

# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9805220016    DOC. DATE: 98/05/08    NOTARIZED: NO    DOCKET #  
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha    05000410  
 AUTH. NAME                      AUTHOR AFFILIATION  
 DEAN, R.J.                      Niagara Mohawk Power Corp.  
 DAHLBERG, K.A.                Niagara Mohawk Power Corp.  
 RECIPIENT NAME                RECIPIENT AFFILIATION

SUBJECT: LER 98-008-00: on 980407, HPCS out of svc w/one division RHS  
 in suppression pool cooling, was determined. Caused by  
 technical inaccuracies. Operating procedures revised to  
 require RHS to be declared inoperable. W/980508 ltr.

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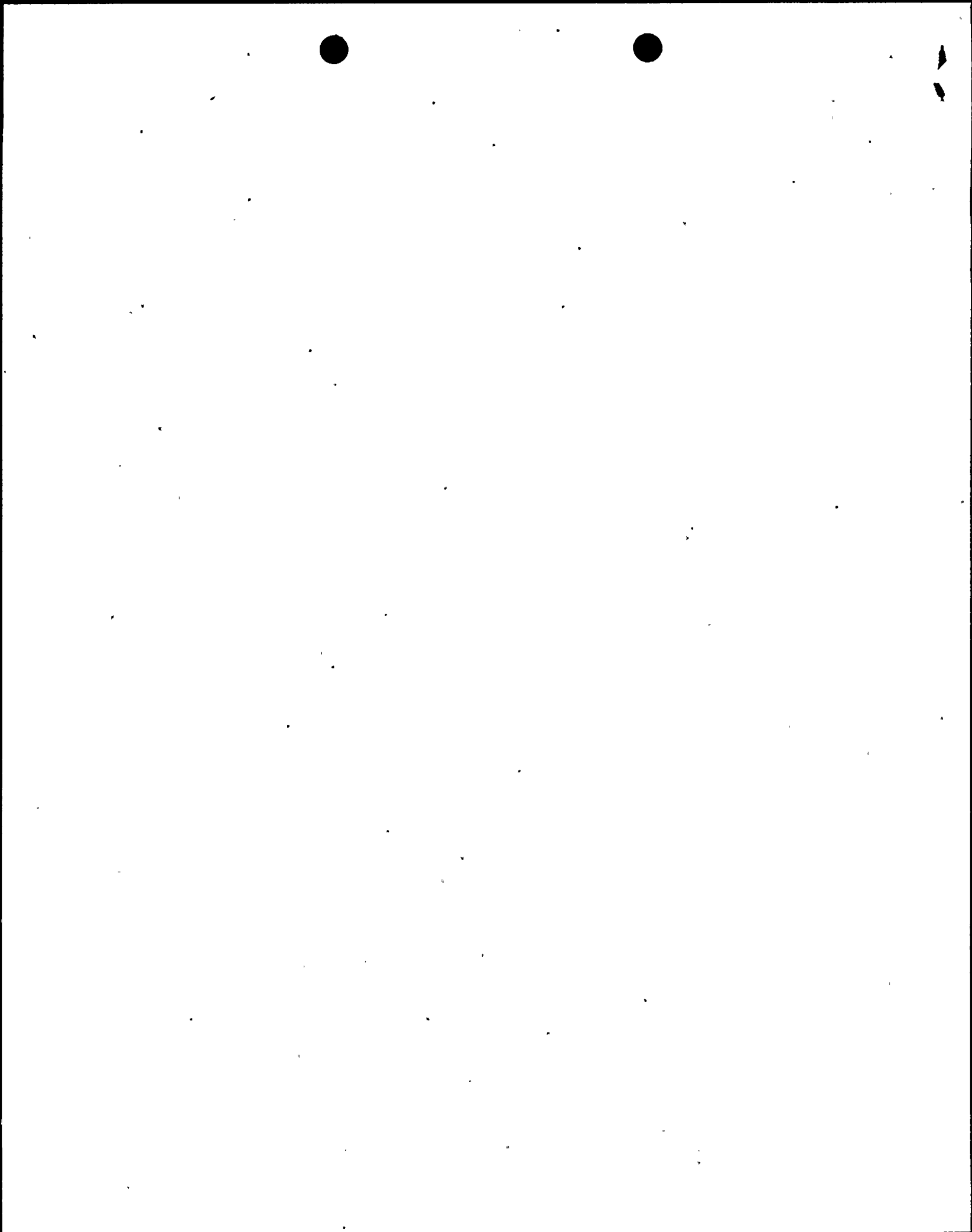
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	AEOD/SPD/RRAB	1 1	<b>FILE CENTER</b>	1 1
	NRR/DE/ECGB	1 1	NRR/DE/EELB	1 1
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EXTERNAL:	L ST LOBBY WARD	1 1	LITCO BRYCE, J H	1 1
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NIAGARA MOHAWK  
GENERATION  
BUSINESS GROUP

NINE MILE POINT NUCLEAR STATION/LAKE ROAD, P.O. BOX 63, LYCOMING, NEW YORK 13093

May 8, 1998  
NMP2L 1780

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

RE: Docket No. 50-410  
LER 98-08

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(i)(B), we are submitting LER 98-08, "HPCS Out of Service With One Division RHS in Suppression Pool Cooling."

Very truly yours,

Kim A. Dahlberg  
Plant Manager - NMP2

KAD/GJG/kap  
Attachment

xc: Mr. H. J. Miller, Regional Administrator, Region I  
Mr. B. S. Norris, Senior Resident Inspector  
Records Management

9805220016 980508  
PDR ADDCK 05000410  
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1/1  
IE22



LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1)

Nine Mile Point Unit 2

DOCKET NUMBER (2)

05000410

PAGE (3)

1 OF 3

TITLE (4)

HPCS Out of Service With One Division RHS in Suppression Pool Cooling

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)	
04	07	98	98	08	00				N/A	05000	
									N/A	05000	

OPERATING MODE (9)

1

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

POWER LEVEL (10) 92	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 73.71
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<i>(Specify in Abstract below and in Text, NRC Form 366A)</i>
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

R. J. Dean, Manager Unit 2 Engineering

TELEPHONE NUMBER

(315) 349-4240

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 April 7, 1998, Niagara Mohawk Power Corporation (NMPC) determined that on January 25, 1996 and potentially on previous occasions, Nine Mile Point Unit 2 (NMP2) had operated with the High Pressure Core Spray (HPCS) system out of service and Division II of the Residual Heat Removal (RHS) System in the Full Flow Test mode. Since the Suppression Pool Cooling (SPC) valves close in approximately 120 seconds, and the RHS Low Pressure Coolant Injection (LPCI) injection valves are analyzed in the Loss of Coolant Accident (LOCA) Analysis to open in 65 seconds as designed, the Division II RHS should have been declared inoperable which required entry into TS 3.0.3.

The cause of this event has been determined to be technical inaccuracies in the original design information. Justification for the RHS test return valve closure time being incompatible with the LPCI injection valve was inadequate at the time of the original design.

The operating procedures have been revised to require that the RHS system be declared inoperable when placed into SPC and system testing.



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LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	08	00	02 OF 03

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

### I. DESCRIPTION OF EVENT

During the investigation of a generic industry concern relative to the operability of the Residual Heat Removal (RHS) System in the Suppression Pool Cooling (SPC) or Full Flow Test modes of operation, Niagara Mohawk Power Corporation (NMPC) determined, on April 7, 1998, that Nine Mile Point Unit 2 (NMP2) had operated with the High Pressure Core Spray (HPCS) system out of service for maintenance and Division II RHS in Full Flow Test on January 25, 1996 and potentially on previous occasions. With NMP2 in that configuration, Technical Specification (TS) action 3.5.1c could not be met. Therefore TS 3.0.3 should have been entered.

On March 10, 1998, NMPC initiated Deviation/Event Report (DER) 2-98-0557 based upon a concern at another Boiling Water Reactor (BWR) licensee regarding operability of RHS in SPC mode. The disposition of that DER identified that TS Actions 3.5.1a and b had always been met, therefore there had not been a TS violation. However, as a result of that initial concern, DER 2-98-0597 was initiated which identified potential concerns with operability of the Low Pressure Core Spray (LPCS) System and the High Pressure Core Spray (HPCS) System during full flow testing.

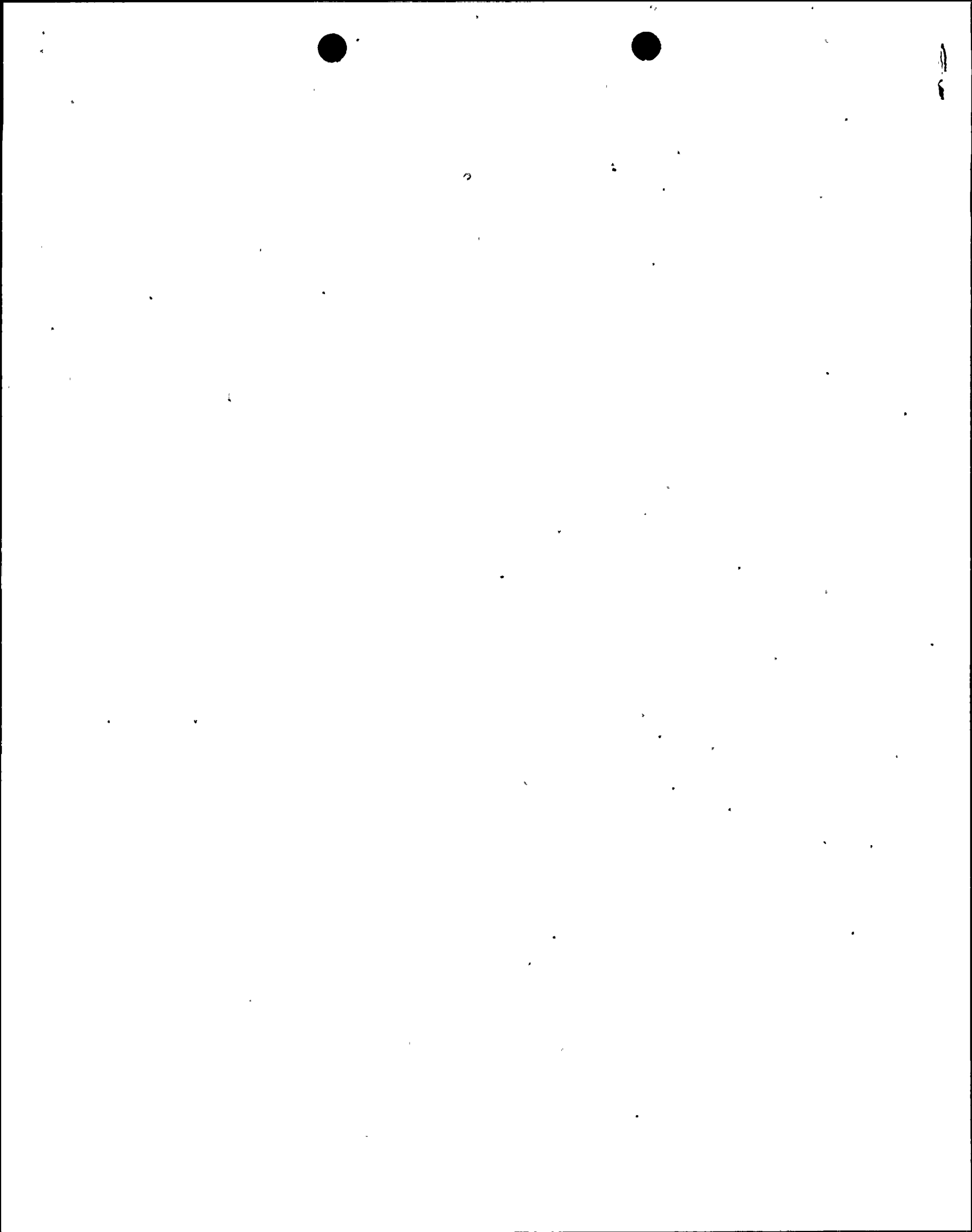
During the disposition of DER 2-98-0597, it was discovered that for a period of 12 minutes on January 25, 1996 HPCS was out of service for maintenance and Division II of RHS was in Full Flow Test. At that time, NMPC did not consider Division II of RHS to be inoperable. However, since the SPC valve (2RHS\*FV38B) closes slower (120 seconds) than the RHS-Low Pressure Coolant Injection (LPCI) mode injection valve opens (65 seconds), Division II of RHS should have been declared inoperable. Consequently, TS 3.0.3 should have been entered since TS Action 3.5.1.c could not be met.

### II. CAUSE OF EVENT

The cause of this event has been determined to be technical inaccuracies in the original design information. Justification for the RHS test return valve closure time being incompatible with the LPCI injection valve was inadequate at the time of the original design.

### III. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73(a)(2)(i)(B) "any operation or condition prohibited by the plant's Technical Specifications." On January 25, 1996, NMPC should have entered TS 3.0.3.





LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  Nine Mile Point Unit 2	DOCKET NUMBER (2)  05000410	LER NUMBER (4)			PAGE (3)  03 OF 03
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		98	08	00	

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

**III. ANALYSIS OF EVENT (Cont'd)**

In November 1990, NMPC had General Electric (GE) perform a Sensitivity Study of ECCS requirements for NMP2. As part of that study, equipment out of service was evaluated for the fuel design at the time. The results indicated that with one RHS (LPCI) out of service and a failure of the Division III Emergency Diesel Generator (EDG), the fuel peak clad temperature (PCT) was 1459°F, well below the limit of 2200°F in 10CFR50.46. Even though the fuel design has changed since 1990, NMPC's engineering judgement is that the PCT would remain well below the regulatory limit. Therefore, this event did not pose a threat to the public or plant personnel.

**IV. CORRECTIVE ACTIONS**

1. The following administrative actions have been taken to resolve the original design deficiency:
  - Operating procedures have been revised to require RHS to be declared inoperable when in the SPC and Full Flow Testing modes.
  - Operating procedure for HPCS and LPCS have been revised to require the system to be declared inoperable when in the Full Flow Test Mode.
2. The inaccuracies occurred during the design phase of the plant. NMPC's current design procedures and guidelines provide the necessary guidance to prevent recurrence of similar issues. The ongoing FSAR verification and Improved Technical Specification (ITS) projects provide a reasonable level of assurance that these kind of technical inaccuracies are identified.

**V. ADDITIONAL INFORMATION**

- A. Failed components: none.
- B. Previous similar events: none.
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
RHS	NA	BO
HPCS	NA	BG
LPCS	NA	BM
SPC flow valve	FCV	BO



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