

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9806090168 DOC.DATE: 98/06/04 NOTARIZED: NO DOCKET #
 FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH.NAME AUTHOR AFFILIATION
 WARD,K.D. Niagara Mohawk Power Corp.
 DAHLBERG,K.A. Niagara Mohawk Power Corp.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-012-00:on 980507,missed TS LSFT of SWP circuitry was noted.Caused by poor work practices.Applicable procedure was temporarily revised & applicable contacts were tested.
 W/980604 ltr.

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NIAGARA MOHAWK

GENERATION
BUSINESS GROUP

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

June 4, 1998
NMP2L 1787

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

RE: Docket No. 50-410
LER 98-12

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(i)(B), we are submitting LER 98-12, "Missed Technical Specification Logic System Functional Testing of Service Water Pump Circuitry."

Very truly yours,

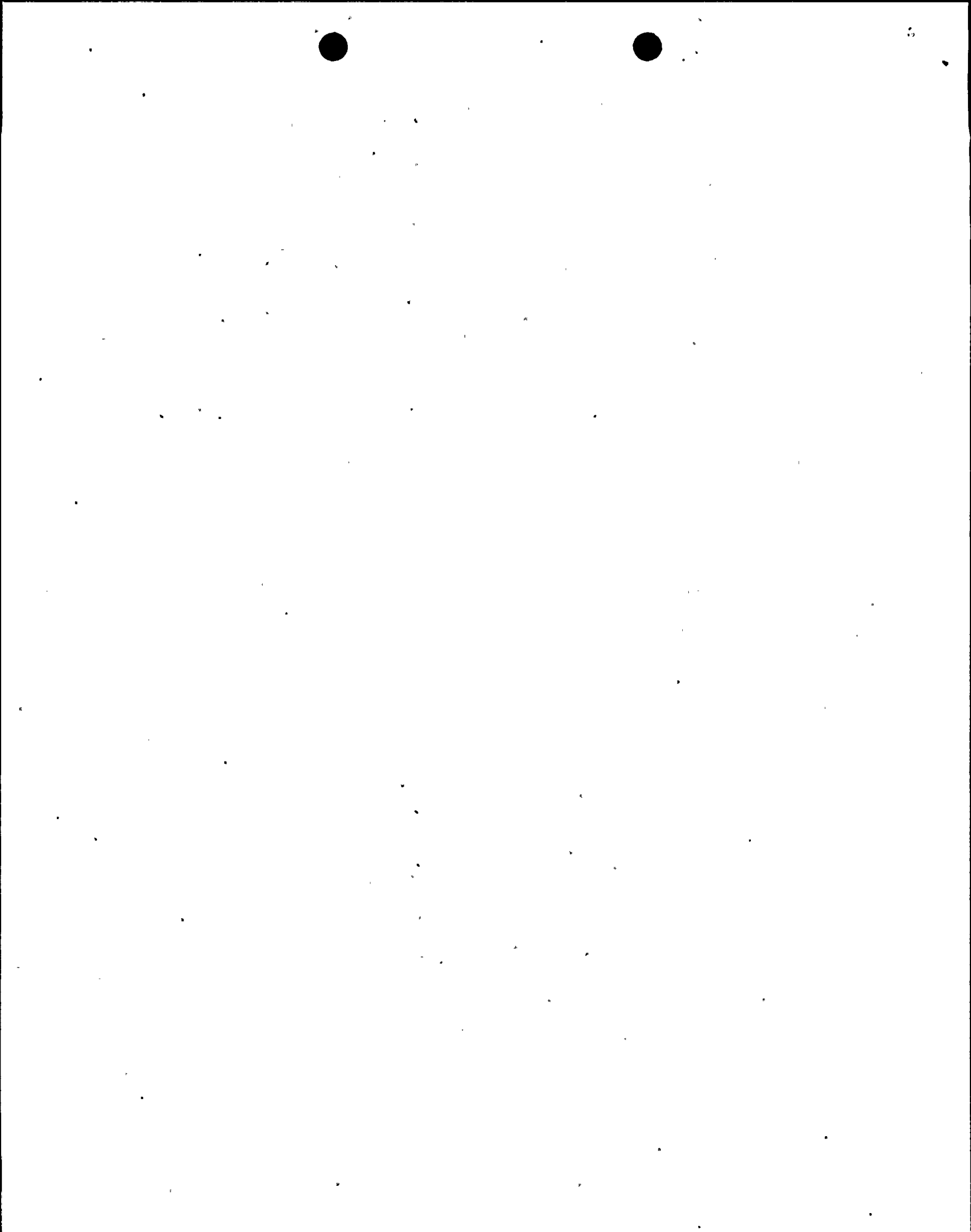
Kim A. Dahlberg
Plant Manager - Unit 2

KAD/TWP/kap
Attachment

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

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LICENSEE EVENT REPORT (LER)

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 (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 5

TITLE (4)

Missed Technical Specification Logic System Functional Testing of Service Water Pump Circuitry

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)	
05	07	98	98	012	00	06	04	98	N/A	05000	
									N/A	05000	

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) 000	<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

K. D. Ward, Technical Support Manager

TELEPHONE NUMBER

(315) 349-1043

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)

MONTH

DAY

YEAR

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

On May 7, 1998, Niagara Mohawk Power Corporation (NMPC) determined that the Nine Mile Point Unit 2 (NMP2) Logic System Functional Test (LSFT) procedures for the Division I and II Plant Service Water System (SWP) pumps failed to adequately test the entire circuit. These deficiencies were identified during a review of logic circuits as a result of Generic Letter (GL) 96-01. The SWP pumps were declared inoperable and TS 3.7.1.2 was entered. The missed LSFT requirements is a violation of Technical Specification Surveillance Requirements (TS SR) 4.7.1.1.1.e.1 and 4.7.1.2.1.e.1, which are required to be performed at least once per 18 months.

The cause of this event has been determined to be poor work practices. The deficiencies should have been identified during initial procedure development. Subsequent reviews also failed to identify the deficiencies.

The applicable procedure was temporarily revised and the applicable contacts were tested. Permanent procedure revisions will be completed. The GL 96-01 review continues and is scheduled for completion prior to startup from Refueling Outage 6 (RFO6).



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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 20535, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	- 12	- 00	02 OF 05

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

I. DESCRIPTION OF EVENT

On May 7, 1998, at approximately 1700 hours, Niagara Mohawk Power Corporation (NMPC) determined that the Nine Mile Point Unit 2 (NMP2) Logic System Functional Test (LSFT) procedures for the Division I and II Plant Service Water System (SWP) pumps failed to adequately test the entire circuit. The SWP pumps were declared inoperable due to the missed LSFT requirements and Limiting Condition for Operation (LCO) 3.7.1.2 was entered. The plant was in Mode 5 at the time in Refueling Outage 6 (RFO6). The missed LSFT requirements is a violation of Technical Specification Surveillance Requirements (TS SR) 4.7.1.1.1.e.1 and 4.7.1.2.1.e.1, which are required to be performed at least once per 18 months.

These deficiencies were identified during a review of logic circuits being performed as a result of commitments associated with Generic Letter (GL) 96-01, Testing of Safety-Related Logic Circuits. TS SR 4.7.1.1.1.e.1 and 4.7.1.2.1.e.1 require that a LSFT of the SWP pump starting logic be performed for operating and shutdown conditions, respectively. Portions of the circuitry involving the SWP pump Loss of Offsite Power (LOOP) automatic start sequencing and the LOOP/Loss of Coolant Accident (LOCA) manual start interlock logic were not completely tested.

The six SWP pumps are controlled automatically by the required combination and sequence of signals generated by LOOP, automatic load sequencing, and prior pump status. On a LOOP, all running pumps are stopped and one pump per division is restarted automatically in timed sequence. If a running pump fails to restart in time, a standby pump is started automatically, to assure that one pump is running in each loop. Specifically, the previously running pumps (red flagged, normal after a pump start) are automatically started first, followed by the green flagged pumps (normal after a pump stop) if the previously running pumps fail to start. Verification of the automatic starting logic ensures that the SWP pumps will be available when required.

On May 7, 1998, at approximately 1700 hours, Divisions I and II SWP were declared inoperable due to the missed testing. Division I SWP had previously been declared inoperable on May 6, 1998 for planned maintenance and testing. TS 3.7.1.2 was entered and appropriate actions were taken.

The missed contacts in Divisions I and II were subsequently tested on May 14, 1998 and May 8, 1998, respectively, via temporary changes to the procedure. Division II SWP was declared operable on May 9, 1998 at approximately 1525 hours. Division I SWP remained out of service for other maintenance and testing.



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 (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Nine Mile Point Unit 2	05000410	98	12	00	03 OF 05	

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

II. CAUSE OF EVENT

The cause of this event has been determined to be poor work practices. The initial procedure writers did not perform an adequate review to ensure that all the appropriate contacts were tested. A lack of understanding of the pump automatic start sequencing circuit or a belief that the manual start inhibit function was not an LSFT requirement may have contributed to this error.

During the review of this event, technical inaccuracies were identified in color coded LSFT drawings that are used for the review of procedures involving LSFT requirements. The missed contacts were not color coded to indicate which procedure tested these contacts. This lack of color coding would provide misleading information with respect to the LSFT requirements. NMPC had performed two previous LSFT reviews (in 1989 and 1995) that were independent of the review for GL 96-01. Neither of these previous reviews identified these deficiencies. The drawing inaccuracies may have influenced the results of the LSFT reviews. However, personnel involved in these reviews were knowledgeable of TS SR and LSFT requirements and should have identified these deficiencies.

III. ANALYSIS OF EVENT

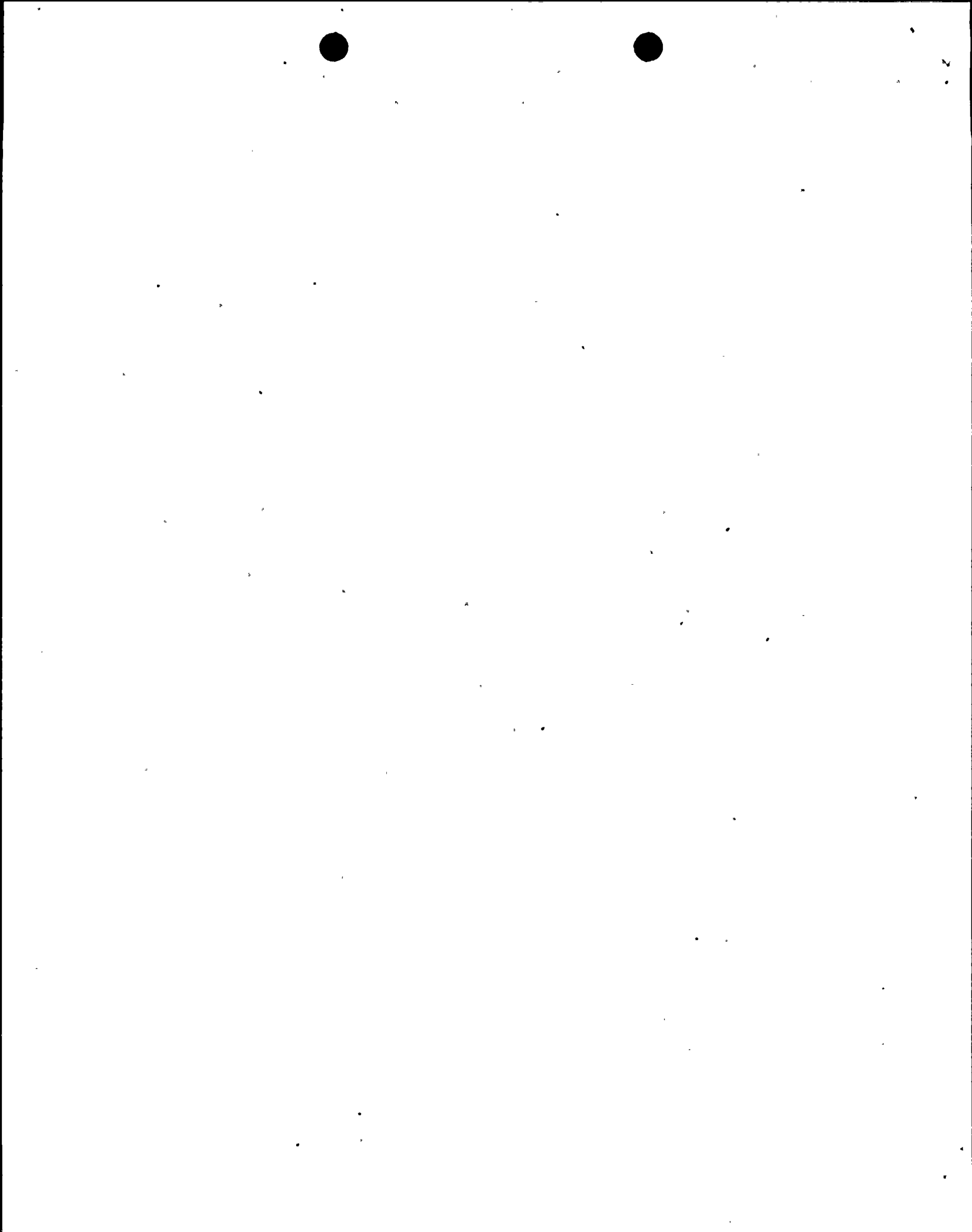
This event is reportable in accordance with 10CFR50.73(a)(2)(i)(B), "any operation or condition prohibited by the plant's Technical Specifications."

The SWP System provides cooling water to essential components through two separate, redundant supply and return headers. Each supply header provides sufficient cooling water to various components essential for the safe shutdown of the reactor and for mitigating the consequences of design basis accidents.

The missed contacts in this circuit perform different functions. Some of the contacts prevent a previously running pump (red flagged) from starting when another divisional pump is running (i.e., pump A prevents pumps C and E from starting). This prevents an overload condition during the LOOP automatic load sequencing. The relays were confirmed to operate properly in another procedure and had been tested, but specific contact arrangements had not.

Other contacts prevent a manual start of the divisional pumps within 70 seconds of a LOOP or LOCA initiation signal. This lockout prevents an operator from manually starting a pump within this 70 second period, which might interfere with the automatic load sequencing and possibly overload the bus. Again, the relay had been tested and verified, but other contacts associated with this lockout were not.

When the associated contacts in each Division were tested, the contacts operated correctly, and therefore, any functions that would have been required would have occurred. Since this circuitry was demonstrated to be functional, this event had no adverse consequences on the health and safety of the public or plant personnel.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	12	00	04 OF 05

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

IV. CORRECTIVE ACTIONS

1. The applicable procedure was temporarily revised to incorporate the appropriate testing requirements.
2. The applicable contacts were tested during the current refueling outage (RFO6).
3. The applicable procedure(s) will be permanently revised no later than November 30, 1998.
4. The objective of the GL 96-01 review was to ensure that all LSFT components are adequately tested from the sensor through and including the actuated device. The rigor and level of detail of the GL 96-01 review identified the missed LSFT requirements. The missed requirements were self-identified and demonstrate the acceptability of current work practices. Long-term enhancements and controls for LSFT will be developed based on conclusions drawn from the GL 96-01 review. One determination that has been made is that the color-coded LSFT drawings will be considered historical documentation. The GL 96-01 review is scheduled for completion prior to startup from RFO6.

V. ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events:

NMP2 has had a number of instances where procedure preparation or review caused missed or inadequately performed surveillance tests. In accordance with NMPC's Corrective Action Program, a Deviation/Event Report (DER) was initiated to evaluate this trend. A root cause team was assembled to evaluate this overall trend to determine if process problems or other common aspects could be identified. Required corrective actions will be taken as necessary to correct any identified deficiencies in accordance with the corrective action program.

LERs 98-04, 98-07, and 98-11 also involved missed LSFT requirements. The cause of LER 98-04 was poor work practices, which led to an incorrect determination of what component served as the actuated device. LERs 98-07 and 98-11 were similar to this LER and also involved poor work practices from previous LSFT and TS reviews. The rigor and level of detail of the GL 96-01 review identified the missed LSFT and TS requirements described in LERs 98-07 and 98-11 and the missed LSFT described in this LER, and therefore, should prevent further occurrence.



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 (6)			PAGE (3) 05 OF 05
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		98	12	00	

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

V. ADDITIONAL INFORMATION (Cont'd)

C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Plant Service Water System	N/A	BI
Pump	P	BI
Relay	RLY	BI
Bus	BU	EB

