ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9401030141 DOC.DATE: 93/12/22 NOTARIZED: YES DOCKET #
FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH.NAME AUTHOR AFFILIATION
TERRY,C.D. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Notifies that improvements to instrument air sys,per Generic Ltr 88-14,as described in 911220 ltr revised based on further evaluation during implementation process. Improvements,revs & status of improvements encl.

DISTRIBUTION CODE: A048D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 8
TITLE: OR/Licensing Submittal: Equipment Qualification

NOTES:

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD1-1 PD		1	0	MENNING,J	1	1
INTERNAL:	ACRS		6	6	NRR/DE/EMEB	1	1
	OC/LFDCB		1	0	OGC/HDS1	1	1
	REG FILE	01	1	1	RES/DSIR/EIB	1	1
EXTERNAL:	NRC PDR		1	1	NSIC	1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 15 ENCL 13

MAY

RIDS/ADDS

RIDS/ADDS

NIAGARA MOHAWK

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

December 22, 1993
NMP2L 1458

U. S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Re: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69
TAC NO. M71686

Gentlemen:

SUBJECT: GENERIC LETTER 88-14, "INSTRUMENT AIR SUPPLY SYSTEM PROBLEMS AFFECTING SAFETY-RELATED EQUIPMENT"

On August 8, 1988, the Nuclear Regulatory Commission issued Generic Letter 88-14, "Instrument Air Supply System Problems Affecting Safety-Related Equipment." The purpose of this generic letter was to request that each plant perform a design and operations verification of the instrument air system.

Niagara Mohawk responded to Generic Letter 88-14 for Nine Mile Point Unit 2 in our letters dated April 1, 1989 (NMP2L 1193) and January 11, 1991 (NMP2L 1276). By letter, dated June 18, 1991, the Staff concluded, based upon our responses, that Niagara Mohawk had fulfilled the requirements of Generic Letter 88-14 for Nine Mile Point Unit 2. Additionally, the Staff requested that it be notified in writing when system improvements have been implemented.

In Niagara Mohawk's letter to the Staff dated December 20, 1991 (NMP2L 1330), Instrument Air Supply System improvements were identified to enhance the reliability of the system. These improvements, as described in our December 20, 1991, letter, have been revised based upon further evaluation which occurred during the implementation process. These improvements, their revisions and status are indicated in the attachment to this letter. None of these improvements are required to assure compliance with design or operational requirements. These improvements will increase Instrument Air System reliability.

Very truly yours,

280143

C. D. Terry
Vice President
Nuclear Engineering

CDT/KWK/ksj
Attachment

pc: Regional Administrator, Region I
Mr. B. S. Norris, Senior Resident Inspector
Mr. R. A. Capra, Director, Project Directorate I-1, NRR
Mr. J. E. Menning, Project Manager, NRR
Records Management

A048
1/1

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Niagara Mohawk Power Corporation	)	Docket No. 50-410
	)	
Nine Mile Point Unit 2	)	

C. D. Terry, being duly sworn, states that he is Vice President, Nuclear Engineering of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and accurate to the best of his knowledge, information, and belief.

C. D. Terry
Vice President
Nuclear Engineering

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 22nd day of December, 1993.

Notary Public in and for
Oswego County, New York

My Commission Expiries:
7-13-95

LEAH ALLEN
State of New York
Oswego County
4892488
Commission Expires 7-13-95

ATTACHMENT

On August 8, 1988, the Nuclear Regulatory Commission issued Generic Letter 88-14, "Instrument Air Supply System Problems Affecting Safety-Related Equipment." The purpose of this generic letter was to request that each plant perform a design and operations verification of the instrument air system.

Niagara Mohawk responded to Generic Letter 88-14 for Nine Mile Point Unit 2 in our letters dated April 1, 1989 (NMP2L 1193) and January 11, 1991 (NMP2L 1276). By letter, dated June 18, 1991, the Staff concluded, based upon our responses, that Niagara Mohawk had fulfilled the requirements of Generic Letter 88-14 for Nine Mile Point Unit 2. Additionally, the Staff requested that it be notified in writing when system improvements have been implemented.

In Niagara Mohawk's letter to the Staff dated December 20, 1991 (NMP2L 1330), Instrument Air Supply System improvements were identified to enhance the reliability of the system. These improvements, as described in our December 20, 1991, letter have been revised based upon further evaluation which occurred during the implementation process. These improvements, their revisions and status are indicated in the attachment to this letter. None of these improvements are required to assure compliance with design or operational requirements. These improvements will increase Instrument Air System (IAS) reliability.

The numbering scheme used below for each item is identical to that used in Niagara Mohawk's letter dated December 20, 1991. For each item, under the subheading entitled "Improvement," the system modification or engineering documentation/procedure revision is indicated as it was presented in our December 20, 1991, letter. In addition, the current status of each item is provided under the subheading entitled "Status."

<u>System Modifications</u>

1. Change aftercooler water supply to Service Water

   <u>Improvement</u>

   The aftercooler cools the air discharged from the air compressor. The aftercooler currently receives cooling water from the reactor building closed loop cooling water system. The modification will change the cooling water supply to the aftercooler from the reactor building closed loop cooling system to the service water system . The service water is usually substantially cooler than the reactor building closed loop cooling water. This change will significantly improve the ability of the aftercooler to remove moisture from the compressed air.

Status

The need for this change was eliminated by the replacement of all three compressors with highly efficient Atlas-Copco rotary screw type compressors. The air temperature at the outlet of the new compressors' aftercooler is about 85 to 90 degrees fahrenheit, which is much lower than the old compressors' aftercooler outlet temperature of 110 to 115 degrees fahrenheit.

2. Modify piping/valve configuration for IAS strainer shutoff valve

Improvement

The periodic manual operation of the IAS drain trap strainer shutoff valve has resulted in damage to associated piping (1/4 " diameter). The piping/valves configuration will be modified to eliminate the potential for future damage.

Status

This change has been implemented. Drain traps were replaced with new automatic drain traps, and the strainer blow down valve configuration has been re-sized for the new traps.

3. Add drains to compressor regulator sensing lines

Improvement

The potential exists for trapping water in the compressor regulator sensing lines. The addition of drains to the sensing lines for the regulator will allow periodic blowdown of these lines to remove any accumulated water.

Status

This change is no longer required due to replacement of the compressors. The new compressors are not incrementally loaded and do not have regulating lines.

4. Add control switch in dryers' fan circuit

Improvement

The second fan for each dryer starts automatically on high pressure. The addition of a control switch will allow operational flexibility by permitting manual starting of the second fan.

Status

This proposed enhancement was determined to be undesirable. After further consultation with the vendor, it was determined that manual operation of the fans could lead to freeze-up. The proper automatic starting and operation of the fans has been verified.

5. Add pressure gauges for the compressor unloaders.

Improvement

The addition of these gauges will facilitate monitoring of the performance of the IAS. This modification has been completed.

Status

Pressure gauges were installed for the old compressors. However, since the new compressors are not incrementally loaded, these pressure gauges are no longer required.

6. Add flow and temperature instrumentation and throttle valve on compressor cooling water supply.

Improvement

The addition of flow and temperature instrumentation for the cooling water supply to the compressors will provide the capability to monitor the cooling water flow to the compressors. The throttle valve and instrumentation will allow regulation of cooling water flow to the compressors.

Status

The flow/temperature instrumentation and the throttle valve are an integral part of the new compressor. No additional changes are required.

7. Add run timer to the compressors.

Improvement

The addition of run time meters for the compressors will allow more meaningful trending of IAS compressor performance.

Status

The new compressors have run time meters for loaded and running hours.

8. Modify intake piping for each compressor and add maintenance platform

Improvement

The modification of the intake piping, which is located on the turbine building roof, for each compressor will eliminate the potential for obstruction of the air supply intake to the compressors during a severe snowstorm. The addition of a maintenance platform for the intake piping addresses personnel safety concerns.

Status

There is no longer a need for a maintenance platform for the intake filters. The air intake filters on the roof have been removed due to the internal filter design of the new compressors. Furthermore, since installation of a platform is no longer needed the potential for obstruction of the intake piping is eliminated.

9. Installation of additional isolation valves in instrument air lines

Improvement

The additional isolation valves will allow isolation of portions of the IAS from the main air supply header. This will allow work to be performed on portions of the IAS while minimizing the impact on the operability of the system. The addition of isolation valves will also facilitate restoration of IAS to partial operability in the event of a piping break or a significant leak in the IAS piping.

Status

This proposed enhancement was further evaluated and deemed unnecessary. Based upon previous work performed on the IAS, it was determined that additional isolation valves were not needed to facilitate work on the IAS. In addition, the existing check valves in the IAS provide adequate automatic isolation of the IAS from system piping failures.

10. Add lift pads, trolleys and beams in compressor area

Improvement

The addition of this equipment will facilitate maintenance on the IAS compressors and the associated system.

Status

The need for this enhancement was eliminated by replacement of the compressors. The new compressors do not require overhead lifting, they are accessible from the side panels, and can be serviced using conventional lifting rigs.

11. Add vacuum gauges to compressor inlet

    Improvement

    The addition of vacuum gauges to the compressor inlet line will allow monitoring of the performance of the inlet filters in the IAS.

    Status

    The new compressors are equipped with vacuum indication for the intake filter.

Engineering Documentation/Procedure Revisions

As stated in our December 20, 1991, letter, three of the five items were completed. They are:

1. Development of a Instrument Air Sampling Procedure

2. Changeout of Filters and

5. IAS check valve testing procedures

As stated in our December 20, 1991, letter, two of the five items were not completed. They are:

3. IAS Engineering Documentation and

4. Revision to Updated Safety Analysis Report (USAR)

These two items and their status are indicated below:

3. IAS Engineering Documentation

    Improvement

    Industry documentation was reviewed against the IAS operating procedure. The review determined no changes were required to the IAS procedure. However, it was concluded that it was desirable to revise the IAS P&ID to provide a higher level of detail. In addition, other IAS related documentation, such as set point data sheets, vendor manuals, electrical drawings, and logic diagrams will be updated, as appropriate.

Status

The IAS P&ID's have been upgraded to provide a tabulated summary of the end users downstream of each root valve. This enhancement was made to provide operators with a quick reference to the instrument air end users. The End Users Reference Lists were developed by Engineering, and walked down by Operations to verify their accuracy with the exception of approximately 2 % of the components located in high radiation areas. The walk downs could not be completed during the third refueling outage as the outage length was shortened due to both aggressive outage planning and work management practices. These end users will be walked down during the fourth refueling outage. The appropriate P&ID revisions will be completed within 60 days after the restart of NMP2 from the fourth refueling outage.

4. Revision to Updated Safety Analysis Report (USAR)

Improvement

The USAR stated that air supplied by the IAS meets or exceeds the particle size requirements of IAS-S7.3 1978 (3 microns or smaller). A review of IAS users indicates that their operability is not adversely affected by particle sizes up to 40 microns. Therefore, Niagara Mohawk believes that the 3 micron particle size requirement for IAS supplied air is unnecessarily restrictive based upon this IAS review. The USAR statement regarding particle size will be evaluated in accordance with 10 CFR 50.59 requirements and any appropriate USAR changes will be made.

Status

A 10 CFR 50.59 evaluation was completed and the USAR was updated to indicate that the maximum allowable particle size is 40 microns. This was done in Revision 5 to the USAR. There were no hardware changes associated with USAR change.