

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8704290209 DOC. DATE: 87/04/21 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 86-004-01: on 861109, reactor scrams. Caused by faulty
 LPRM circuit card mfg by GE. Card was replaced. W/870421 ltr.

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

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
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	HAUGHEY, M	1 1	MINER, S	1 1
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	1 1
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	NRR/DEST/ADE	1 0
	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/EPB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<u>REG FILE</u> 02	1 1
	RES SPEIS, T	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

TOTAL NUMBER OF COPIES REQUIRED: LTTR 42 ENCL 40

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 013	
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TITLE (4)

Reactor Scrams Due to APRM Upscale Trip

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			DOCKET NUMBER(S)												
1	1	0	9	8	6	8	6	0	0	4	0	1	0	4	2	1	8	7	N/A	0	5	0	0	0
										N/A										0	5	0	0	0

OPERATING MODE (9) 5		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																					
POWER LEVEL (10) Q 010	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.406(c)	50.38(c)(1)	50.38(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)(A)	50.73(a)(2)(vii)(B)	50.73(a)(2)(ix)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)		

LICENSEE CONTACT FOR THIS LER (12)

NAME Robert G. Randall, Supervisor Technical Support										TELEPHONE NUMBER 311 5 314 91-12 4 14 15									
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	
B	IIG	EIC1 B1D	Q 01810	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)										X 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 November 9, 1986, Nine Mile Point Unit 2 was in its initial fuel load phase with the mode switch in "REFUEL". At 0440 hours the unit experienced a full scram with the shorting links removed. The scram was initially attributed (prior to the root cause analysis) to the occurrence of a spike on Average Power Range Monitor (APRM) Channel C with the shorting links removed because spikes on Source Range Monitors and Intermediate Range Monitors had previously been caused by welding near nuclear instrumentation cabling. At the time of the scram, welding had been in progress near a primary containment penetration which includes Local Power Range Monitor (LPRM) cables feeding APRM Channel C. A Post Reactor Scram Analysis and Evaluation (root cause analysis) was initiated.

At 0637 hours that same day the unit experienced a second full scram. The original Post Reactor Scram Analysis and Evaluation had not yet been completed. This scram was identical in nature to the first scram and further investigation showed that a faulty LPRM circuit card was the cause of both.

Since the card was replaced no further spikes have been noticed. The root cause is suspected to be random infant mortality. There were no transients to analyze nor any potential safety consequences as a result of this event.

Corrective actions include immediate LPRM circuit card replacement and trending of any future failures.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 6	— 0 0 4	— 0 1	0 2	OF	0 3

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

I. DESCRIPTION OF EVENTS

On November 9, 1986, Nine Mile Point Unit 2 was in its initial fuel load phase with the mode switch in the "REFUEL" position. At 0440 hours the unit experienced a full scram. Immediate operator action was to follow the scram procedure and no other events occurred. The scram was initially attributed (prior to the root cause analysis) to the occurrence of a spike on Average Power Range Monitor (APRM) Channel C with the shorting links removed because spikes on Source Range Monitors and Intermediate Range Monitors had previously been caused by welding near the nuclear instrumentation cabling. At the time of the scram welding had been in progress near a primary containment penetration which includes Local Power Range Monitor (LPRM) cables feeding APRM Channel C. Since the mode switch was in "REFUEL" the APRM trip set point was set down to 15% so a high spike on a single LPRM will trip the APRM. Since the shorting links were removed, a trip of one neutron monitoring instrument will cause a full scram. At 0450 hours the scram was reset, APRM Channel C was bypassed, and the mode switch set back to "REFUEL". There were no transients to analyze nor were there any inoperable structures, components, or systems which contributed to this event. The reactor scram did not affect ongoing operations and a Post Reactor Scram Analysis and Evaluation was initiated. APRM Channel C was bypassed from 0450 hours until 0630 hours with no additional spikes observed. The operators thought they had isolated the cause of the event (welding near nuclear instrumentation cabling) and at 0630 hours APRM Channel C was put back in the normal unbypassed condition. At 0637 hours a second scram occurred. Again operator action was to follow the scram procedure and no other events occurred. Only one LPRM was found in the tripped condition. The circuit card for this LPRM was found to be faulty and was replaced via work request (No. 115208). At 0642 the alarms were cleared and the mode switch set back to the "REFUEL" position. There were no transients to analyze nor were there any other inoperable structures, components, or systems.

II. CAUSE OF EVENTS

The two reactor scrams described above were later both attributed to a faulty LPRM circuit card manufactured by General Electric (GE Part No. 136B2543AAG002). Since the card was replaced, no further spikes have been noticed. The root cause of the card failure is unknown but random infant mortality is suspected and no further investigation other than normal Corrective Maintenance Review is scheduled.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 6	— 0 0 4	— 0 1	0 3	OF	0 3

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. There would not have been any adverse safety consequences under any other operating configuration since a circuit card failure of this type would only decrease the margin to scram slightly via the APRM's.

IV. CORRECTIVE ACTION

Immediate corrective action involved replacing the faulty LPRM circuit card and returning to normal fuel load sequences. Long term corrective action includes reviewing any future failures via Administrative Procedure 5.0 Section 7.0, "Corrective Maintenance Review", which consists of regularly scheduled annual reviews of all corrective maintenance actions involving safety related structures systems and components and those whose loss limits power production.

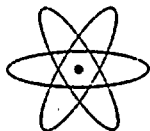
Because the failure was an isolated event, a specific trending program for LPRM cards is not considered warranted at the this time.

V. ADDITIONAL INFORMATION

Identification of Components Referred to in this LER

<u>Component</u>	<u>IEEE 803 EIIIS Funct</u>	<u>IEEE 805 System ID</u>
Local Power Range Monitor (LPRM)	JI	IG
Source Range Monitor	JI	IG
Intermediate Range Monitor	JI	IG
Average Power Range Monitor (APRM)	JI	IG
LPRM Circuit Card	JI	IG

No previous similar events have occurred at Nine Mile Point Unit 2.



NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

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SYRACUSE, NY 13212

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

April 21, 1987

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

RE: Docket No. 50-410
LER 86-04, Revision 1

Gentlemen:

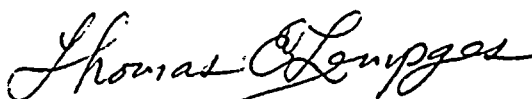
In accordance with 10 CFR 50.73, we hereby submit the following
Licensee Event Report:

LER 86-04 Which is being submitted in accordance with 10 CFR 50.73
Revision 1 (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."

10 CFR 50.72 reports were made at 0545 hours and 0707 hours on
November 9, 1986.

This report was completed in the format designated in NUREG-1022,
Supplement No. 2, dated September 1985.

Very truly yours,



Thomas E. Lempges
Vice President
Nuclear Generation

TEL/CDS/mjd

Attachments

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

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