

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9804100305 DOC. DATE: 98/04/01 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 98-004-00: on 980302, LSFT for main TT on Level 8 failed to verify entire circuit. Caused by knowledge deficiency of EHC sys. Revised LSFT procedures prior to refueling outage 6. W/980401 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
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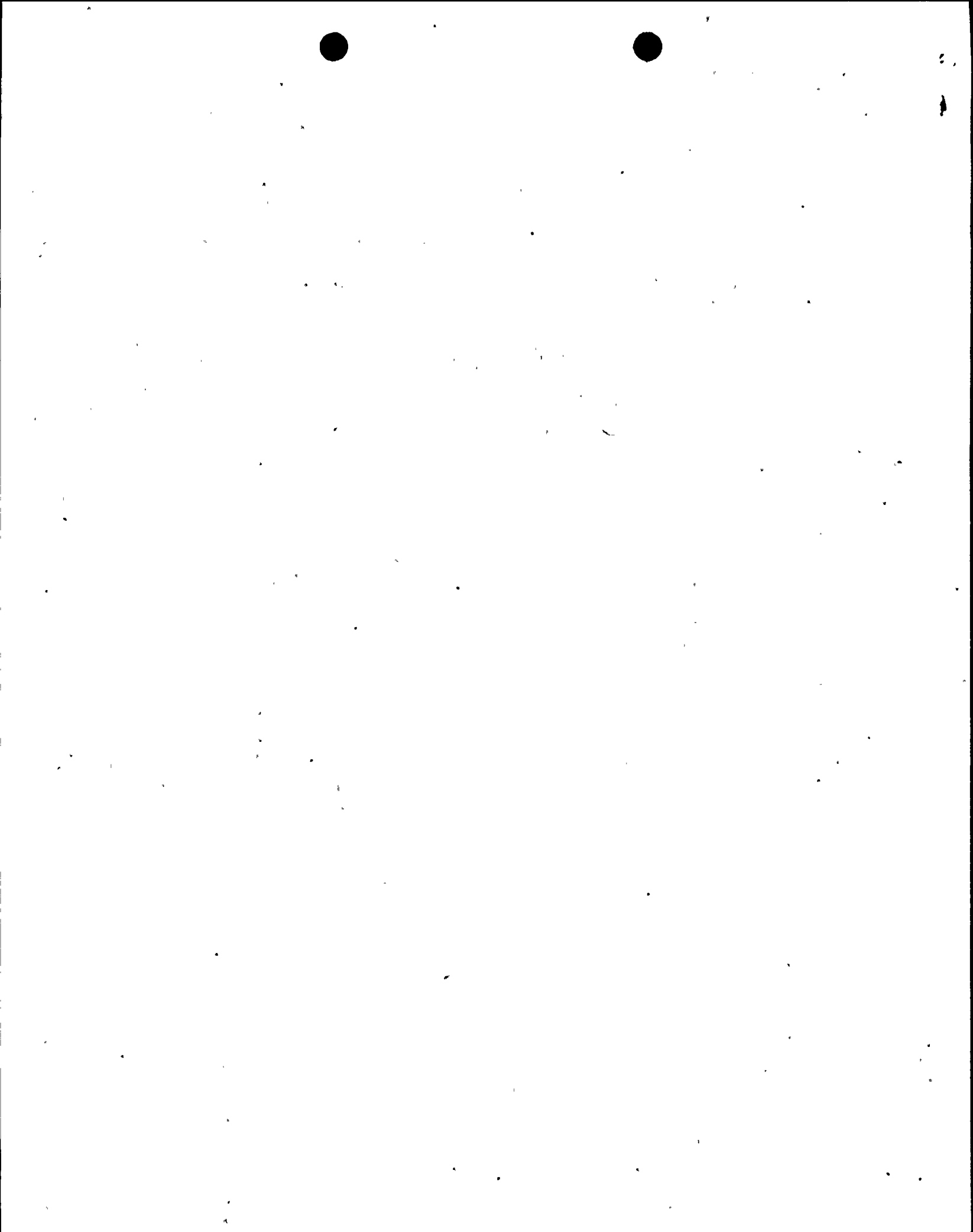
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	NRR/DRCH/HQMB	1 1	NRR/DRPM/PECB	1 1
	NRR/DSSA/SPLB	1 1	NRR/DSSA/SRXB	1 1
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NIAGARA MOHAWK

GENERATION
BUSINESS GROUP

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

April 1, 1998
NMP2L 1766

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

RE: Docket No. 50-410
LER 98-04

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(i)(B), we are submitting LER 98-04, "Missed Technical Specification Required LSFT of Level 8 Trip of Main Turbine."

Very truly yours,

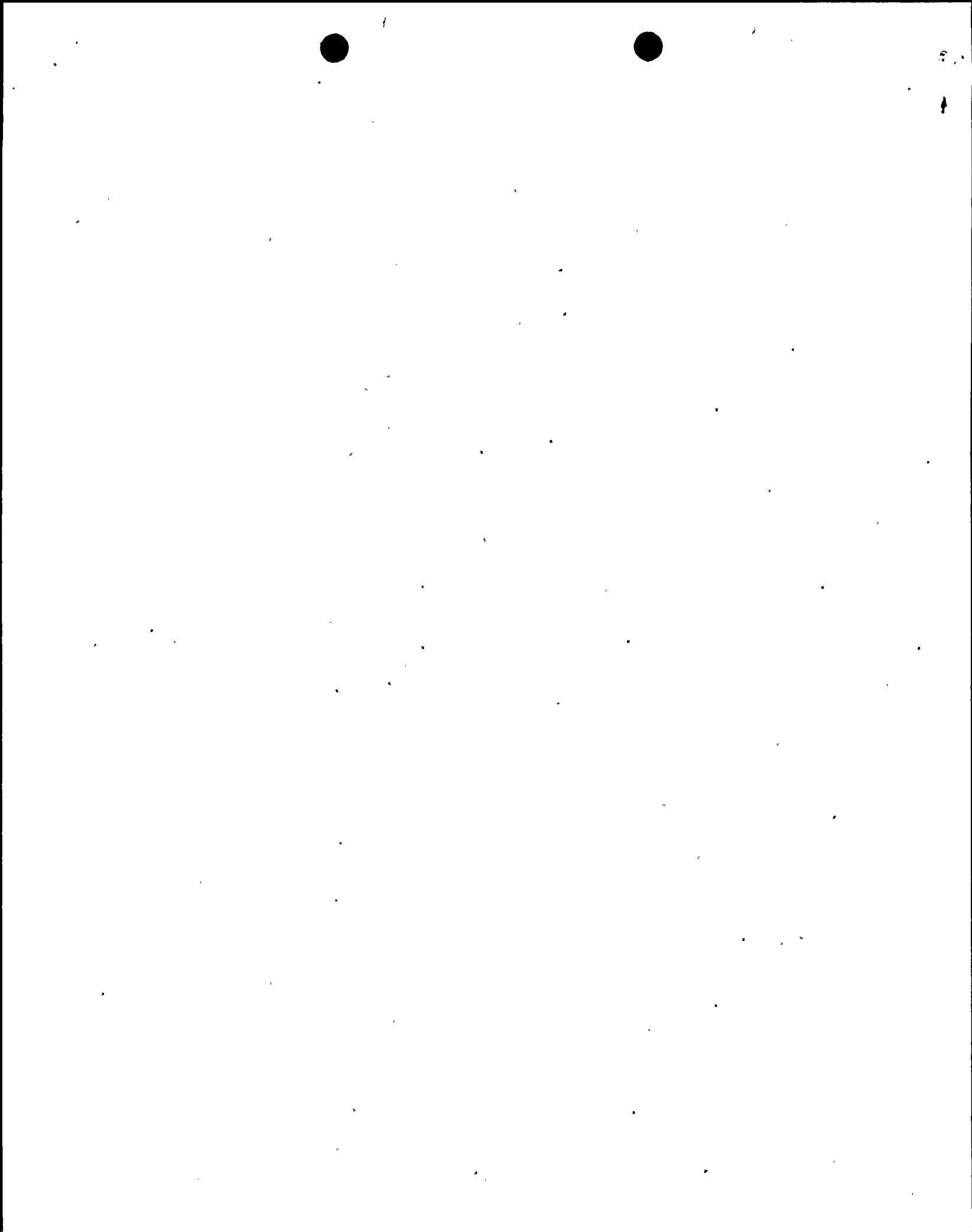
Kim A. Dahlberg
Plant Manager - NMP2

KAD/GJG/cmK
Attachment

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

9804100305 980401
PDR ADDCK 05000410
S PDR

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IE 22



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 4
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TITLE (4)
Missed Technical Specification Required LSFT of Level 8 Trip of Main Turbine

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)
03	02	98	98	04	00	04	01	98	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"/> 20.402(b) <input type="checkbox"/> 20.405(a)(1)(i) <input type="checkbox"/> 20.405(a)(1)(ii) <input type="checkbox"/> 20.405(a)(1)(iii) <input type="checkbox"/> 20.405(a)(1)(iv) <input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c) <input type="checkbox"/> 50.36(c)(1) <input type="checkbox"/> 50.36(c)(2) <input checked="" type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(ii) <input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv) <input type="checkbox"/> 50.73(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(vii) <input type="checkbox"/> 50.73(a)(2)(viii)(A) <input type="checkbox"/> 50.73(a)(2)(viii)(B) <input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b) <input type="checkbox"/> 73.71(c) <input type="checkbox"/> OTHER <i>(Specify in Abstract below and in Text, NRC Form 366A)</i>
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LICENSEE CONTACT FOR THIS LER (12)

NAME K. D. Ward - Technical Support Manager	TELEPHONE NUMBER (315) 349-1043
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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)	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO				

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

On March 2, 1998, Niagara Mohawk Power Corporation (NMPC) determined that the Nine Mile Point Unit 2 (NMP2) Logic System Functional Tests (LSFT) for the main turbine trip on high reactor vessel level (Level 8) failed to verify the entire circuit. This is a violation of Technical Specification Surveillance Requirement (TS SR) 4.3.9.2 which is required to be performed at least once per 18 months.

The cause of this event has been determined to be an apparent knowledge deficiency of the Electro Hydraulic Control (EHC) system combined with poor work practices, which led the LSFT procedure developers to conclude that the EHC panel was the actuated device. Contributing to this event was the omission of relevant information when the LSFT procedure for the Level 8 turbine trip was developed. The circuit diagrams for the Level 8 turbine trip show the EHC panel as a circuit termination.

The applicable LSFT procedures will be revised prior to refueling outage 6 (RFO6). This event has been discussed with personnel performing the Generic Letter 96-01 procedure reviews.



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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATIONESTIMATED 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	- 04	- 00	02 OF 04

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

I. DESCRIPTION OF EVENT

On March 2, 1998, Niagara Mohawk Power Corporation (NMPC) determined that the Nine Mile Point Unit 2 (NMP2) Logic System Functional Tests (LSFT) for the main turbine trip on high reactor vessel level (Level 8) failed to verify the entire circuit. This is a violation of Technical Specification Surveillance Requirement (TS SR) 4.3.9.2 which is required to be performed at least once per 18 months.

This deficiency was identified in response to a question from another licensee concerning LSFT testing of the Electro Hydraulic Control (EHC) system. The EHC system engineer reviewed the LSFT drawings and determined that the EHC circuit had been tested from the Level 8 transmitter to an EHC panel in accordance with an LSFT procedure which references TS 4.3.9.2. The circuitry from the master trip bus within the EHC panel to the turbine stop and control valves was tested in accordance with an Instrument and Control surveillance procedure which did not specifically reference TS 4.3.9.2. However, the circuitry from the EHC panel input terminals to the master trip bus was not tested in either of the LSFT procedures.

After further review, it was found that the EHC panel circuitry from the input terminals to the master trip bus has been tested since Refueling Outage 3 in October 1993, but not by an LSFT. Work orders have been initiated with step text to perform the testing each refueling outage since RFO3. Therefore, the entire circuit has been tested since October 1993 to meet the LSFT requirements.

NMPC had performed two previous LSFT reviews and an initial review of this Level 8 LSFT as part of the overall LSFT review for Generic Letter (GL) 96-01. None of these reviews identified this deficiency. However, the NMP2 GL 96-01 process has not been completed. A senior engineer is required to perform an independent verification of the initial reviewer's work. That verification would likely have identified this deficiency.

II. CAUSE OF EVENT

The cause of this event has been determined to be an apparent knowledge deficiency of the EHC system combined with poor work practices, which led the LSFT procedure developers to conclude that the EHC panel was the actuated device. Contributing to this event was the omission of relevant information when the LSFT procedure for the Level 8 turbine trip was developed. The circuit diagrams for the Level 8 turbine trip show the EHC panel as a circuit termination.

The cause of the individual not finding this during the initial GL 96-01 review was again knowledge deficiency and poor work practice. The individual believed that since the EHC/Turbine System is non-safety related, the actual trip of the main turbine was simply an economic issue to prevent turbine damage and not for reactor safety. Based on this, the individual did not pursue his review beyond the EHC panel input.



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LICENSEE EVENT REPORT (LER)
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Nine Mile Point Unit 2	05000410	98	04	00	03 OF 04

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

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 purpose of the turbine trip on high water level is to cause a reactor scram to limit the minimum critical power ratio. NMP2 Updated Safety Analysis Report (USAR) Section 15.1.2, Feedwater Controller Failure - Maximum Demand, Subsection 15.1.2.2.3, Effect of Single Failures and Operator Errors, states "In Table 15.1-3, the first sensed event to initiate corrective action to the transient is the vessel high water level (L8) trip. Multiple level sensors are used to sense and detect when the water level reaches the L8 setpoint. At this point in the logic, a single failure will not initiate or prevent a turbine trip signal. Turbine trip signal transmission, however, is not built to single-failure criterion. The result of a failure at this point would have the effect of delaying the pressurization "signature." However, high moisture levels entering the turbine will be detected by high levels in the turbine's moisture separators, resulting in a trip of the unit. In addition, excessive moisture entering the turbine will cause vibration to the point where it too will trip the unit." Based upon these other turbine trip signals and associated reactor scram, the impact of not having this Level 8 trip is negligible. Therefore, this event did not pose a threat to public health and safety or to plant personnel.

IV. CORRECTIVE ACTIONS

1. The applicable LSFT procedures will be revised prior to RFO6.
2. This event has been reviewed and expectations reinforced with the personnel performing the GL 96-01 procedure reviews.
3. The verification process for GL 96-01 will specifically address the LSFT circuit scope as part of the verification review. The verification reviews are scheduled for completion by the end of RFO6.



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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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Nine Mile Point Unit 2	05000410	98	04	00	04 OF 04

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

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) has been initiated to evaluate this trend. Required corrective action will be taken in accordance with the disposition of that DER.

C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Electro Hydraulic Control	N/A	TG



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