

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8707210569 DOC. DATE: 87/07/14 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME AUTHOR AFFILIATION
 RANDALL, R. G. Niagara Mohawk Power Corp.
 LEMPGES, T. E. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-042-00: on 870614, facility experienced actuation of
 ESF, specifically isolation of RWCU sys. Caused by procedural
 deficiency. Verify plant status as normal, reset isolation
 signal & return RWCU sys to service. W/870714 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD1-1 LA	1 1	PD1-1 PD	1 1
	NEIGHBORS, D	1 1	MINER, S	1 1
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DOA	1 1	AEOD/DSP/NAS	1 1
	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1
	DEDRO	1 1	NRR/DEST/ADE	1 0
	NRR/DEST/ADS	1 0	NRR/DEST/CEB	1 1
	NRR/DEST/ELB	1 1	NRR/DEST/ICSB	1 1
	NRR/DEST/MEB	1 1	NRR/DEST/MTB	1 1
	NRR/DEST/PSB	1 1	NRR/DEST/RSB	1 1
	NRR/DEST/SGB	1 1	NRR/DLPQ/HFB	1 1
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1
	NRR/DREP/RAB	1 1	NRR/DREP/RPB	2 2
	NRR/PMAS/ILRB	1 1	NRR/PMAS/PTSB	1 1
	REG FILE 02	1 1	RES DEPY GI	1 1
	RES TELFORD, J	1 1	RES/DE/EIB	1 1
	RGN1 FILE 01	1 1		
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1



LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 1 0	PAGE (3) 1 OF 0 4
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TITLE (4)
Reactor Cleanup System Isolation due to Procedural Deficiency

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)
0 6	1 4	8 7	8 7	0 4 2	0 0	0 7	1 4	8 7	N/A		0 5 0 0 0
									N/A		0 5 0 0 0

OPERATING MODE (9) 2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 2	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" 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)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<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)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME Robert G. Randall, Supervisor Technical Support		AREA CODE 3 1 5	3 4 1 9 1 - 1 2 1 4 1 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	

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 June 14, 1987 at 1657 hours, Nine Mile Point Unit 2 (NMP2) experienced the actuation of an Engineered Safety Feature (ESF), specifically, isolation of the Reactor Water Cleanup (RWCU) system. At the time of the event, the plant was at approximately 2% power with the mode switch in the "STARTUP" position. Reactor pressure and temperature were approximately 409 pounds per square inch gauge (psig) and 445°F, respectively.

The root cause of the event has been determined to be a procedural deficiency. As a result of this deficiency, a Niagara Mohawk operator repositioned the RWCU reject flow control valve subsequent to having established reject flow to the Main Condenser. Repositioning the reject flow control valve induced erratic flow oscillations on the reject flow transmitters and initiated the RWCU isolation.

Corrective action has been to revise the deficient procedure. The revised procedure instructs operators to use the feedwater level control valves to maintain reactor water level, rather than use of the RWCU system. A caution has been included to instruct operators that the reject flow control valve shall not be repositioned with a filter/demineralizer inservice and total reject flow to the Main Condenser.

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

I. DESCRIPTION OF EVENT

On June 14, 1987 at 1657 hours, Nine Mile Point Unit 2 (MP2) experienced the actuation of an Engineered Safety Feature (ESF), specifically, isolation of the Reactor Water Cleanup (RWCU) system. At the time of the event, the plant was at approximately 2% power with the mode switch in the "STARTUP" position. Reactor pressure and temperature were approximately 409 pounds per square inch gauge (psig) and 445°F, respectively.

In support of startup activities a Niagara Mohawk operator was controlling reactor water level by use of the RWCU system. During reactor startup/hot standby, it is necessary to remove excess reactor coolant, due to Control Rod Drive (RDS) system cooling water in-flow and reactor water thermal swell, via the RWCU system. The removed excess reactor coolant (reject flow) may be directed to either the Main Condenser or to the Liquid Radioactive Waste Treatment system. With reject flow to the Main Condenser already established, a Niagara Mohawk operator began to adjust the amount of reject flow by repositioning the RWCU reject flow control valve, 2WCS-FV135. As the valve was being repositioned, flow oscillations developed in the reject flow line. These oscillations resulted in a high flow differential between the RWCU suction and reject flow transmitters, initiating the RWCU isolation.

For the event, operator actions were per the approved temporary procedure 87-41, "Feedwater/Clean-Up System Operation". This procedure is in effect during startup and shutdown of the plant to mitigate feedwater line temperature stratification.

There were no components or systems which were inoperable and/or out of service which contributed to the event. No plant system or component failures resulted from the event.

II. CAUSE OF EVENT

The root cause of the event has been determined to be a procedural deficiency. The system lineup section of temporary procedure 87-41 stated, "Caution: Once reject flow to the condenser is established per Step j, 2WCS-FV135 position should not be changed." Later in the operating section of the procedure, the operator was instructed per procedure, to maintain RWCU reject flow between 170-200 gallons per minute. The operator, not aware the earlier caution still applied, attempted to control reactor water level by adjusting reject flow to the Main Condenser. However, once 2WCS-FV135 was repositioned flow oscillations developed in the RWCU system.

To mitigate the effects of feedwater line temperature stratification, temporary procedure 87-41 has the RWCU system lined-up with total reject flow to the Main Condenser. With no RWCU return flow to the feedwater system, there is only a small amount of backpressure present on the filter/demineralizer effluent valves. With only this small amount of backpressure, when the reject flow control valve was repositioned, the filter/demineralizer effluent valve began oscillating. This oscillating valve induced flow oscillations on the RWCU flow transmitters, initiating the isolation.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

III. ANALYSIS OF EVENT

The NMP2 Final Safety Analysis Report Section 5.4.8 states: The RWCU system is classified as a primary power generation system (not an Engineered Safety Feature (ESF)), a small part of which is part of the reactor coolant pressure boundary (RCPB) up to and including the outside isolation valve. The other portions of the system are not part of the RCPB and can be isolated from the reactor. The RWCU system may be operated at any time during planned reactor operations or it may be shutdown if water quality is within the Technical Specification limits."

An RWCU isolation does not impair the station's capability to achieve a safe shutdown condition. The RWCU isolation function operated as designed with no other transients or inoperable systems contributing to the event.

The event is considered reportable via 10CFR50.73 (a)(2)(iv) because the isolation function is an ESF function which is part of the Primary Containment and Reactor Vessel Isolation Control System.

The duration of the event was approximately 17 minutes.

IV. CORRECTIVE ACTIONS

Immediate corrective actions were to verify the plant status as normal, reset the isolation signal and return the RWCU system to service.

Corrective action to prevent this event from recurring has been initiated in the form of a revision to temporary procedure 87-41. The procedure has been revised to: 1) Instruct the operators that reactor water level should be controlled by use of the feedwater level control valves, not the RWCU reject flow control valve, and 2) Inform the operator that the reject flow control valve shall not be repositioned with a filter/demineralizer inservice and total reject flow to the Main Condenser.



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

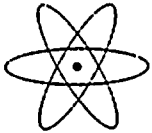
V. ADDITIONAL INFORMATION

Identification of Components Referred to in this LER

Component	IEEE 803 EIIS Funct	IEEE 805 System ID
Flow Transmitter	FT	IJ
Reactor Water Clean Up System	N/A	CE
Isolation Logic System	N/A	JE
Flow Control Valve	FCV	CE

Although the event described in LER 87-26 deals with a RWCU isolation, the root cause of that event was personnel error in venting one of the reject flow transmitters. Therefore, that event and the event described above are not considered similar.





NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

301 PLAINFIELD ROAD
SYRACUSE, NY 13212

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

July 14, 1987

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

RE: Docket No. 50-410
LER 87-42

Gentlemen:

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

LER 87-42 Is being submitted in accordance with 10 CFR 50.73 (a) (2) (iv), "Any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS). However, actuation of an ESF, including the RPS, that resulted from and was part of the preplanned sequence during testing or reactor operation need not be reported."

A 10 CFR 50.72 (b) (2) (ii) report was made at 1945 hours on June 14, 1987.

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

Very truly yours,

Thomas E. Lempges
Vice President
Nuclear Generation

TEL/JTD/mjd

Attachments

cc: Regional Administrator, Region 1
Sr. Resident Inspector, W. A. Cook

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