REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8709100220 DOC. DATE: 87/09/04 NOTARIZED: NO DOCKET #
FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH. NAME AUTHOR AFFILIATION
LEMPGES, T. E. Niagara Mohawk Power Corp.
RECIP. NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Responds to violations noted in Insp Rept 50-410/87-16. Corrective actions: station shift supervisors & assistants directed by 870605 memo to perform valve manipulations via temporary changes to Tech Specs.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES: 21 05000410

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD1-1 PD	1	1	HAUGHEY, M	2	2
	BENEDICT, B	2	2			
INTERNAL:	ACRS	2	2	AEOD	1	1
	DEDRO	1	1	NRR MORISSEAU, D	1	1
	NRR/DOEA DIR	1	1	NRR/DREP/EPB	1	1
	NRR/DREP/RPB	2	2	NRR/DRIS DIR	1	1
	NRR/PMAS/ILRB	1	1	OE LIEBERMAN, J	1	1
	OGC/HDS1	1	1	REG FILE	1	1
	RES DEPY GI	1	1	RGN1 FILE 01	1	1
EXTERNAL:	LPDR	1	1	NRC PDR	1	1
	NSIC	1	1			

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 24

NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/301 PLAINFIELD ROAD, SYRACUSE, N.Y. 13212/TELEPHONE (315) 474-1511

September 4, 1987

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

RE: Nine Mile Point - Unit 2
Docket No. 50-410

Gentlemen:

Attached is Niagara Mohawk's response to the Notice of Violation contained in Inspection Report No. 50-410/87-16 dated August 5, 1987.

In the letter transmitting the Notice and Inspection Report, you requested Niagara Mohawk to respond to the weaknesses that were discussed in the Inspection Report. Niagara Mohawk will provide this response by September 11, 1987. The schedule for this response was agreed to by Mr. Johnson of Region I during a phone conversation with our Nuclear Licensing Manager on September 4, 1987.

Very truly yours,
Niagara Mohawk Power Corporation

T. E. Lempges
Vice President
Nuclear Generation

TEL/AZP/jac
(0676G)

cc: Regional Administrator, Region I
Mr. W. A. Cook, Resident Inspector
Mr. R. A. Capra, Project Director

IE01
1/1

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNIT 2

DOCKET NO. 50-410

RESPONSE TO NOTICE OF VIOLATION AS ADDRESSED IN INSPECTION REPORT 50-410/87-16

Violation (87-16-02)

As a result of the inspection conducted on June 1, 1987 to June 12, 1987, and in accordance with NRC Enforcement Policy (10 CFR 2, Appendix C) the following violation was identified:

> 10 CFR 50, Appendix B, Criterion XI "Test Control" requires that "a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures." Technical Specification 6.8 and 10 CFR 50, Appendix B, Criterion V, Procedures, also requires that activities affecting quality be performed in accordance with approved procedures.
>
> Also, 10 CFR 50.59 "Changes, Test and Experiments" required that "the licensee shall maintain records of tests and experiments not described in the Safety Analysis Report. These records must include a written safety evaluation which provides the basis for the determination that the test or experiment does not involve an unreviewed safety question."
>
> Contrary to the above, on May 25, 1987 and again on May 30, 1987, the licensee operated the Feedwater System in a manner not authorized by a procedure (on one loop) and performed a test to determine the effect of isolation of a single feedwater line on feedwater temperature stratification. This test is not described in the Safety Analysis Report and was performed without a written procedure and without the performance of a written safety evaluation to determine that an unreviewed safety operation did not exist.

RESPONSE

Niagara Mohawk operators, on two occasions as stated, did manipulate the Feedwater System blocking valves (MOV-21A and MOV-21B). This was performed to alleviate an adverse condition affecting the Feedwater System. This adverse condition was thermal stratification of the feedwater lines, which results in increased stress to the piping system. Niagara Mohawk agrees that a Regulatory requirement was violated during the second event. The following paragraphs provide additional detail regarding these events.

During the Midnight to 8 AM shift on May 25, 1987, with reactor temperature at approximately 260°F and reactor power less than 1%, the Station Shift Supervisor was notified that a potentially high stress condition was occurring on the "B" feedwater line. This condition was determined to be the result of thermal stratification of the feedwater lines, which was known to be caused by either a very low flow rate of cold feedwater flowing on the bottom of a large hot feedwater line, or back flow of hot fluid returning from the cleanup system stratifying on the top of a cold feedwater line, or a combination of the two. This condition resulted in increased pipe stress as well as support stresses. The Station Shift Supervisor took action to alleviate the increased stresses by eliminating the stratification.

The Station Shift Supervisor determined that feedwater flow existed in only one of the two lines and that there was insufficient flow to open the check valve (2FWS-104B) at the containment boundary in the second line. The valve was not considered to be inoperable, but merely closed, because it experienced slightly less or requires slightly more differential pressure than the other line to open. Therefore the remedy was to close the blocking valve (2FWS-MOV21A) in the "A" feedwater line, which forced the flow to open the "B" check valve. This induced mixing of the hot and cold fluids and alleviated the thermal stratification, and hence, the stresses.

In addition to the action the Operator had taken, he considered the following:

1) Isolate the cleanup system. The Cleanup System was being used to reject reactor water to the condenser for level control, and to provide a steady flow to the reactor to minimize thermal cycling of the feedwater nozzles. The reject flow also allowed a greater feedwater flow which minimized the duty on the feedwater nozzles and also aided in alleviating thermal stratification. Therefore it was desirable to leave cleanup in service, as per normal operation procedure.

2) Isolate the Cleanup System return to the reactor vessel and reject full cleanup system flow to the condenser. There was no procedure to operate in this mode, and this was felt to cause an increase in the thermal duty on the feedwater nozzles. At this time Operations considered this to be an undesirable alternative. (Note that this was the method ultimately used after the appropriate procedure changes and 10CFR50.59 evaluations were performed as thermal stratification worsened with increasing reactor temperature.)

3) Shutdown the plant. The action of placing the plant in shutdown and cooldown would not have quickly eliminated the stresses. The Station Shift Supervisor desired to resolve the problem as expeditiously as possible, and held this option in reserve.

Therefore, closing the feedwater blocking valve long enough to open the opposite line's check valve, reduce the stratification, and then return the system to normal alignment was the best option. This event was considered to be a one time only operating anomaly.

Niagara Mohawk considers the action of manipulating valves within the feedwater system, to alleviate an adverse condition that was being experienced, to be a controlled operation within the capabilities and authority of the Station Shift Supervisor, and not an unauthorized experiment. This conclusion is based on the fact that the operator took standard, "within the skills of the trade", steps to open a check valve that was closed, and then returned the system to its normal configuration.

Five days later, during the 4 PM to midnight shift on May 30, 1987, with the reactor temperature at approximately 360°F and power less than 1%, a near overstress condition on a feedwater line support was brought to the attention of the same Station Shift Supervisor. After consulting with Engineering personnel, including the Lead Structural Engineer, the Station Shift Supervisor decided that this condition was also being caused by thermal stratification that was again being experienced. It was apparent to this group that due to the increased reactor and cleanup return temperatures, the low feedwater flow rates were insufficient to obtain sufficient mixing, and/or prevent back flow stratification, and that some action had to be taken to alleviate the high stress condition. Because of the Station Shift Supervisor's previous observation of the positive effect of sending all the flow through one feedwater line, during the May 25 event, the Station Shift Supervisor, with the concurrence of the Structural Engineering personnel, decided to alternately send flow through one feedwater line by alternately closing the blocking valves. This action was taken such that at no time were both lines isolated at the same time, and this action was successful at maintaining the stratification within acceptable levels and alleviating the condition of the nearly overstressed support.

This event, although very similar to the May 25 event in that the operator manipulated valves within feedwater system to alleviate a high stress condition, is judged by Niagara Mohawk management to have been outside of our administrative procedural controls. The Station Shift Supervisor corrected the condition by changing the valve lineup, without first processing a Temporary Change in accordance with Administrative procedures and Technical Specifications. However, we maintain that this event was not an unauthorized test or experiment. Valves were not manipulated to determine if manipulation would alleviate thermal stratification; observation of the stratification on May 25, prior to manipulating valves, showed that flow through one line minimized thermal stratification in that line. Therefore, the Station Shift Supervisor placed the plant into a condition known to minimize the adverse condition. However, he should have done so by first making a change to the applicable operating procedures.

CORRECTIVE ACTIONS

On June 4, 1987 a safety evaluation was approved which verified that an unreviewed safety question did not exist.

Station Shift Supervisors and Assistants were given direction from the Station Superintendent on June 5, 1987 via a memorandum that operations such as these valve manipulations be performed via temporary changes to approved procedures (made in accordance with technical specifications.).

Operators and Site Engineering personnel will be given direction via memorandum by September 11, 1987 that off normal operating manipulations such as these events may be considered tests or experiments and may require safety evaluations and approved procedures. This will also be included in the Lessons Learned book and Operator Requalification Training.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved by September 11, 1987, by issuance of the directive memoranda. Implementation of the Lessons Learned book will be completed by September 11. Requalification training will be completed by the end of the first requalification cycle following September 11, 1987. A safety evaluation was performed to address the issue of feedwater stratification while operating with one feedwater line in service up to 5% power, on June 4, 1987 (SER #87-073).

(0676G)