

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8903020638 DOC.DATE: 89/02/21 NOTARIZED: NO DOCKET #  
 FACIL:50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe 05000220  
 AUTH.NAME AUTHOR AFFILIATION  
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 WILLIS,J.L. Boston Edison Co.  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-005-01:on 880220,liquid poison sys isolated valves  
 local leak rate test failure.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

### NOTES:

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	PD1-1 LA		1	1		PD1-1 PD		1	1	
	SLOSSON,M		1	1						
INTERNAL:	ACRS MICHELSON		1	1		ACRS MOELLER		2	2	
	ACRS WYLIE		1	1		AEOD/DOA		1	1	
	AEOD/DSP/TPAB		1	1		AEOD/ROAB/DSP		2	2	
	ARM/DCTS/DAB		1	1		DEDRO		1	1	
	NRR/DEST/ADE 8H		1	1		NRR/DEST/ADS 7E		1	0	
	NRR/DEST/CEB 8H		1	1		NRR/DEST/ESB 8D		1	1	
	NRR/DEST/ICSB 7		1	1		NRR/DEST/MEB 9H		1	1	
	NRR/DEST/MTB 9H		1	1		NRR/DEST/PSB 8D		1	1	
	NRR/DEST/RSB 8E		1	1		NRR/DEST/SGB 8D		1	1	
	NRR/DLPQ/HFB 10		1	1		NRR/DLPQ/QAB 10		1	1	
	NRR/DOEA/EAB 11		1	1		NRR/DREP/RAB 10		1	1	
	NRR/DREP/RPB 10		2	2		NRR/DRIS/SIB 9A		1	1	
	NUDOCS-ABSTRACT		1	1		<u>REG FILE 02</u>		1	1	
	RES/DSIR/EIB		1	1		RES/DSR/PRAB		1	1	
	RGN1 FILE 01		1	1						
EXTERNAL:	EG&G WILLIAMS,S		4	4		FORD BLDG HOY,A		1	1	
	H ST LOBBY WARD		1	1		LPDR		1	1	
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A/10-4



**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Nine Mile Point Unit 1	0 15 10 10 10 21 210	1 OF 0 3

TITLE (4)

Liquid Poison System Isolation Valves Local Leak Rate Test Failure

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		COCSET NUMBER(S)																
0	2	2	0	8	8	8	8	0	0	5	0	1	0	2	2	1	8	9			0	5	0	0	0	1	1
																				0	5	0	0	0	1	1	

OPERATING MODE (8)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.406(a)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 1 0 1 0	20.406(a)(1)(i)	50.73(a)(1)	50.73(a)(2)(v)	73.71(c)
		20.406(a)(1)(ii)	50.73(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Test YAC Form 25KAI)
		20.406(a)(1)(iii)	X 50.73(a)(2)(iii)	50.73(a)(2)(vii)(A)	
		20.406(a)(1)(iv)	X 50.73(a)(2)(iii)	50.73(a)(2)(vii)(B)	
		20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)	
NAME	TELEPHONE NUMBER
Peter A. Mazzaferro, Supervisor Technical Assessment	<div>AREA CODE</div> <div>3, 1, 5</div> <div>3, 4, 9 - 7, 9, 1, 9</div>

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (12)

[illegible]

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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)

## ABSTRACT

This report is being submitted as Supplement 1 to LER 88-05.

On February 19 and 20, 1988, with Nine Mile Point Unit 1 in a refueling outage, both containment isolation valves of the Liquid Poison System failed their local leak rate test. The tests were being performed in accordance with 10 CFR 50 Appendix J requirements. The results of these tests determined the measured leakage to be greater than the Technical Specification allowable limit.

The root cause for failure of the containment isolation valves was determined to be dirt accumulation on the teflon seats, and minor binding of the pivot pin.

Initial corrective action involved declaring the Liquid Poison System inoperable and generating station work requests to inspect the valves and repair as necessary. The Liquid Poison System valves were disassembled and inspected. The valves were reinstalled, and the system was reassembled. The valves satisfactorily passed the LLRT.

8903020638 890221  
PDR ADUCK 05000220  
S PDC



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES: 9/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LEC		NUMBER (6)		PAGE (3)	
		YEAR		JENTIAL NUMBER	REVISION NUMBER		
		88	—	0005	—	01	02 OF 03

TEXT (If more space is required, use additional NRC Form 306A's) (17)

DESCRIPTION OF THE EVENT

On February 19 and 20, 1988, with Nine Mile Point Unit 1 (NMP1) in a refueling outage, both containment isolation valves of the Liquid Poison System failed their local leak rate test (LLRT). Type C leak rate tests were being performed in accordance with the requirements of 10 CFR 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." Instrument and Control (I&C) technicians were testing the Liquid Poison System containment isolation valves. These valves are 2 inch, Crane Company, Model 1532V check valves. The test procedure, N1-ISP-C-25.2, "Primary Containment Isolation Valve Leak Rate Tests," requires the measured leakage to be less than 12.9 SCFH at 22 psig for successful completion. (This limit is identified in the NMP1 Technical Specifications.) On February 19, 1988, the inboard isolation valve, 42.1-02, was tested and the measured leakage rate was off-scale high. On February 20, 1988, the outboard isolation valve, 42.1-03, was tested and the measured leakage rate was also off-scale high. With the failure of both valves, the containment penetration was considered inoperable with respect to providing a leakage boundary and the Liquid Poison System was also considered inoperable. A station work request and occurrence report were written for each of the valves.

On February 21, 1988, the I&C technicians again performed N1-ISP-C-25.2 in order to quantify the leakage past the Liquid Poison isolation valves. The test for 42.1-02 again read off-scale high. The second test for 42.1-03, however, resulted in a measured leakage rate of 2.13 SCFH. Apparently, valve 42.1-03 seated better and reduced the leakage path. Both valves were cleaned at the seat and valve 42.1-02 was also cleaned at the pivot pin area. After inspecting and cleaning the valves, they were placed back into the Liquid Poison System and retested in accordance with procedure N1-ISP-R-042-501 which superseded procedure N1-ISP-C-25.2.

There were no other inoperable structures, systems or components that contributed to this event.

CAUSE OF THE EVENT

The root cause of failure for isolation valve 42.1-02 was dirt accumulation on the teflon seat and minor binding of the pivot pin. The failure for valve 42.1-03 was attributed to a dirty seat. Corrective actions were taken and the valves satisfactorily passed the LLRT.

ANALYSIS OF THE EVENT

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i), for exceeding a Technical Specification limit, and 10 CFR 50.73(a)(2)(ii), as a degradation of a principal safety barrier.

There were no adverse safety consequences associated with this event. Even though a primary containment penetration was inoperable with respect to a leakage boundary, primary containment integrity was not required at the time of discovery since NMP1 was in a refueling outage and the primary containment dome was removed.



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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Nine Mile Point Unit 1	0 5 0 0 0 2 2 0	8 8	0 0 5	0 1	0 3	OF 0 3

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

ANALYSIS OF THE EVENT (Cont'd)

If this condition existed with the reactor in operation, there also would not have been any adverse safety consequences. The Liquid Poison System is connected directly to the reactor vessel and the isolation valves (check valves) are held closed with reactor pressure (approximately 1000 psig). Any leakage past these valves would pressurize the system from the isolation valves to the system explosive valves. These valves are leak proof and located on the discharge of the redundant pumps. Therefore, there is no potential for radioactive material to be released or plant personnel or public health and safety to be compromised.

CORRECTIVE ACTIONS

Initial corrective actions taken included declaring the Liquid Poison System inoperable, generating station work requests to inspect and correct the root cause, and generating an occurrence report to document the failure of each valve to pass its LLRT. Additional corrective actions included disassembly, inspection and cleaning of the valves. The valves were subsequently placed back into the system and satisfactorily passed their LLRT.

ADDITIONAL INFORMATION

Information on the Liquid Poison System isolation valves that failed their LLRT is as follows (both valves have the same information):

<u>NUREG-1022</u> <u>Cause</u>	<u>IEEE 805-1983</u> <u>System</u>	<u>IEEE 803A-1983</u> <u>Component</u>	<u>NPRDS</u> <u>Coordinator</u>
B	BR	ISV	C665

The following is a list of previous NMP1 LERs that describe LLRT failures of primary containment penetrations.

81-16	82-17	82-19	82-21
81-27	82-18	82-20	82-22





NINE MILE POINT NUCLEAR STATION / P.O. BOX 32 LYCOMING, NEW YORK 13093 / TELEPHONE (315) 343-2110

February 21, 1989

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

RE: Docket No. 50-220  
LER 88-05-S1

Gentlemen:

In accordance with 10 CFR 50.73, we hereby submit the following Licensee Event Report:

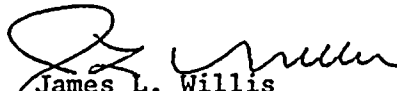
LER 88-05-S1      Which is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B), "Any operation or condition prohibited by the plant's Technical Specifications;" and

10 CFR 50.73 (a)(2)(ii), "Any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded..."

A 10 CFR 50.72 telephone notification was made at 1114 hours on February 20, 1988.

This report was completed in the format designated in NUREG-1022, Supplement 2, dated September 1985.

Very truly yours,

  
James L. Willis  
General Superintendent  
Nuclear Generation

JLW/MB/meh

Attachment

cc: William T. Russell  
Regional Administrator

IE22  
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