

# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9701270123      DOC. DATE: 97/01/17      NOTARIZED: NO      DOCKET #  
 FACIL: 50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe      05000220.  
 AUTH. NAME      AUTHOR AFFILIATION  
 YAEGER, W.      Niagara Mohawk Power Corp.  
 RADEMACHER, N.L.      Niagara Mohawk Power Corp.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 96-008-01: on 960926, missed augmented inspections of welds. Caused by inadequate change management. Performed required weld examinations, reviewed ISI Program Plan & will update ISI Program Plan Database. W/970117 ltr.

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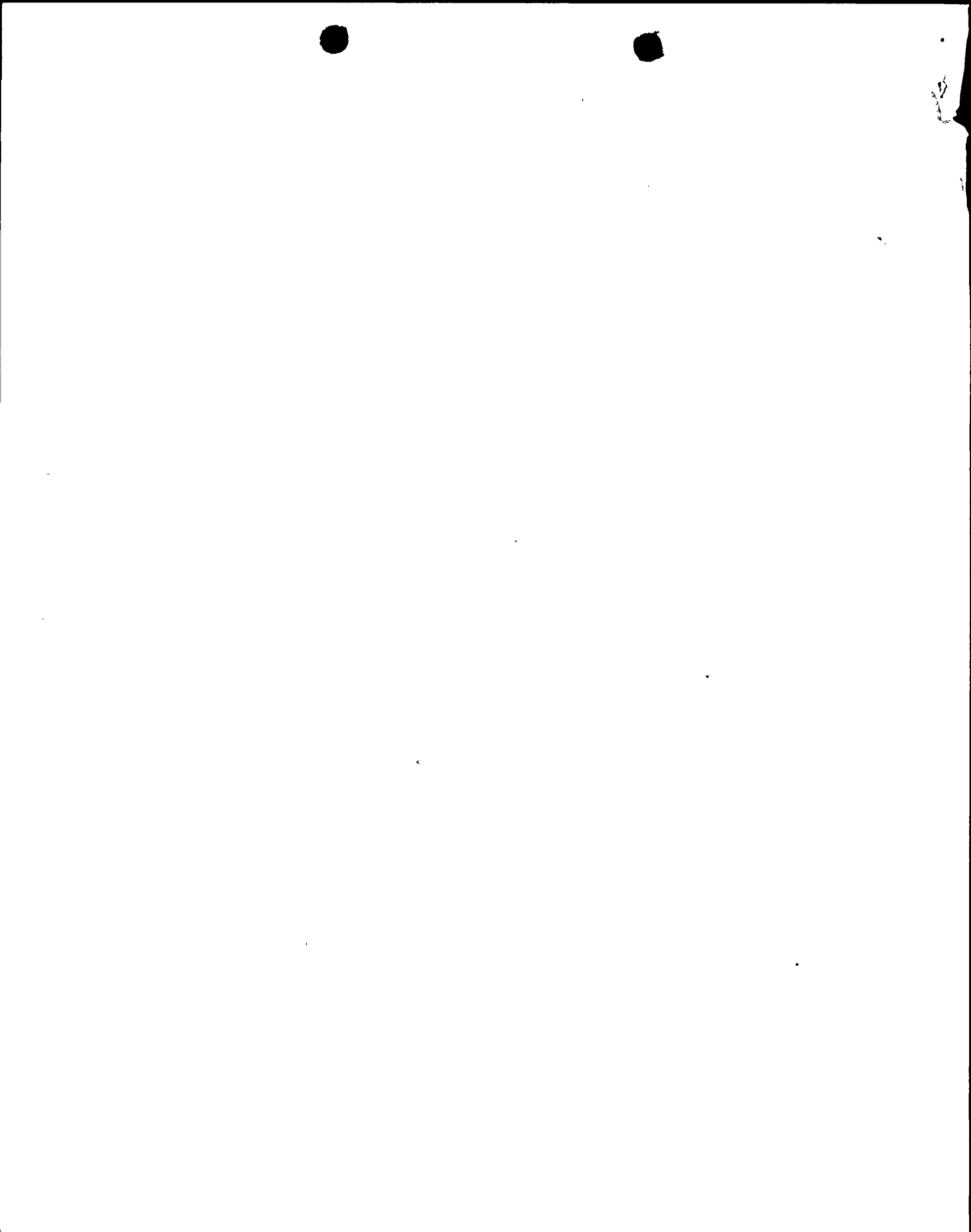
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NIAGARA MOHAWK

GENERATION  
BUSINESS GROUP

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

January 17, 1997  
NMPIL 1174

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: LER 96-08, Supplement 1  
Docket No. 50-220

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), we are submitting LER 96-08, Supplement 1, "Technical Specification Violation Involving Missed Augmented Inspections Caused by Inadequate Change Management."

Very truly yours,

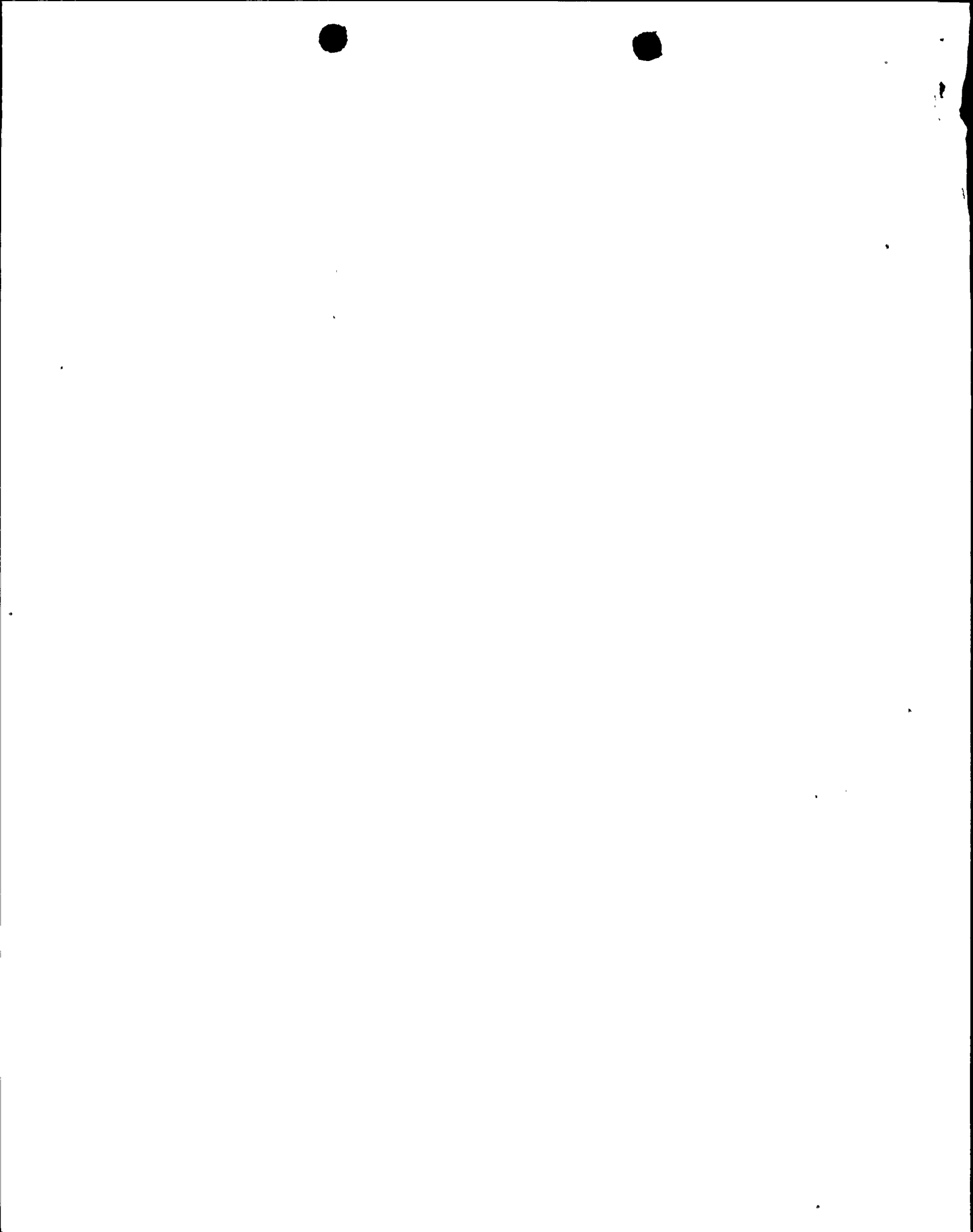
Norman L. Rademacher  
Plant Manager - NMP1

NLR/AFZ/kap  
Enclosure

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

9701270123 970117  
PDR ADOCK 05000220  
S PDR

270023



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 1

DOCKET NUMBER (2)

5000220

PAGE (3)

1 OF 6

TITLE (4)

Technical Specification Violation Involving Missed Augmented Inspections Caused by Inadequate Change Management

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)
09	26	96	96	08	01	01	17	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) 100	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<i>(Specify in Abstract below and in Text, NRC Form 366A)</i>
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Mr. William Yaeger, Unit 1 Engineering Manager	315-349-7834

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)

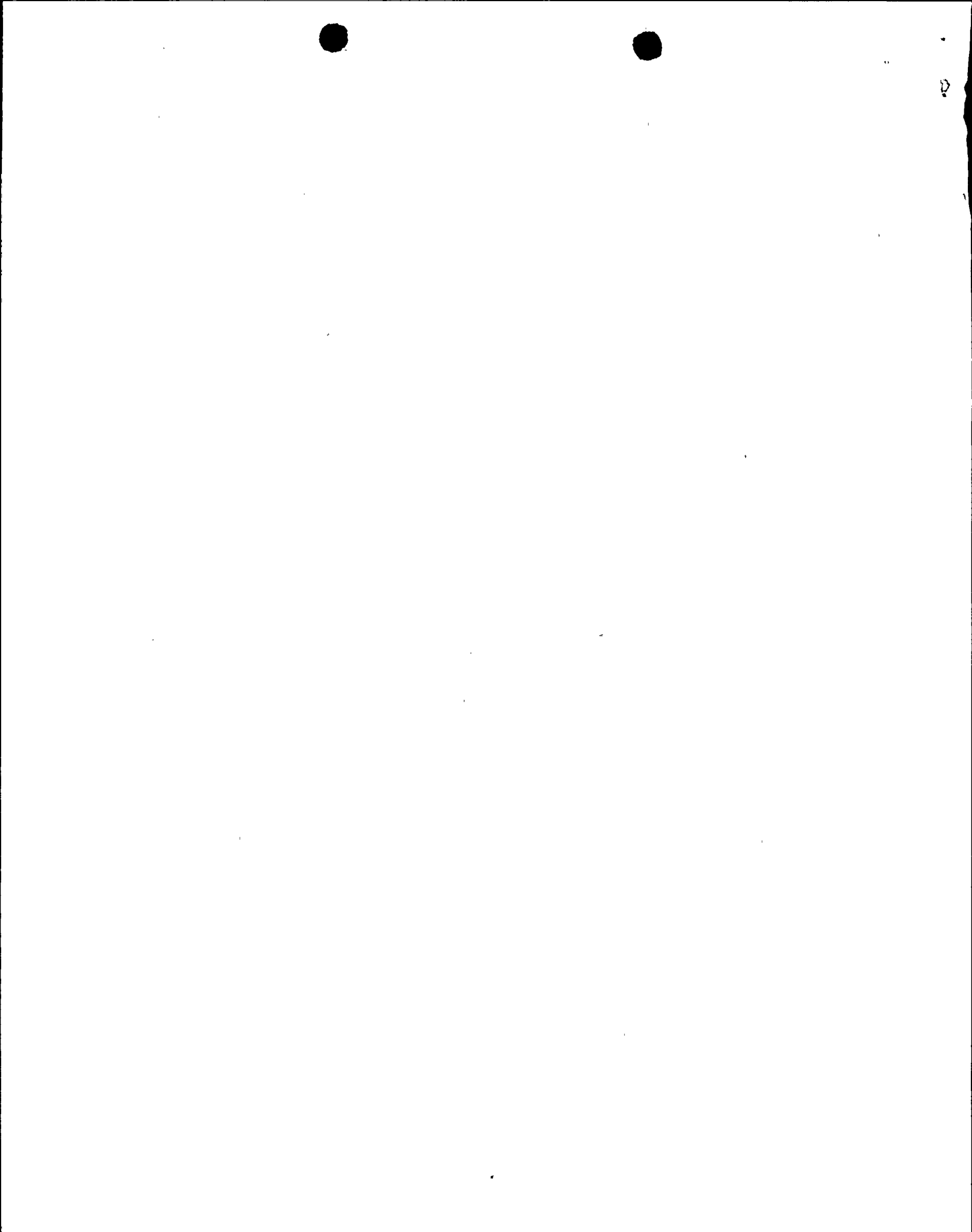
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On September 26, 1996, with Nine Mile Point Unit 1 (NMP1) in the RUN mode and reactor thermal power at approximately 100 percent, NMP1 management determined that the plant was not in compliance with Technical Specification (TS) 4.2.6.a.2, which requires Inservice Inspection (ISI) of piping identified in Generic Letter 88-01. Specifically, four welds in the Core Spray System had not been examined at the required frequency. Completion of the initial corrective actions also determined that welds in the Reactor Recirculation System had also not been inspected at the proper frequency.

The cause of this violation was inadequate change management in that the welds requiring augmented inspection for Intergranular Stress Corrosion Cracking (IGSCC) were not properly identified in the Inservice Inspection program.

Corrective actions identified include: Performing required weld examinations during a forced outage, updating the ISI Program Plan Database, and reviewing the ISI Program Plan for other potentially affected systems.



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-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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 1	05000220	96	- 08	- 01	02 OF 06

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

**I. DESCRIPTION OF EVENT**

On September 26, 1996, with Nine Mile Point Unit 1 (NMP1) in the RUN mode and reactor thermal power at approximately 100 percent, NMP1 management determined that the plant was not in compliance with Technical Specification (TS) 4.2.6.a.2, which requires Inservice Inspection (ISI) of piping identified in Generic Letter 88-01. Specifically, four welds in the Core Spray System had not been examined at the required frequency.

During planning activities for the spring 1997 refueling outage, it was noted by a maintenance planner that an augmented examination of a certain Core Spray System weld was not included in the outage schedule. Subsequent evaluation determined that four Core Spray System welds, included in the ISI program in accordance with the staff positions in Generic Letter 88-01, had not been examined at the frequency required by the Technical Specifications. The four welds which should have been examined by refueling outage (RFO) 13 are:

40-WD-035  
40-WD-079A40-WD-079  
40-WD-080

NOTE: The original report identified five welds which were not examined at the proper frequency. Weld 40-WD-039, identified as a missed examination in the original LER submittal, was examined during RFO 13 as required. Additional evaluation of this event determined that the augmented inspection program began with RFO 12 and, therefore, the examination frequency for weld 40-WD-039 was in accordance with the Generic Letter 88-01 requirements. The numbers reported in this supplement have been corrected as required.

These welds required augmented Inservice Inspection in accordance with Technical Specification 4.2.6.a.2., and should have been examined within two fuel cycles.

In a series of letters between July 1988 and March 1991, Niagara Mohawk provided information to the NRC regarding plans for examination of welds for Intergranular Stress Corrosion Cracking (IGSCC) in response to Generic Letter 88-01. On July 7, 1989 the NRC approved License Amendment 107, which incorporated the augmented inspection guidance of Generic Letter 88-01 into Section 4.2.6.a.2 of the Technical Specifications. During this same period, Niagara Mohawk also developed the second interval ISI Program Plan. The augmented IGSCC inspections, in accordance with the guidance in Generic Letter 88-01, were also incorporated into the second interval ISI Program Plan. The second interval Program Plan was submitted to the NRC in March of 1992 and approved in April of 1994.

The ISI database entries of the four welds which were not examined at the proper frequency contained incorrect data in some fields, e.g., examination frequency, scheduling period, and IGSCC category. The evaluation of this event indicates that these incorrect entries were created during development of the second interval ISI Program Plan.





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

**I. DESCRIPTION OF EVENT (Cont'd)**

As a result of the initial corrective actions, inspection frequency deficiencies were also identified for welds in the Reactor Recirculation System. Specifically, the review performed determined that Niagara Mohawk had committed to perform augmented inspections every refueling outage for six of the 30 welds between pumps or valves and the Recirculation System piping. Over the last three refueling outages only ten, rather than 18, welds were inspected. As with the initially identified deficiencies, the review indicates that this deviation existed since the second interval ISI Program Plan was developed.

The review also identified a discrepancy between the Reactor Water Cleanup System (RWCU) welds that were actually inspected, and the list of RWCU welds identified in the Generic Letter 88-01 correspondence submitted to the NRC. Specifically, in its correspondence, Niagara Mohawk committed to inspect 10 percent of the RWCU welds outboard of the containment isolation valves, and identified three specific RWCU welds which would be inspected to meet this commitment. Additionally, the review identified that the Category A and D welds in the correspondence were scheduled differently than in the rewritten Second Ten-Year ISI Interval Program Plan. This resulted from the new selection of welds and changes that were made to equalize the weld examinations between two refueling outages. Niagara Mohawk has inspected 10 percent of the RWCU welds outboard of the containment isolation valves (in conformance with Generic Letter 88-01 in every respect), but two of the three welds examined were different than those identified in the correspondence.

**II. CAUSE OF EVENT**

The cause of this violation was inadequate change management in that the welds requiring augmented inspection for Intergranular Stress Corrosion Cracking (IGSCC), as originally submitted to the NRC in the Generic Letter 88-01 response, were not properly identified in the ISI Program. In addition, a weld map was not properly updated during development of the second interval ISI program, which contributed to the failure to identify one of these deficiencies.

The Niagara Mohawk responses to Generic Letter 88-01 identified welds in the Core Spray System which should have been volumetrically examined every two fuel cycles. A review of the Core Spray System ISI Program Plan database identified some discrepancies in various fields of the database, which resulted in the above four welds not being scheduled and examined at the required frequency. The review also determined that a weld map had not been properly updated during development of the second interval ISI program. The weld map did not reflect the design configuration drawings, and this deficiency contributed to the failure to identify one of these discrepancies earlier.



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

**II. CAUSE OF EVENT (Cont'd)**

A formal root cause investigation was performed utilizing Nuclear Interface Procedure NIP-ECA-01, "Deviation/Event Report." The investigation determined that, prior to 1992, the Generic Letter 88-01 commitments were maintained in a database separate from the ISI Program Plan. In 1992, this data was manually transferred into the ISI Program Plan. During this transfer some welds were not identified as requiring Generic Letter 88-01 inspections and/or were not scheduled for inspection. Contributing to this event were inadequate managerial methods and oversight, resulting in ineffective independent review.

**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."

Although these four welds were not examined before resuming power operation after RFO 13, the Core Spray System was determined to be operable based on the following considerations. The ISI Program examinations which have been performed on the welds of the Core Spray System are in compliance with the ISI requirements of Section XI of the ASME Boiler and Pressure Vessel Code and Technical Specification 3.2.6.a.1. The Limiting Condition for Operation specifies that system operability is dependent upon compliance with ASME Section XI. Therefore, the system is considered operable since the review of the Core Spray ISI examinations did not reveal any non-conformance in this area. Niagara Mohawk has demonstrated that the ISI program is in compliance with ASME Section XI requirements, as the program is reviewed and a summary report is submitted to the NRC after every refueling outage. Furthermore, the total number of ISI examinations Niagara Mohawk has performed during a period approaches the high end of the percentage range (approximately 33%) specified in ASME Section XI, which provides further assurance that the requirements of ASME Section XI will be met for systems currently under review.

Furthermore, these four welds are similar in age, material, pedigree, normal operating stress levels, and operating conditions to the welds which have been inspected at the proper frequency. In addition, all of the Core Spray System Welds covered by the guidance of Generic Letter 88-01 have been examined at least once since 1988 by qualified IGSCC inspectors. There have been no reportable or rejectable flaws requiring further evaluation in any of the inspected welds. Thus, there is high confidence that these welds will be in the same condition as the properly inspected welds. Additionally, since 1988, NMP1 has maintained a high quality water chemistry. Maintaining this level of water chemistry reduces crack growth significantly, thereby reducing the potential for initiation of a crack from IGSCC.

The four welds in the Core Spray System, which were not examined prior to startup following RFO13, were examined prior to startup from a forced outage which occurred in November of 1996. Also eight welds in



**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

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Nine Mile Point Unit 1	05000220	96	08	01	05 OF 06	

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

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

the Reactor Recirculation System were examined during this forced outage. No reportable or rejectable flaws requiring further evaluation resulted from these examinations. Accordingly, the safety significance of the missed examinations is minimal as the Core Spray and Reactor Recirculation Systems remain fully capable of meeting their design criteria.

Although two of the three RWCW welds inspected each outage are different than those identified in Niagara Mohawk's Generic Letter 88-01 correspondence, the actually inspected welds meet the selection criteria of the Generic Letter, and do not represent a change to the intent of the augmented inspection program. The three RWCW welds being inspected are, therefore, an acceptable implementation of the Generic Letter 88-01 requirements.

This event had no adverse affect on any other safety system nor the operators' ability to maintain safe reactor plant conditions. The Technical Specification violation did not adversely affect the health and safety of the general public or plant personnel.

### IV. CORRECTIVE ACTIONS

The following corrective actions have been or will be taken:

1. A root cause evaluation was performed for the specific discrepancies identified in the ISI Program Plan. This LER supplement provides the results of the evaluation.
2. The four Core Spray Systems welds not examined prior to startup following RFO13 were inspected during a forced outage in November of 1996. Eight welds in the Reactor Recirculation System were also examined during the forced outage. The augmented examinations for IGSCC are now in compliance with Technical Specification requirements.
3. The ISI Program Plan for the remaining four systems (Reactor Recirculation, Reactor Water Cleanup, Shutdown Cooling, and Emergency Cooling) addressed in Niagara Mohawk's response to Generic Letter 88-01 were reviewed for missed examinations. The results of this review are reported in this supplement.
4. The second ten-year interval ISI Program Plan shall be updated and corrected for augmented examinations, as required. Completion Date: February 28, 1997.



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LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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FACILITY NAME (1)  Nine Mile Point Unit 1	DOCKET NUMBER (2)  05000220	LER NUMBER (6)				PAGE (3)  06 OF 06
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		96	08	01		

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

IV. CORRECTIVE ACTIONS (Cont'd)

5. The Core Spray weld map was updated to reflect the design configuration. Weld maps for the remaining four systems will be updated, as required, to reflect the design configuration. Completion Date: April 4, 1997.
6. The current ISI Program management methods and level of oversight will be evaluated relative to task requirements, incorporating the lessons learned from this event. Appropriate changes to procedures will be made, as required, and any applicable lessons learned will be shared with appropriate branch managers. Completion Date: May 15, 1997.
7. An independent vertical slice review will be performed of other selected augmented inservice inspection requirements (e.g., NUREG-0619 or IEB 80-13). Any deficiencies found will be handled in accordance with the Niagara Mohawk corrective action program. Completion Date: June 30, 1997.

V. ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events: LER 88-01 was issued to address problems identified with implementation of the first interval ISI Program as required by ASME Section XI. The evaluation performed for this event has not identified any non-conformance related to ASME requirements. The event described in this report involves non-conformances with augmented volumetric examination of certain welds susceptible to IGSCC.
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Core Spray System	NA	BM
Reactor Recirculation System	NA	AD
Reactor Water Cleanup System	NA	CE

