

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 1 0 1 0 0 4 1 1 0	PAGE (3) 1 OF 4
--	---	---------------------------

TITLE (4)
Main Steam Isolation Valve Trip Due to 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		DOCKET NUMBER(S)			
02	28	87	87	006	01	07	07	87	N/A		0 5 1 0 1 0 0			
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)														
OPERATING MODE (9) 4			20.402(b)			20.406(e)			50.73(a)(2)(iv)			73.71(b)		
POWER LEVEL (10) 01010			20.406(a)(1)(ii)			50.36(e)(1)			50.73(a)(2)(v)			73.71(e)		
			20.406(a)(1)(iii)			50.36(e)(2)			50.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 368A)		
			20.406(a)(1)(iv)			50.73(a)(2)(i)			50.73(a)(2)(vii)(A)					
			20.406(a)(1)(v)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)					
			20.406(a)(1)(vi)			50.73(a)(2)(iii)			50.73(a)(2)(ix)					

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Robert G. Randall, Supervisor Technical Support	3 1 6 3 4 9 - 1 2 4 4 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

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 February 2, 1987 with the reactor mode switch in Shutdown (operational condition 4), and the reactor at 0% power and at 142 degrees Fahrenheit and 600 pounds per square inch gauge (during a hydrostatic test), the main steam isolation valves (MSIVs) closed on an isolation signal. This incident occurred as a result of two safety related reactor monitoring devices being inadvertently tripped during an operability surveillance test being performed on the reactor instrument line excess flow check valves. The tripped devices satisfied the logic to isolate the MSIV's.

CORRECTIVE ACTIONS TAKEN:

1. Surveillance procedure N2-ISP-ISC-R001 will be revised prior to its next scheduled use.
2. The particular main steam isolation valve logic circuits involved in this incident will be verified for proper function.

8707140359 870707
PDR ADDCK 05000410
S PDR



FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	006	01	2	OF 04

Nine Mile Point Unit 2

050011087-006-01 2 OF 04

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

I. DESCRIPTION OF EVENT

On February 2, 1987 at 0516 with the reactor mode switch in Shutdown (operational condition 4), and the reactor at 0% power and at 142 degrees Fahrenheit and 600 pounds per square inch gauge (during a hydrostatic test), the main steam isolation valves (MSIVs) closed in response to an isolation signal. This incident occurred as a result of two safety related reactor monitoring devices being tripped during performance of an operability surveillance test on the reactor instrument line excess flow check valves. The inadvertent tripping of these devices satisfied the logic to isolate the MSIV's.

The sequence of events are as follows: (Refer to Figure 1)

On February 2, 1987 at 0150 while performing surveillance on excess flow check valve 2ISC*EFV10, level transmitter 2ISC*LT11B momentarily tripped on a low-low-low (level 1) reactor vessel (RPV) water level. (This signal was a byproduct of the surveillance testing and not representative of the actual RPV water level. The actual RPV water level was being maintained at a high level point which was greater than level 8.) This momentary trip, which automatically cleared four seconds later, caused one channel of the MSIV trip logic to seal in. The MSIV's did not close at this time.

At 0516 the same day, while performing surveillance on excess flow check valve 2ISC*EFV15, level transmitter 2ISC*LT11C momentarily tripped on a low-low-low (level 1) RPV water level. (This signal was also a byproduct of testing and not representative of the actual RPV water level). This second device trip in conjunction with the earlier trip satisfied the logic to isolate the MSIV's.

There were no other inoperable systems that contributed to this event.

II. CAUSE OF EVENT

There are two root causes for this event: (1) procedure deficiency and, (2) possible equipment deficiency due to a temporary circuit configuration.

Procedural Deficiency

The Reactor Instrument Line Excess Flow Valve surveillance procedure (N2-ISP-ISC-R001) does account for the possibility of pressure surges within the instrument lines (as a result of this test procedure) causing an inadvertent instrument trip. But, it does not require checks for a possible tripped device or require resetting the trip signal.

Equipment Deficiency

At the time this surveillance procedure was being conducted various MSIV logic circuit modifications were being performed (as detailed in engineering and design coordination report M10074) which could have had a significant impact on this incident. In particular, the Instrument and Control (I&C) technicians performing this test stated that no MSIV channel trip indication annunciated, as it should have, when the first level transmitter tripped. It is possible that the circuit



2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Nine Mile Point Unit 2	0 5 0 0 0 4 1 0	8 7	-	0 0 6	-	0 1	0 3 OF 0 4

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

modifications being performed may have placed the circuit in a temporary configuration such that the trip indication would not have come in. Therefore, a temporary circuit configuration as described would have made a trip condition on the MSIV logic difficult to detect.

Further investigation into this matter (see Corrective Actions Taken) is being conducted.

III. ANALYSIS OF EVENT

There were no safety consequences to the plant or public as a result of this incident. Had this event occurred at 100% power, the transient that would result would be similar to and bounded by, the "Closure of all MSIV's" event discussed in FSAR section 15.2.4.

The duration of this incident from the first device trip to the MSIV isolation was approximately 3 1/2 hours.

IV. CORRECTIVE ACTIONS TAKEN

1. Surveillance procedure N2-ISP-ISC-R001 will be revised prior to its next use to include checks for tripped devices and provisions for resetting trip signals.
2. The particular MSIV trip circuits and associated indication, involved in this incident, will be tested for proper performance. This test will be completed prior to initial criticality.

V. ADDITIONAL INFORMATION

No other LER's cover events similar to that discussed in this report

Identification of Components Referred to in this LER

Component	IEEE 803 EIS Funct	IEEE 805 System ID
Main Steam Isolation Valves	ISV	JM
Logic Circuits	N/A	JM
Indicators	XI	JM
Excess Flow Check Valve	SHV	JM
Level Transmitter	LT	JE



FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Nine Mile Point Unit 2

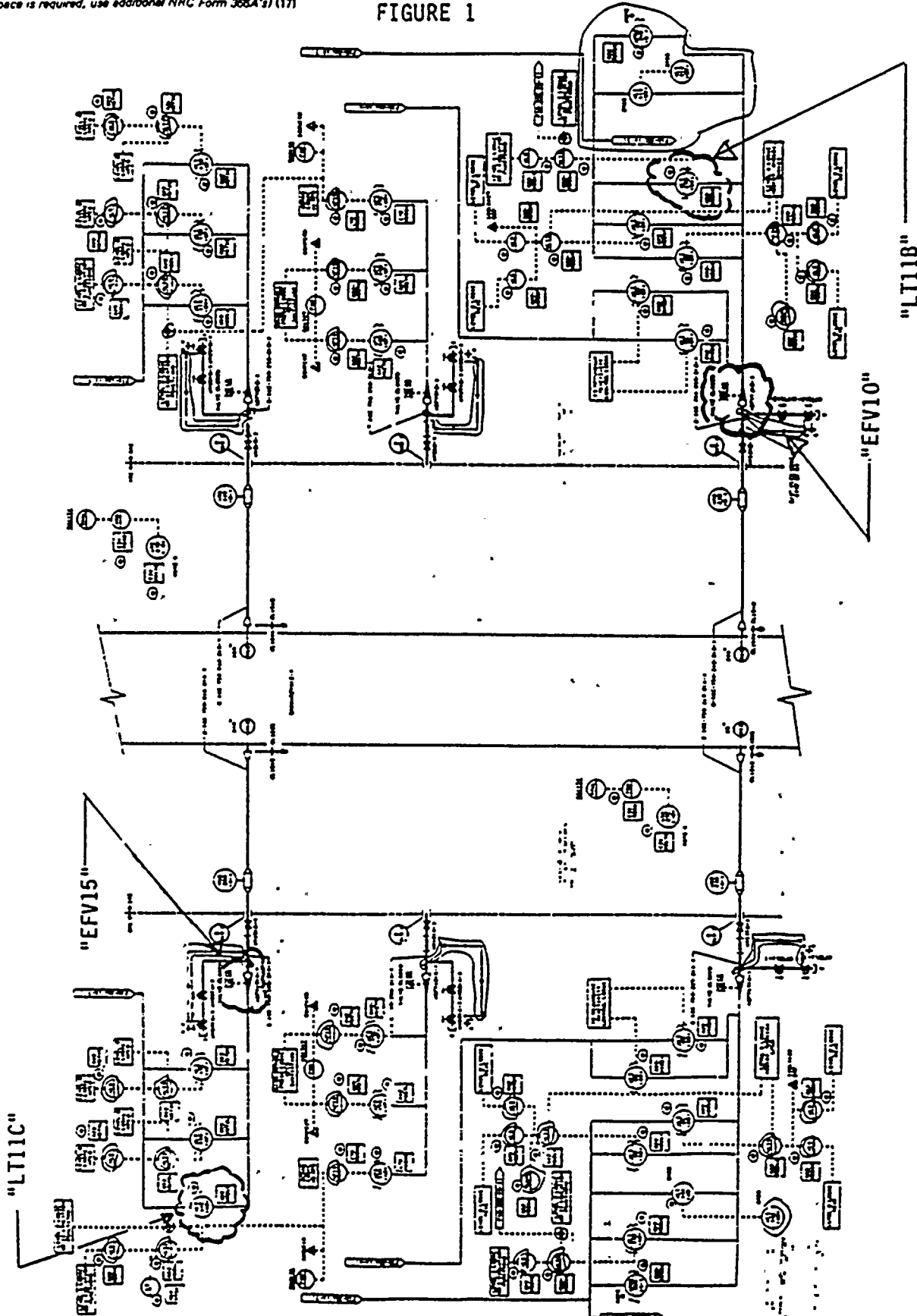
05000410

YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
87	006	01

04 OF 04

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

FIGURE 1



PIPING & INSTRUMENTATION DIAGRAM
NUCLEAR BOILER AND
PROCESS INSTRUMENTATION
NINE MILE POINT NUCLEAR STATION-UNIT 2
NIAGARA MOHAWK POWER CORPORATION

12177-P10-288-3



.

.

.

.