REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8409250343 DOC.DATE: 84/09/14 NOTARIZED: NO DOCKET #
FACIL:50-263 Monticello Nuclear Generating Plant, Northern States 05000263
AUTH.NAME AUTHOR AFFILIATION
MUSOLF,D. Northern States Power Co.
RECIP.NAME RECIPIENT AFFILIATION
Office of Nuclear Reactor Regulation, Director

SUBJECT: Describes implementation of GE recommendations in Info Ltr 402 re vent header cracking, Nitrogen inerting sys design & operation adequate, Insp of nitrogen injection line revealed no low temp-induced defects.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 7
TITLE: OR Submittal: General Distribution

NOTES: 05000263
OL:09/08/70

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR ORB2 BC	01	7	7				
INTERNAL:	ADM/LFMB		1	0	ELD/HDS1		1	0
	NRR/DE/MTEB		1	1	NRR/DL DIR		1	1
	NRR/DL/ORAB		1	0	~~NRR/DSI/~~METB		1	1
	NRR/DSI/RAB		1	1	REG FILE	04	1	1
	RGN3		1	1				
EXTERNAL:	ACRS	09	6	6	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
	NTIS		1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 26 ENCL 23

Northern States Power Company

414 Nicollet Mall
Minneapolis, Minnesota 55401
Telephone (612) 330-5500

September 14, 1984

Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Implementation of Recommendations in General Electric
Service Information Letter No. 402

The purpose of this letter is to provide, for the information of the NRC Staff, a description of actions taken to implement recommendations contained in General Electric Service Information Letter (SIL) No. 402 related to vent header cracking. All applicable recommendations of this SIL will be implemented by Northern States Power Company.

The following actions have been taken, or are planned, with respect to the recommendations in SIL No. 402:

1. Evaluate Inerting System Design

Evaluate the design of the nitrogen inerting system. Investigate the potential for introducing cold (less than 40° F) nitrogen and the orientation of the nitrogen port relative to the vent header, downcomers, or other equipment in the wetwell and drywell which may be in the path of the injected nitrogen. Assure that the temperature monitoring devices, the low temperaure shutoff valve, and overall system design are adequate to prevent the injection of cold nitrogen into the containment.

Status

The orientation of the nitrogen port relative to the vent header downcomers, and other equipment in the wetwell and drywell has been investigated (Figures 1,2,3). We believe existing plant design is adequate in this area.

Evaluation of the temperature monitoring devices, low temperature shutoff valve and the overall system design is underway. This evaulation will be completed and documented prior to plant startup (i.e. prior to inerting system operation).

A001

The nearest structure to the torus nitrogen injection penetration is the torus monorail at a distance of

sixteen inches below the penetration.

The torus catwalk handrail is the next closet structure at a distance of seven feet-four inches. The vent header is a distance of approximately eight feet.

Monticello also has nitrogen injection into the drywell. The attached sketch show the drywell injection port location. The nearest structure to the drywell injection penetration is a drywell fan unit housing. The fan unit housing is located five inches to the side of the nitrogen injection penetration and does not obstruct the flow from the penentration. The drywell fan motor support is the next closest structure to the penetration. This vertical I-beam support is at a distance of approximately one foot from the penetration opening.

2. Evaluate Inerting System Operation

Review the operating experience of the inerting system to assure that the vaporizer, the low temperature shutoff valve and the temperature indicators have functioned properly. Evalulate the plant calibration, maintenance and operating procedures for the inerting system. Assure that cold nitrogen injection would be detected and prevented.

Status

Preliminary investigation and discussions with operations personel has revealed that during early plant operation the inerting system vaporizer discharge line has frozen on several occasions during inerting system operation. Design Change 76M017 was completed in 1976 to correct deficiencies in the vaporizer temperature control. The design change and adherance to the inerting procedure appears to have eliminated this problem.

A complete investigation of plant calibration records, maintenance and operating procedures will be completed and documented prior to plant startup.

3. Test for Drywell/Wetwell Bypass Leakage

Perform a bypass leakage test as soon as convenient to confirm the integrity of the vent system. The test should be conducted during plant operation following normal plant procedures. If no procedures exist, the followng is a general guide for preparing your procedure: pressurize the drywell to approximately 0.75 psi above the wetwell pressure, maintain this drywell pressure and measure the pressure buildup in the wetwell. Any bypass leak area can then be calculated (and is limited by Technical Specifications on many plants) from the wetwell pressure and the

drywell-wetwell pressure difference. This will provide an indicaton that the vent system integrity is intact and that no gross failure exists.

Status

The Monticello Nuclear Generation Plant was in the process of shutting down for a planned refueling/maintenance outage when IE Bulletin 84-01 was telecopied to the plant. Monticello performed a visual inspection of the vent header, downcomers, and other equipment in the containment which could be affected by the injection of cold nitrogen. Because Monticello was in cold shutdown and visual inspection was performed, a bypass leakage test was not necessary.

4. Inspect Nitrogen Injection Line

Conduct an ultrasonic test (UT) as soon as convenient of all accessible welds in the nitrogen injection line from the last isolation valve to the wetwell and drywell penetrations. Also UT the containment penetrations and the containment shell within 6 inches of the penetrations. UT is recommended because cracks would be most likely to initiate on the inside of the pipe or on the side of the metal in contact with cold nitrogen.

Status

Ultrasonic inspection of all welds in the nitrogen injection line from the last isolation valve to the wetwell and drywell penetrations, including a 6-inch diameter around the penetrations, was performed. No signs or indications of low temperature induced defects were found. However, two non-related indications were found. One appears to be a pipe manufacturing defect on a 6-inch combustible gas control system (CGCS) return line. This piping is being replaced prior to plant startup. The other defect is in the drywell purge penetration (X-26) weld. The defect appears to be lack of fusion on the initial root pass. This defect is currently being analyzed to determine required actions. In addition to the recommendation UT examination, a visual inspection of all accessible welds and piping of the inerting system was conduted. No signs or indications of any low temperature induced defects were found.

5. Inspect Containment

During the next planned outuage, perform a visual inspection of the vent header, downcomer and other equipment in the containment which might be expected to be affected by the injection of cold nitrogen. The vent header should be inspected on the outside and the inside. Also inspect the containment shell or steel liner for at least 6 inches

around the nitrogen penetration.

Status

As stated in recommendation 3 status, a visual inspection of the vent header, downcomers, and all other equipment in the containment which might be affected by the injection of cold nitrogen was conducted. No indication of cracking was found.

Please contact us if you have any questions related to the actions we have taken in response to this issue.

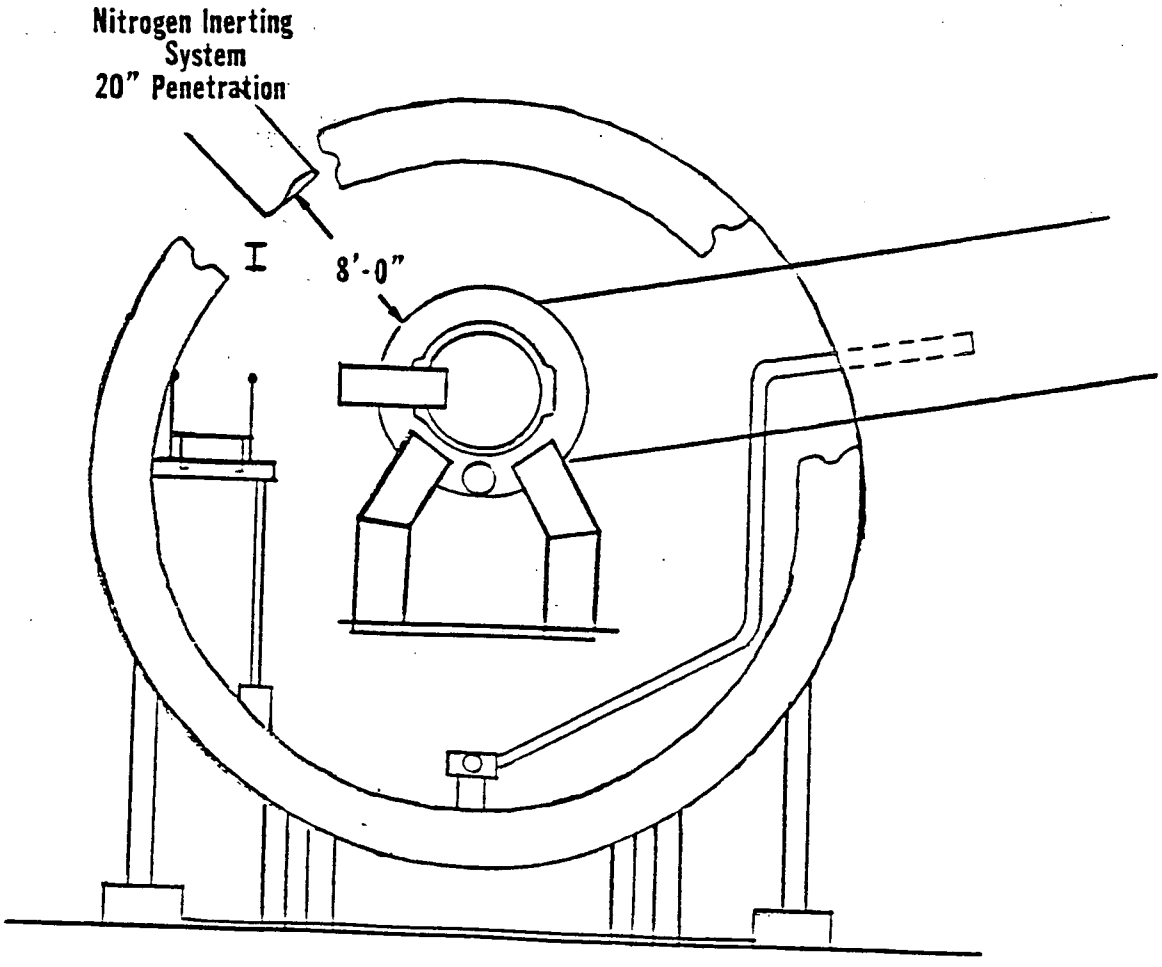
David Musolf
Manager - Nuclear Support Services

DMM/le

cc: J G Keppler
G Charnoff
NRR Project Manager, NRC
NRC Resident Inspector

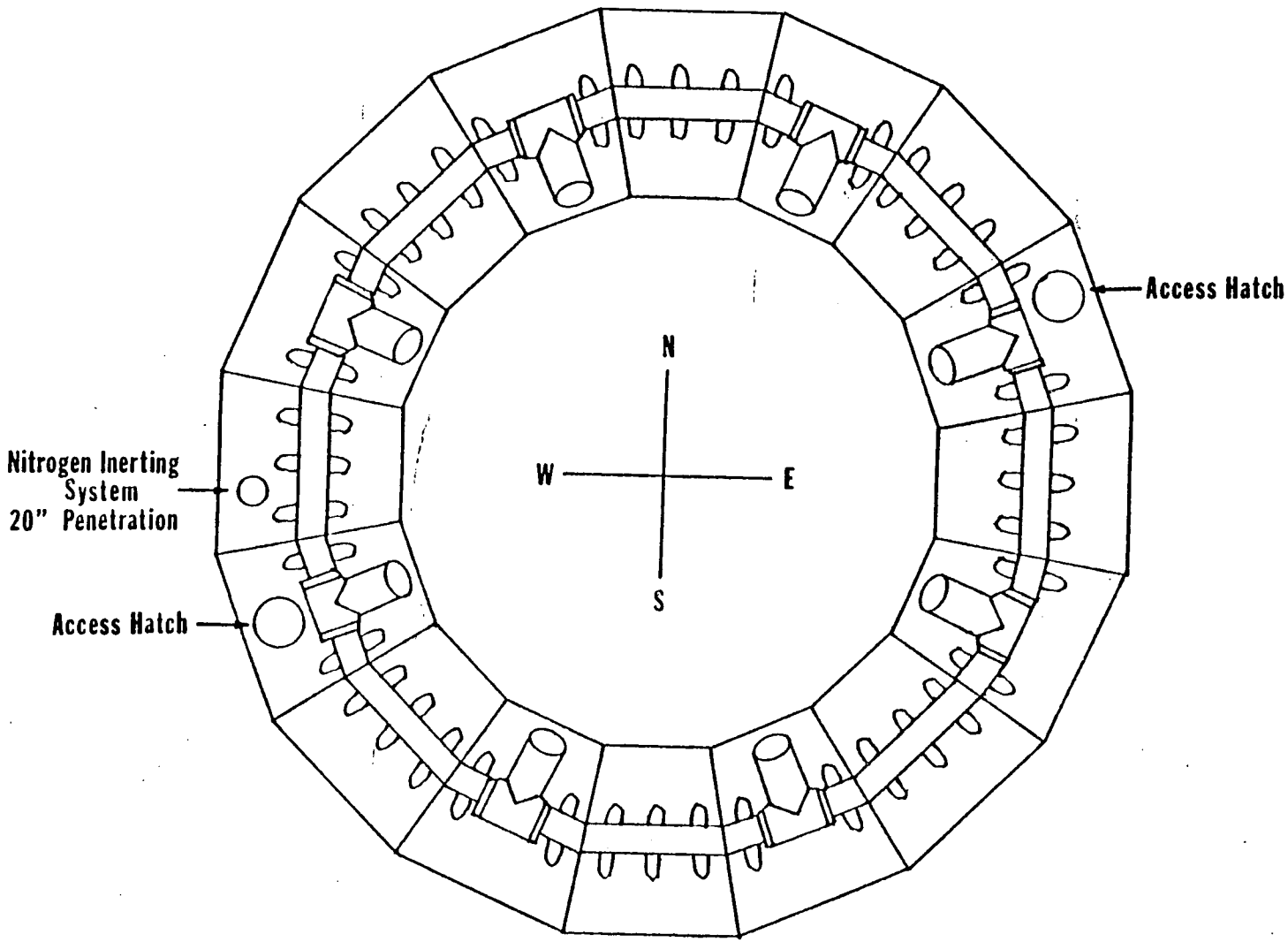
Attachment

Director of NRR
September 14, 1984
Figure 1



MONTICELLO

Director of NRR
September 14, 1984
Figure 2



MONTICELLO

MONTICELLO

Director of NRR
September 14, 1984
Figure 3