NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Nine Mile Point Unit I	0 5 0 0 0 2 2 0	1 OF 0 2

TITLE (4)
Loss of Power to One Channel of Reactor Protection System Resulting in Full Scram.

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)
										0 5 0 0 0
0 4	0 2	8 6	8 6	0 0 5	0 0	0 4	2 3	8 6		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 1 0		20.405(a)(1)(ii)	50.36(c)(2)	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)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Robert G. Randall, Supervisor, Technical Support	3 1 5 3 4 9 - 2 4 4 5

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	
X	J E	R L Y	B 4 5 5	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

ABSTRACT

On April 2, 1986, Nine Mile Point Unit #1 was in the shutdown condition for refueling. The mode switch was in the "SHUTDOWN" position. At 0226 hours the unit experienced a full scram. Upon investigation it was determined that the cause was the loss of Reactor Protection System (RPS) Bus #11. It was further established that the loss of RPS Bus #11 was caused by the deenergization of a Brown Boveri ITE-27 undervoltage relay that monitors the output of the RPS Bus #11 supply (motor-generator set #162). Non-coincident logic during "SHUTDOWN" will cause a full scram upon loss of either RPS Bus (11 or 12). The undervoltage relay was reset when it was established that there was no undervoltage condition, and the supply to RPS Bus #11 was restored. The corrective action initiated involved an investigation into the cause of the relay trip. If required, the undervoltage relay will be repaired or replaced.

IE22
1/1

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

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

TEXT

On April 2, 1986, Nine Mile Point Unit I was in the shutdown condition for refueling. The mode switch was in "SHUTDOWN". At 0226 hours the unit experienced a full scram. It was determined that the cause of the scram was the loss of Reactor Protection System (RPS) Bus #11. It was determined that the loss of RPS Bus #11 was caused by the deenergization of an undervoltage relay, a Brown Boveri ITE-27 type #211B1165 relay. This resulted in the isolation of RPS Bus #11 from its normal supply, motor generator set #162. The low condenser vacuum bypass relay , main steam isolation valve closure bypass relay, and the reactor trip reset permissive after shutdown relay are all part of non-coincident logic available when the mode switch is in the "SHUTDOWN" position. Therefore, the loss of one RPS channel during shutdown will deenergizize both subchannels of auto-reactor trip relays on each RPS channel, and both manual scram relays on both RPS channels. Subsequently, the loss of RPS Bus #11 during shutdown resulted in a full scram.

ASSESSMENT OF POTENTIAL SAFETY CONSEQUENCES

Since the Reactor Protection System functioned as designed for conditions corresponding to the shutdown mode, and in the conservative direction, there were no adverse safety consequences. There was no control rod movement. Due to the spiral off-load pattern used at Unit I, all rods were either fully inserted, or fully withdrawn and valved out if the corresponding fuel cell was unloaded. If the unit was to experience an event of this type during normal full power operation, the result would have been a half-scram. There would, again, have been no adverse safety consequences.

CORRECTIVE ACTION

An investigation into the cause of the relay trip was initiated. Based on the findings of this investigation, the relay will be repaired or replaced.

NMP-17814

NIAGARA MOHAWK POWER CORPORATION

NIAGARA MOHAWK

300 ERIE BOULEVARD WEST
SYRACUSE, N.Y. 13202

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

April 23, 1986

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

RE: Docket No. 50-220
LER 86-05

Gentlemen:

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

LER 86-05 Which 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 0315 on April 2, 1986.

This report was completed in the format designated in NUREG-1022, dated September 1983.

Very truly yours,

Thomas E. Lempges

Thomas E. Lempges
Vice President
Nuclear Generation

TEL/tg
Attachments
cc: Dr. Thomas E. Murley
Regional Administrator

IE22
1/1