

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8709010226 DOC. DATE: 87/08/26 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moho 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 87-046-00: on 870730, operators determined that Tech Spec operability requirements for APRM not met when unit entered mode 1 on 870729. Caused by mgt deficiency. Procedure revised. W/870826 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: 21

05000410

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	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	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		
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LICENSEE EVENT REPORT (LER)

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TITLE (4)
Required Surveillance not Performed due to Programmatic Deficiencies

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)
07	29	87	87	046	00	08	26	87	N/A		0 5 0 0 0
									N/A		0 5 0 0 0

OPERATING MODE (9) **1**

POWER LEVEL (10) **010**

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.406(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)

NAME Robert G. Randall, Supervisor Technical Support	TELEPHONE NUMBER AREA CODE 315 NUMBER 349-2445
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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)

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)

While in Mode 1 (11% power) on July 30, 1987, NMPC licensed control room operators determined that Technical Specification operability requirements for the Average Power Range Monitor (APRM) system had not been met to enter Mode 1. The flow-biased upscale thermal trips and rod block functions had not been tested at the required interval because they were deleted as a procedure requirement during heatup and for modes other than Mode 1. The weekly APRM surveillance procedure that tests these functions was performed while still in Mode 2. The unit entered Mode 1 on July 29, 1987 at 10% power. Due to an inadvertent oversight, the procedure had not been revised for the upcoming mode change. The root cause of the event was management deficiency. The intermediate cause was procedural deficiency. A contributing factor was initiation of a permanent procedure change instead of a one-time-only change to delete Mode 1 requirements.

Immediate corrective actions were to declare these functions inoperable and follow Technical Specification requirements. Subsequently, the procedure was revised, and the functions were tested. Further corrective actions are the review of Operations and Instrument and Control Surveillance Procedures, the development of a special list for variable frequency procedures and the training of Technical Staff.

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

I. DESCRIPTION OF EVENT

While in Mode 1 (11% power) on July 30, 1987 at 1200 hours, preparations for the Average Power Range Monitor (APRM) calibration startup test were in progress. As a prerequisite, Startup and Test personnel reviewed the last weekly APRM surveillance procedure and discovered that the flow biased upscale thermal trips and rod block functions had not been tested. This was immediately reported to Operations personnel, who subsequently determined that Technical Specification (TS) operability requirements for the APRMs had not been met prior to entering Mode 1.

The last weekly APRM surveillance procedure was performed on July 28, 1987 while still in Mode 2 (Startup). The approved procedure did not require the functions to be tested. The weekly APRM surveillance procedure had been revised to delete these checks during Test Plateau-Heatup (0-5% power levels). The reason being, these checks were only required in Mode 1. The unit had never entered Mode 1. The Instrument and Controls (I&C) technician adhered to the approved procedure and did not test those functions that were not required. However, the procedure had not been revised for the upcoming mode change. Unaware that these checks had not been performed, the Station Shift Supervisor (SSS) granted permission to enter Mode 1. At 1416 hours on July 29, 1987 at 10% power, the mode switch was placed in "RUN" to enter Mode 1 and commence Test Condition 1 (TC-1) power ascension testing.

Upon discovery that TS requirements for APRM operability in Mode 1 were not met, the SSS declared these functions inoperable. Immediate corrective actions were to manually trip one trip system of the Reactor Protection System (RPS), to reduce power to enter the startup mode within 6 hours, and to insert a rod withdrawal block within 1 hour per Technical Specifications. The startup mode was entered at 1257 hours. Subsequently, the APRM flow-biased upscale thermal trip and rod block functions were tested, and the APRMs were restored to operable status on July 31, 1987.

II. CAUSE OF EVENT

The root cause of the event is management deficiency. The intermediate cause is procedural deficiency. A contributing factor was the initiation of a permanent procedure change instead of a one-time-only change to delete Mode 1 requirements.

This event is the result of a programmatic deficiency. The channel functional checks omitted were not properly tracked by the I & C department to ensure they were reinstated prior to entering Mode 1. Each department was responsible for ensuring that applicable surveillance procedures required for Mode 1 were completed. Had these items been properly tracked, the procedure would have been revised to ensure Mode 1 testing requirements were met. Thus, Technical Specifications would not have been violated.



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A contributing factor to the programmatic deficiency was the initiation of a permanent procedure change, instead of a one-time-only change. Since the weekly surveillance is performed frequently, I & C supervision decided to delete the portion of the procedure required only in Mode 1 as a permanent procedure change. This type of procedure change aided in the inadvertent omission of the required checks.

Procedural deficiency was also identified as a cause of this event for two reasons. First, the portions of the procedure that checked upscale thermal trip and rod block functions could not be performed as written due to power ascension testing constraints. Per Regulatory Guide 1.68, the upscale neutron trips are being set at less than 20% beyond the power of the next level during power ascension testing. The upscale neutron trips had been set at 24% power during heatup and are currently set at 38% while in TC-1. When the upscale neutron trips are set below the upscale thermal trips and rod block, the thermal trips cannot be tested without the use of a jumper and extender card. The procedure was written for upscale neutron trips set at the normal setpoint (118%). Therefore, the procedure had to be revised so that these functions could be tested while in Mode 1 and with upscale neutron trips set below the thermal trips.

Second, the procedure specifically stated that if upscale neutron trips were set below 70%, upscale thermal trips and rod block functions were not required to be checked during Test Plateau-Heatup. No mention was made in the procedure that these functions were required in Mode 1. In addition, this statement was no longer applicable, since the procedure was performed in preparation for TC-1. Therefore, the procedure was deficient and needed to be revised to perform the required checks.

III. ANALYSIS OF EVENT

This event had no adverse safety consequences. The APRM upscale neutron trips were conservatively set at 38% prior to entering Mode 1. Since upscale thermal trips and rod block functions are set above the upscale neutron trip, the upscale neutron trip would occur first to initiate a scram via RPS. Therefore, any abnormal neutron flux increases during power ascension would be terminated by a reactor scram from the APRM system.

Inoperable APRM flow-biased upscale thermal trips and rod block functions while at 100% power operation can compromise reactor safety. The APRM upscale thermal trip indicates reactor power is approaching a thermal safety limit. This trip is automatically adjusted in proportion to total recirculation driving flow (ie. flow-biased) to better approximate heat flux. The flow-biased upscale thermal trip provides a scram signal at less than 113.5% to prevent exceeding thermal safety limits. However, if this trip is inoperable, the upscale neutron trip will scram the reactor at 118% to prevent fuel damage. Thus, the upscale neutron trip will mitigate a serious overpower transient.

The APRM flow-biased upscale thermal trips and rod block functions were considered inoperable from the time the mode switch was placed in "RUN" until the required surveillance checks were satisfactorily completed and approved on July 31, 1987.



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IV. CORRECTIVE ACTIONS

Immediate corrective actions were to manually trip one trip system of RPS, to reduce power to enter the startup mode within 6 hours, and to insert a rod withdrawal block within 1 hour per Technical Specifications. Subsequently, the flow-biased upscale thermal trips and rod block functions were tested, and the APRMs were restored to operable status on July 31, 1987. Further corrective actions are as follows:

1. The weekly APRM surveillance procedure was revised to allow testing of the flow-biased upscale thermal trips and rod block functions when upscale neutron trips are set below the thermal trips.
2. Operations and I & C surveillance procedures required in Mode 1 were reviewed to ensure that all requirements were satisfied prior to returning to Mode 1.
3. A memorandum will be issued to direct department supervisors in ensuring that any procedural changes initiated against surveillance procedures be one-time-only changes, if these changes will delete required checks that vary with plant modes. Estimated date of completion is August 31, 1987.
4. A special list of variable frequency surveillance procedures is being developed to aid departments in tracking required surveillances that depend solely on plant conditions. Estimated date of completion is September 30, 1987.
5. A Training Modification Recommendation has been initiated for the Technical Staff Training Department to review the information in this LER with all Technical Staff. The importance of properly tracking Technical Specification required surveillances that vary with plant conditions will be emphasized to prevent future Technical Specification violations.

V. ADDITIONAL INFORMATION

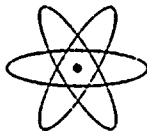
A. Components referred to in this LER

Component	IEEE 803 EIIIS Funct	IEEE 805 System ID
Reactor Protection System (RPS)	N/A	JC
Average Power Range Monitor (APRM)	N/A	IG
Upscale Thermal/Neutron Trip	N/A	JC
Rod Block	N/A	JD

B. Previous Similar Events - None

C. Failed Components - None





NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

301 PLAINFIELD ROAD
SYRACUSE, NY 13212

THOMAS E. LEMPGES
VICE PRESIDENT—NUCLEAR GENERATION

August 26, 1987

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

RE: Docket No. 50-410
LER 87-46

Gentlemen:

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

LER 87-46 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."

A 10 CFR 50.72 report was made at 1227 hours on July 30, 1987.

This report was completed in the format designated in NUREG-1022,
Supplement No. 2, dated September 1985.

Very truly yours,

Thomas E. Lempges
Vice President
Nuclear Generation

TEL/PB/mjd

Attachments

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

IE22
1/1

