

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9709220041 DOC. DATE: 97/09/12 NOTARIZED: NO DOCKET #
FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH. NAME AUTHOR AFFILIATION
PISANO, L.E. Niagara Mohawk Power Corp.
DAHLBERG, K.A. Niagara Mohawk Power Corp.
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-007-00: on 970813, failed to calibr H recombiner instruments required by TS. Caused by inadequate written communication when procedure was initially developed & instruments were omitted. Testing was completed. W/970912 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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NIAGARA MOHAWK

GENERATION
BUSINESS GROUP

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

September 12, 1997
NMP2L 1724

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

RE: Docket No. 50-410
LER 97-07

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(i)(B), we are submitting LER 97-07, "Failure to Calibrate Hydrogen Recombiner Instruments as Required by Technical Specifications due to Procedure Omission."

Very truly yours,

Kim A. Dahlberg
Plant Manager - NMP2

KAD/TWP/lmc
Attachment

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

IEDD/1

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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 20535, 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
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TITLE (4)
Failure to Calibrate Hydrogen Recombiner Instruments as Required by Technical Specifications due to Procedure Omission

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)
08	13	97	97	007	00	09	12	97	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) 95	<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 <small>(Specify in Abstract below and in Text, NRC Form 366A)</small>
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LICENSEE CONTACT FOR THIS LER (12)

NAME L. E. Pisano - Maintenance Manager NMP2	TELEPHONE NUMBER (315) 349-2073
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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 (Limits to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On August 13, 1997 at 1300 hours, Nine Mile Point Unit 2 staff identified eight instruments in the Hydrogen Recombiner System (HCS) (four instruments in each division) that had not been calibrated as required by Technical Specification (TS) Surveillance Requirement (SR) 4.6.6.1.b.1. Specifically, the TS.SR requires that a channel calibration be performed at least once per 18 months. NMP2 identified this error as part of an ongoing review based on commitments made in response to Generic Letter (GL) 96-01, "Testing of Safety-Related Logic Circuits."

The root cause of the event was inadequate written communications when the procedure was initially developed in that these instruments were omitted. A contributing cause was poor work practices in that the deficiency was not identified during subsequent revisions of the procedure.

Both divisions of HCS were declared inoperable. TS Limiting Condition for Operation (LCO) 3.0.3 was entered but actions were delayed based on TS SR 4.0.3. The surveillance procedure was revised to incorporate calibration of the control portion of the instrument loops (the required testing that was omitted). Testing was completed and verified that all circuits were within their required tolerances and were capable of performing their intended design functions. Each division of HCS was declared operable when the associated testing was completed for that division. The review of logic circuits is continuing and any future deficiencies will be evaluated.



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.

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Nine Mile Point Unit 2	05000410	97	- 07	- 00	02 OF 05

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

I. DESCRIPTION OF EVENT

On August 13, 1997 at 1300 hours, Nine Mile Point Unit 2 (NMP2) staff identified eight instruments (four instruments in each division) that had not been calibrated as required by Technical Specification (TS) Surveillance Requirement (SR) 4.6.6.1.b.1. Specifically, the TS SR requires that a channel calibration be performed at least once per 18 months on all recombiner instrumentation and control circuits. NMP2 determined that certain control portions of the instrument loops 2HCS*TE20A and 20B had not been included in calibration procedure N2-ISP-HCS-R110. This omission was identified during a review that was being conducted based on commitments made in response to Generic Letter (GL) 96-01, "Testing of Safety-Related Logic Circuits."

A review of development history revealed that the control portions of the instrument loops were calibrated during initial construction in 1986 as part of the original loop calibration reports, which were used to establish the "as-built" data. When the corresponding calibration procedure was written and later issued in 1986 (N2-ISP-HCS-R110), it did not include provisions to calibrate the control portions of these instrument loops. Additionally, no other procedures could be found that satisfied the TS calibration requirement. The subsequent two full revisions of the procedure did not identify the missing test requirements. These full revisions should have identified the inadequate procedure.

II. CAUSE OF EVENT

The root cause of the event was inadequate written communications when the procedure was initially developed in that the control portions of the instrument loops were omitted.

A contributing cause was poor work practices in that the deficiency was not identified during the subsequent full revisions of the procedure.

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." TS SR 4.6.6.1.b.1 requires that a channel calibration be performed at least once per 18 months on all recombiner instrumentation and control circuits. Certain control portions of the instrument loop were not calibrated since initial plant startup.

The NMP2 Hydrogen Recombiner System (HCS) consists of two independent subsystems, either of which is designed to maintain primary containment hydrogen and oxygen concentrations below five volume percent



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III. ANALYSIS OF EVENT (cont'd)

following a design basis Loss of Coolant Accident (LOCA), without relying on containment purging. Each recombiner is capable of taking suction from the drywell or suppression chamber, and has a separate return line from the recombiner to the suppression chamber.

During normal plant operation, the primary containment is inerted with nitrogen to maintain the noncondensable oxygen gas concentration below four volume percent in accordance with the Technical Specifications. Following a design basis LOCA, hydrogen and oxygen may be generated by the reaction of the zirconium fuel cladding with water (hydrogen only), radiolytic decomposition of water, and corrosion of metals.

The recent testing verified that all circuits were within their required tolerances and were capable of performing their intended design functions. Therefore, this condition did not pose a threat to the health and safety of the public or NMP2 plant personnel.

IV. CORRECTIVE ACTIONS

Both divisions of the Hydrogen Recombiner System (HCS) were declared inoperable at 1430 hours on August 13, 1997. TS Limiting Condition for Operation (LCO) 3.0.3 was entered but actions were delayed based on TS SR 4.0.3, which allows delaying the Action requirements for up to 24 hours to permit the completion of the surveillance. The surveillance procedure was revised to incorporate calibration of the control portions of instrument loops 2HCS*TE20A and 20B. Testing was completed and verified that all circuits were within their required tolerances and were capable of performing their intended design functions. Division I was restored to operable status at 2310 hours on August 13, 1997. TS 3.0.3/4.0.3 was exited. The Actions of TS 3.6.6.1 (restore the remaining inoperable hydrogen recombiner to operable status within 30 days) remained in affect until 1300 hours on August 14, 1997 when Division II was declared operable.

NMP2 is currently reviewing logic circuits based on the commitments made in our April 18, 1996 and August 14, 1996 letters to the NRC in response to GL 96-01. One of the actions is to compare electrical schematic drawings and logic diagrams to plant surveillance procedures to ensure that TS requirements are met. It was this review that identified the deviation addressed by this LER. If further deviations are found, they will be evaluated for operability and reportability.



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IV. CORRECTIVE ACTIONS (cont'd)

In addition, since the deficiencies which initiated this event occurred prior to 1994, previously implemented actions to address instances of inadequate managerial methods, relative to technical procedure preparation and review, are also applicable to this event. Specifically, a corrective action described in LER 94-003:

An inadequate technical review has been recognized in the past as being one of the major reasons for violating specific requirements. Niagara Mohawk has upgraded specific programs whose purpose is not only to ensure that adequate procedures are written, but also to ensure the review of these procedures is carried out in a manner that should eliminate events such as these. These include, but are not limited to, the following procedurally controlled programs:

- NIP-SEV-01, Applicability Reviews and Safety Evaluations
- NIP-PRO-03, Preparation and Review of Technical Procedures
- PWM-PRO-0105, Technical Procedure Verification and Validation

These new procedural requirements, as well as new expectations regarding the general level of detail of these reviews, will provide added assurance that procedures are technically accurate and adequate. Therefore, no further corrective or preventative actions are required at this time.

V. ADDITIONAL INFORMATION

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

NMP2 has had a number of instances where inadequate procedure preparation or review caused missed or inadequately performed surveillance tests. As a result of previous events, enhancements were made to the procedure preparation, review, and issue process with the implementation of Nuclear Division Interface Procedure, NIP-PRO-03, "Preparation and Review of Technical Procedures." This event and those discussed in LERs 94-05, 96-01, 96-02, 96-07, and 97-01 involved problems with past-practice identified by personnel involved in procedure review activities. Since this event occurred prior to the corrective actions taken for these similar events, it could not have been prevented by these corrective actions.



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V. **ADDITIONAL INFORMATION** (cont'd)

C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 EIS FUNCTION	IEEE 805 SYSTEM ID
Hydrogen Recombiner	RCB	BB
2HCS*TE20A & 20B	TIC	BB

