

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9906080314 DOC.DATE: 99/06/01 NOTARIZED: NO DOCKET #
 FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH.NAME AUTHOR AFFILIATION
 FOX, F. Niagara Mohawk Power Corp.
 PALEOLOGOS, N. Niagara Mohawk Power Corp.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 99-006-00:on 990429,inadequate surveillance of automatic depressurization nitrogen supply sys isolation valves was notd.Caused by inadequate surveillance procedure.Declared automatic depressurization sys inoperable.With 990601 ltr.

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

NOTES:

	RECIPIENT ID CODE/NAME	COPIES L TTR ENCL	RECIPIENT ID CODE/NAME	COPIES L TTR ENCL
	LPD1-1 PD	1 1	HOOD,D	1 1
INTERNAL:	ACRS	1 1	AEOD/SPD/RRAB	1 1
	<u>FILE CENTER</u>	1 1	NRR/DIPM/IOLB	1 1
	NRR/DIPM/IQMB	1 1	NRR/DRIP/REXB	1 1
	NRR/DSSA/SPLB	1 1	RES/DET/EIB	1 1
	RGN1 FILE 01	1 1		
EXTERNAL:	L ST LOBBY WARD	1 1	LMITCO MARSHALL	1 1
	NOAC POORE,W.	1 1	NOAC QUEENER,DS	1 1
	NRC PDR	1 1	NUDOCS FULL TXT	1 1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: L TTR 17 ENCL 17

AD4

C
A
T
E
G
O
R
Y
1
D
O
C
U
M
E
N
T



Niagara  Mohawk

June 1, 1999
NMP2L 1870

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

RE: Docket No. 50-410
LER 99-06

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), we are submitting Licensee Event Report 99-06, "Inadequate Surveillance of Automatic Depressurization Nitrogen Supply System Isolation Valves."

Very truly yours,



Nick Paleologos
Plant Manager - NMP2

NCP/CES/kap
Attachment

cc: Mr. H. J. Miller, Regional Administrator, Region I
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Records Management

9906080314 990601
PDR ADDCK 05000410
S PDR



1
2
3

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)

01 OF 05

TITLE (4)

Inadequate Surveillance of Automatic Depressurization Nitrogen Supply System Isolation Valves

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	29	99	99	06	00	06	01	99	N/A		
									N/A		

OPERATING MODE (9)

4

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

POWER LEVEL (10) 0%	<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

Frank Fox, Maintenance Manager

TELEPHONE NUMBER

315-349-7330

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

On April 29, 1999, while the plant was shutdown, Niagara Mohawk Power Corporation identified that automatic depressurization nitrogen supply system was not being leak rate tested as required by Technical Specification 4.5.1.e.2.e. The piping upstream of Valves 2GSN*V73A, 2GSN*V73B, 2IAS*V135, and 2IAS*V136 was not being vented to ensure that an adequate system leak rate test was being performed.

The cause was an inadequate surveillance procedure, which did not provide a vent path to perform the appropriate leak rate test. This was caused by a lack of knowledge by the original procedure author and reviewer on the significance of the system design/licensing basis for the isolation valves. A contributing cause was the lack of knowledge of the procedure authors and reviewers during Revision 1 and 2 that were performed to the original test procedure.

Corrective actions included: declaring the automatic depressurization system inoperable; testing Valves 2GSN*V73A and 2GSN*V73B; evaluating the acceptability of Valves 2IAS*V135, and 2IAS*V136; revising the surveillance procedure to properly leak test the automatic depressurization nitrogen supply system; developing guidelines, a qualification and cycle training program, and tools for Technical Specification procedure writers and reviewers; and determining the extent of the problem with Technical Specification surveillance procedures.



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) Nine Mile Point Unit 2	DOCKET NUMBER (2) 05000410	LER NUMBER (6)			PAGE (3) 02 OF 05
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		99	06	00	

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

I. DESCRIPTION OF EVENT

On April 29, 1999, while the plant was shutdown, Niagara Mohawk Power Corporation (NMPC) identified that Technical Specification 4.5.1.e.2.e was not being performed as required. Technical Specification 4.5.1.e.2.e requires a leak rate test be performed on the automatic depressurization nitrogen supply system at least once every 18 months. The safety related automatic depressurization nitrogen supply system was incorrectly leak rate tested.

NMPC identified that the automatic depressurization nitrogen supply system was incorrectly tested while reviewing the post-maintenance testing requirements after re-packing Valves 2GNS*V73A and 2GSN*V73B while the plant was shutdown. While resolving this system testing issue with Valves 2GSN*V73A and 2GNS*V73B, a similar issue was identified with Valves 2IAS*V135 and 2IAS*V136.

Valves 2GSN*V73A and 2GSN*V73B provide isolation between the non-safety related nitrogen supply tanks and the safety related automatic depressurization system receivers and accumulator tanks. Valves 2IAS*V135, and 2IAS*V136 provided isolation between the non-safety related air compressor (abandoned in place) and the safety related automatic depressurization system receivers and accumulator tanks. During past surveillance tests, safety related Valves 2GSN*V73A, 2GSN*V73B, 2IAS*V135, and 2IAS*V136 were closed. However, during performance of the system leak rate tests, the upstream non-safety related piping was not vented. The un-vented piping could have been pressurized during performance of the tests, thereby invalidating the leakage rate of the automatic depressurization nitrogen supply system. The non-safety related piping is not seismically qualified and cannot be relied on after a seismic event.

Upon discovery, the control room operators declared the automatic depressurization system inoperable. The surveillance procedure was temporarily modified to vent the upstream piping to leak rate test Valves 2GSN*V73A and 2GSN*V73B. The leak rate through Valves 2GSN*V73A (0.66 scfh) and 2GSN*V73B (0.339 scfh) was measured and the leakage was added to the total system leak rate. The total system leak rate, with the additional leakage from the two valves, remained below the Technical Specification acceptance criteria for system leakage. There is no individual valve leak rate requirement. Division I total system leakage was 2.683 scfh, and Division II total system leakage was 1.575 scfh within the Technical Specification acceptance criteria of less than or equal to 3 scfh and 4 scfh, respectively.

For Valves 2IAS*V135 and 2IAS*V136, maintenance personnel verified that the upstream piping section was not pressurized between Valve 2IAS-V147 and the two safety related valves. Since the downstream piping (non-safety related) was found not pressurized with the automatic depressurization nitrogen supply system being normally pressurized, then either the safety related valves did not leak or Valve 2IAS-V147 leaked, acting as a vent path. NMPC concluded that either Valves 2IAS*V135 and 2IAS*V136 were not leaking, or the valves leaked and the leakage was accounted for during the system leak rate test and, therefore, operable.



11

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	99	06	00		03 OF 05

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

II. CAUSE OF EVENT

The cause of the inadequate system leak rate was the original Surveillance Procedure N2-ISP-ADS-R106, "Automatic Depressurization System Accumulator and Pneumatic Supply Leak Rate Test," did not provide a vent path for Valves 2GSN*V73A, 2GSN*V73B, 2IAS*V135, and 2IAS*V136. The apparent reason for the omission of the vent path was that personnel involved in the original review of the surveillance procedure lacked the system design and license basis knowledge to identify this error during the review process.

Procedure N2-ISP-ADS-R106 Revisions 00 through 02 were full reviews of the entire procedure, and the procedure writer and subsequent reviewer for each of these revisions failed to identify the procedure deficiency. Administrative requirements for the qualification and extent of the reviews were not clear when Revisions 00 and 01 were issued. Since Revision 01 was issued, administrative procedures have been revised to clearly define the qualification requirements and extent of review required for technical procedures. Although Revision 2 was a full review performed under the new administrative requirements, the procedure writer and reviewer still did not identify the procedure deficiency due to a lack of system design and license basis knowledge. Revisions 03 through 05 were limited revisions and, in accordance with administrative procedures, only required a review of the changes.

III. ANALYSIS OF EVENT

This event is considered reportable under 10CFR50.73(a)(2)(i)(B), "any operation or condition prohibited by the plant's Technical Specifications." Technical Specification surveillance requirement 4.5.1.e.2.e requires that a leak rate test be performed once per 18 months on the safety related automatic depressurization system accumulator pneumatic supply system up to the safety relief valve actuators/operators.

The automatic depressurization nitrogen supply system provides actuating gas pressure to the automatic depressurization system receivers and accumulators. During plant operation, the system is normally pressurized with pressure alarms installed and the isolation valves are normally closed so any leaks or valve failures would be identified quickly.

The recent testing verified that the leakage rate for Valves 2GSN*V73A and 2GSN*V73B when added to the system total leakage was within Technical Specification acceptance criteria, and NMPC determined the leakage from Valves 2IAS*V135 and 2IAS*V136, if any, was accounted for in the previous surveillance system leak rate test. Therefore, this condition did not have an adverse effect on the health and safety of the public.



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 (5)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	99	-06	-00	04 OF 05

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

IV. CORRECTIVE ACTIONS

- The control room operators declared the automatic depressurized system inoperable until two valves were properly tested and the other two valves were evaluated to be operable.
- NMPC significantly improved the procedure review process since the initial development of the surveillance procedure. Specific review checklists were developed and implemented, and there were improvements to 10 CFR 50.59 safety evaluation training and qualification that have increased overall design and license basis knowledge to ensure proper reviews.
- Surveillance Procedure N2-ISP-ADS-R106 will be revised to incorporate the proper test methodology by June 30, 1999.
- Guidelines (including key references), a qualification and cycle training program, and tools will be developed for Technical Specification surveillance procedure writers and technical verifiers. Then a sample of Technical Specification surveillance procedures will be analyzed to determine the extent of condition. These actions will be completed by April 15, 2000.

V. ADDITIONAL INFORMATION

- Failed components: none.
- Previous similar events:

Nine Mile Point 2 has had a number of instances where inadequate procedure preparation or review caused missed or inadequately performed surveillance tests. This event and those discussed in Licensee Event Reports 96-01, 96-02, 96-08, 97-01, 97-07, 97-09, 97-11, 97-12, 97-14, 98-04, 98-07, 98-11, 98-12, 98-15, 98-20, and 98-26 involved problems with past-practices in writing and reviewing procedures. As a result of this example and others, guidelines, training, and tools will be developed for Technical Specification surveillance procedure writers and technical reviewers.

Past corrective actions were implemented to prevent the problem from recurring for the development of new procedures. Also, past corrective actions only reviewed the extent of condition with regard to similar types of testing procedures (for example, logical system functional test). These past corrective actions did not determine the extent of condition and, therefore, did not identify the succeeding similar issues. Implementing Corrective Actions 4 and 5 of this licensee event report will determine the extent of condition.



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) Nine Mile Point Unit 2	DOCKET NUMBER (2) 05000410	LER NUMBER (5)			PAGE (3) 05 OF 05
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		99	06	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 803A FUNCTION	IEEE 805 SYSTEM ID
Safety Relief Valves Actuators/Operators	RV	SB
Nitrogen Gas System Isolation Valves	ISV	LK
Automatic Depressurization System Receivers	RCV	LK
Automatic Depressurization System Accumulators	ACC	LK
Piping	N/A	LK
Nitrogen Tank	TK	LK
Pressure Alarm	PA	LK

