

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Nine Mile Point Unit #1

DOCKET NUMBER (2)

0 5 0 0 0 2 2 0

PAGE (3)

1 OF 0 2

TITLE (4)

#11 Core Spray Loop Crack

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 NAME	DOCKET NUMBER (2)					
0	5	0	7	8	4	8	4	0	0	4	0	5	0	0	0
0	5	0	7	8	4	8	4	0	0	4	0	5	0	0	0

OPERATING MODE (9) ☒ N

POWER LEVEL (10) 01010

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 51. (Check one or more of the following) (11)

20.402(a)	20.402(a)	20.726(a)(2)(iv)	72.71(a)
20.402(a)(1)(i)	20.304(a)(1)	20.726(a)(2)(iv)	72.71(a)
20.402(a)(1)(ii)	20.304(a)(2)	20.726(a)(2)(iv)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)
20.402(a)(1)(iii)	20.726(a)(2)(i)	20.726(a)(2)(iv)(A)	
20.402(a)(1)(iv)	20.726(a)(2)(ii)	20.726(a)(2)(iv)(B)	
20.402(a)(1)(v)	20.726(a)(2)(iii)	20.726(a)(2)(iv)(C)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Fred Hawksley Inservice Inspection Superintendent

TELEPHONE NUMBER 3115 3491-124612

AREA CODE 3115

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	B	G P S P	S S 1 5	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If you complete EXPECTED SUBMISSION DATE) ☒ NO ☐

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

## ABSTRACT

During a refueling outage, while performing ultrasonic testing on the high pressure core spray system, cracks were discovered at one location of the #11 Core Spray Loop. The cause of the cracks were attributed to chloride contamination on the pipe surface. The crack was weld repaired and ultrasonically, dye penetrant and hydrostatically tested.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/86

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (3)

PAGE (3)

Nine Mile Point Unit #1

0 5 0 0 0

2 2 0

8 4

YEAR

0 0 4

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NUMBER

REVISION

NUMBER

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2

OF

0 2

TEXT (4) more space is required, use additional NRC Form 2554's (17)

TEXT

On May 7, 1984, during the current refueling outage, ultrasonic testing was performed on the #11 Core Spray Loop. This pipe, manufactured by Swepeco Tube Corp., is made of ASTM A358 Type 304 Stainless Steel, and has an outside diameter and minimum wall thickness of 12.75 inches and 0.684 inches, respectively. Cracks approximately 0.34 inches deep and extending 90 degrees on the circumference of the pipe were discovered. The cracks were found 1.5 inches from a tee weld between inside Isolation Valves 40-10 and 40-11, and outside Isolation Valve 40-12. Samples of the pipe have been sent to three testing laboratories, and as of this date, one report from General Electric concluded that chloride contamination on the surface of the pipe initiated a transgranular stress corrosion cracking failure. Another report, performed by Niagara Mohawk Power Corporation's inhouse testing laboratory, in conjunction with a local testing laboratory, confirmed the transgranular stress corrosion cracking failure of the pipe.

ASSESSMENT OF SAFETY CONSEQUENCES

The cracks occurred inside the primary containment, on core spray piping normally isolated from the reactor coolant system by the parallel inside isolation valves 40-10 and 40-11. Had a significant through wall crack occurred, it would have been detected by the drywell leakage monitoring system, and it would have leaked condensate water from the keep fill system, not reactor coolant. The piping was exposed to full reactor pressure (v1,000 psig) once per quarter during the previous refueling cycle during the core spray valve operability test. The maximum pressure the piping would be exposed to under an accident condition would be 365 psig, the pressure at which the inside valves 40-10 and 40-11 open upon core spray actuation. If the pipe had completely severed on a core spray actuation following a loss of coolant accident, the opening of valves 40-10 and 40-11 would result in an increased loss of coolant until level fell below the core spray sparger, which is above the top of active fuel. However, this loss from the vessel would remain in containment and be available as inventory for the redundant core spray system. Consequently, there were no actual adverse consequences, and the potential consequences would be adequately mitigated.

CORRECTIVE ACTION

All cracks were ground out, and the grindout cavity was then ultrasonically and dye penetrant tested to verify that the cracks were all ground out. The pipe was then weld repaired to bring the surface back to the original wall thickness. Subsequent dye penetrant, ultrasonic and hydrostatic tests were then satisfactorily performed on the pipe.

HSSO 01600

**NIAGARA  
MOHAWK**

ETB840724  
NMP-8568

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

LER  
0001227814

LER # 220-84004

EVENT DATE 840507

INPO RCVD DATE 840724

NSAC RCVD DATE \_\_\_\_\_

June 6, 1984

RECEIVED

T. J. PERKINS

JUN 11 1984

OPERATIONS

NIAGARA MOHAWK POWER CORP.

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

Re: Docket No. 50-220  
LER 84-04

Gentlemen:

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

LER 84-04

which is being submitted in accordance with  
10 CFR 50.73 (a)(2)(ii), Any event or condition  
that resulted in the condition of the nuclear  
power plant, including its principal safety  
barriers, being seriously degraded . . .

A 10 CFR 50.72 report was made at 1525 hrs. on May 7, 1984.

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

Very truly yours,

*T. E. Lemps*

T. E. Lemps  
Vice President  
Nuclear Generation

NMPC Document Control

INDEXED

TEL/jkr

Attachments (3 copies)

cc: Dr. Thomas E. Murley  
Regional Administrator

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JUN 08 1984

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