QAB	1	1	NRR/DOEA/EAB	1	1
	NRR/DREP/RAB	1	1	NRR/DREP/RPB	2	2
	NRR/DRIS/SIB	1	1	NRR/PMAS/ILRB	1	1
	REG FILE 02	1	1	RES DEPY GI	1	1
	RES TELFORD, J	1	1	RES/DE/EIB	1	1
	RGN1 FILE 01	1	1			
EXTERNAL:	EG&G GROH, M	5	5	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 4 1 0	PAGE (3) 1 OF 03
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TITLE (4)
Main Steam Valve Isolation Signal Due to Turbine Stop Valve Surveillance Testing

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		
									N/A		
09	09	87	87	054	00	10	09	87	N/A		
OPERATING MODE (9) 4			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)								

POWER LEVEL (10) 000	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
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LICENSEE CONTACT FOR THIS LER (12)

NAME Robert G. Randall, Supervisor Technical Support	AREA CODE 315	TELEPHONE NUMBER 349-2445
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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)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

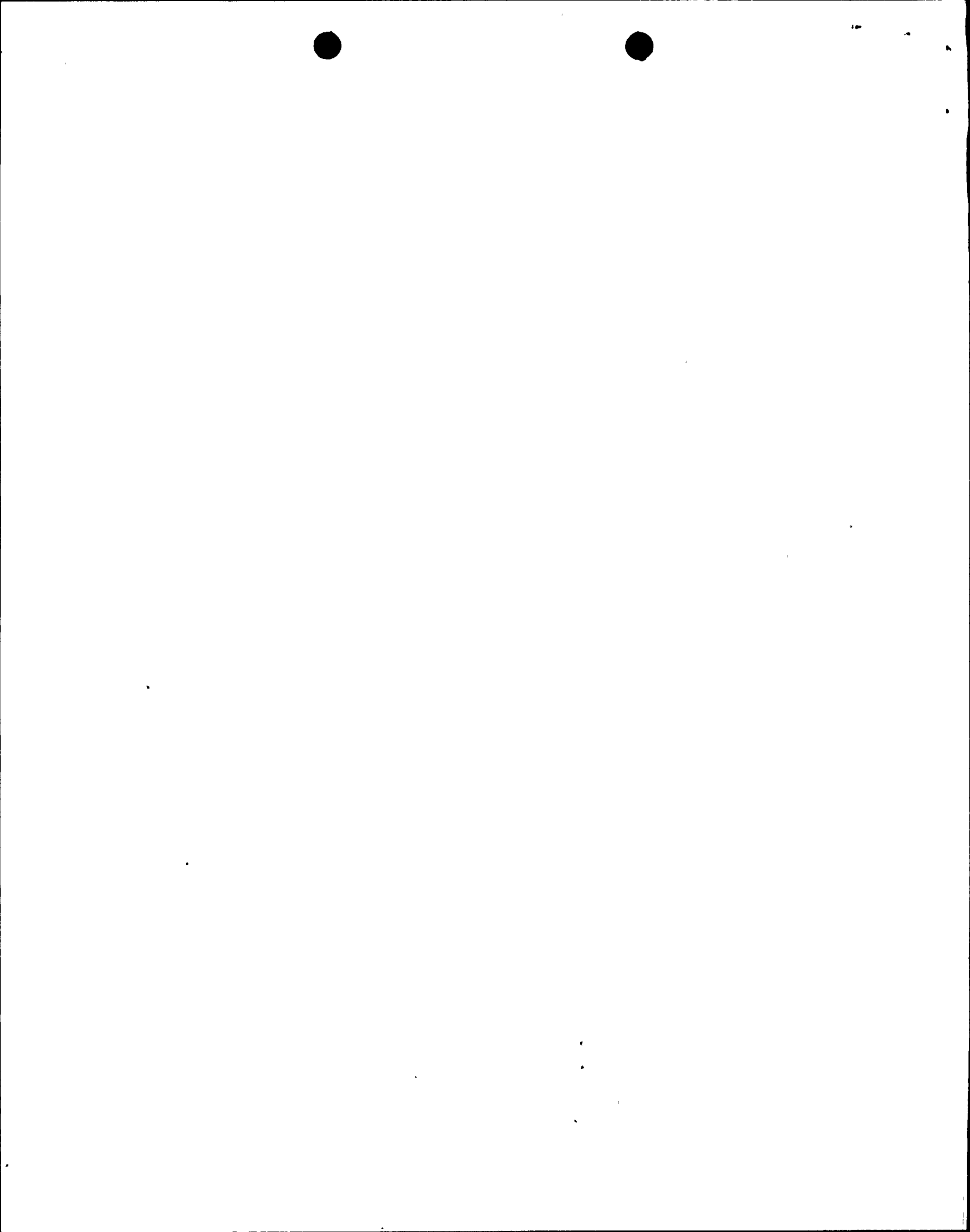
On September 9, 1987 at 0106 hours, Nine Mile Point Unit 2 experienced actuation of an Engineered Safety Feature (ESF), specifically, a Main Steam Isolation Valve (MSIV) isolation signal. At the time of the event, the plant was in cold shutdown (Operational Condition 4) with the reactor mode switch in "SHUTDOWN", at ambient pressure, a temperature of 165°F, and the MSIVs closed. No valves changed position during this actuation of the MSIV logic.

The root cause of the event was a procedural deficiency.

Corrective actions for this event are:

1. The operators immediately investigated the event, determined its cause, and reset the isolation seal-in signal.
2. Changes have been incorporated into the surveillance procedure N2-ISP-RPS-R202 to include plant impact on NS⁴ (Nuclear Steam Supply Shutoff System)/MSIV isolation signals.
3. The Instrument and Control Department is presently reviewing their surveillance procedures to determine if additional comments need to be included regarding the NS⁴ isolation logic.
4. A problem report has been submitted to Engineering to address the lack of annunciation in the control room regarding the NS⁴ isolation signals.

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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	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	054	00	02	03

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

I. DESCRIPTION OF EVENT

On September 9, 1987 at 0106 hours, Nine Mile Point Unit 2 (NMP2) experienced actuation of an Engineered Safety Feature (ESF), specifically, a Main Steam Isolation Valve (MSIV) isolation signal. At the time of the event, the plant was in cold shutdown (Operational Condition 4) with the reactor mode switch in "SHUTDOWN", at ambient pressure, a temperature of 165°F, and the MSIV's closed. No valves changed position during this actuation of the MSIV logic.

At 2200 hours, in support of Local Leak Rate Testing (LLRT), Niagara Mohawk Operators attempted to line-up the main steam line drain valves. Unable to open the valves, the operators immediately began investigating by reviewing the alarm typer printout, sequence of events log, and system elementary diagrams. They discovered that a Group 1 isolation signal was present and had been received approximately 21 hours earlier during the performance of the Turbine Stop Valve Closure Scram Surveillance Test (N2-ISP-RPS-R202). After reviewing the event, and determining its cause, the operators reset the isolation relays and cleared the initiation signal.

There were no components or systems which were inoperable and/or out of service which contributed to the event. No plant system or component failures resulted from the event.

II. CAUSE OF EVENT

A root cause analysis for this event has been completed per Site Supervisory Procedure S-SUP-1, "Root Cause Analysis Program". The root cause has been determined to be a procedural deficiency. The Niagara Mohawk Instrument and Control (I&C) technicians were performing surveillance procedure N2-ISP-RPS-R202, which is used to determine the Reactor Protection System (RPS) scram response time as a result of turbine stop valve closure. The technicians were working on the RPS logic system unaware that the test would affect the Nuclear Steam Supply Shutoff Systems (NS⁴) logic. This was because the surveillance procedure they were using failed to identify any NS⁴ logic signals generated during the test. The logic for an MSIV isolation is a one out of two taken twice logic scheme. The I&C technicians performed this surveillance test on all four channels, needing only two of the channels to satisfy the logic and bring in an MSIV isolation signal.

Contributing to the root cause of this event is a design deficiency. The Niagara Mohawk Operators do not have proper annunciation windows in the control room alerting them of NS⁴ isolation signals. For this reason the MSIV isolation signal went undetected for approximately 21 hours. If the operators had proper annunciation, they would have discovered an unwarranted half MSIV isolation signal (one channel of the surveillance test) when it was received. They then could have prevented this ESF from occurring.



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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	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	054	00	03	OF 03

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

III. ANALYSIS OF EVENT

There were no adverse safety consequences as a result of this event, since the reactor mode switch was in "SHUTDOWN" and all control rods were fully inserted. The MSIV isolation signal in itself was a conservative response. Though NS⁴ signals were generated no equipment actuated or changed state. The failure to realize that an isolation signal was present did not in any way adversely affect any other safety systems nor the operators' ability to maintain a safe shutdown.

This surveillance procedure requires the plant to be in Condition 3, 4, or 5 when being performed.

The total duration of the event from the isolation to its reset was approximately 21 hours.

IV. CORRECTIVE ACTIONS

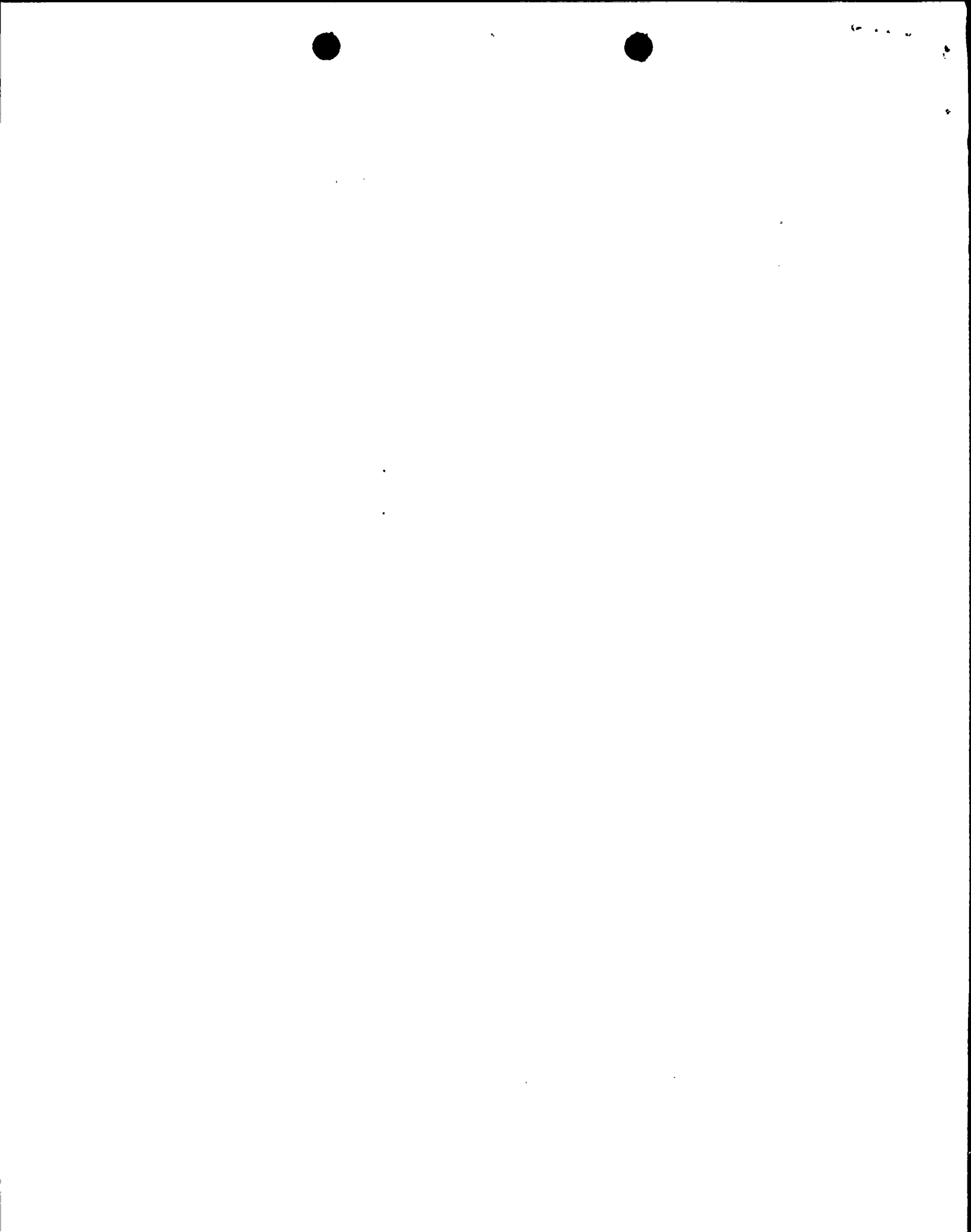
1. The operators immediately investigated the event, determined its cause, and reset the isolation seal-in signal.
2. Changes have been incorporated into the surveillance procedure N2-ISP-RPS-R202 to include plant impact on NS⁴/MSIV isolation signals.
3. The Instrument and Control Department is presently reviewing their surveillance procedures to determine if additional comments need to be included regarding the NS⁴ isolation logic. This action is currently scheduled to be complete on October 31, 1987.
4. A Problem Report has been submitted to Engineering to address the lack of annunciation in the control room regarding the NS⁴ isolation signals. A modification request Issue No. I20230 has been written to track the initiation of this modification.

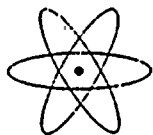
V. ADDITIONAL INFORMATION

Identification of Components Referred to in this LER

Component	IEEE 803 EIIS Funct	IEEE 805 System ID
MSIV	N/A	JC
Drain Valve	V	SB
NS ⁴	N/A	JC
Relay	RLY	JC

There has been one previous similar event described in LER 87-09.





NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

301 PLAINFIELD ROAD
SYRACUSE, NY 13212

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

October 9, 1987

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

RE: Docket No. 50-410
LER 87-54

Gentlemen:

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

LER 87-54 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). However, actuation of an ESF, including the RPS, that resulted from and was part of the preplanned sequence during testing or reactor operation need not be reported."

A 10 CFR 50.72 report was made at 2254 hours on September 9, 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
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