

# NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

August 24, 1979

Mr. James G. Keppler  
Director - Region III  
Office of Inspection and Enforcement  
United States Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
Dockets No. 50-282 and No. 50-306

The following is submitted in response to IE Bulletin 79-17:

- 1(a). Extent and dates of hydrotests and visual examinations (plant personnel) --

Hydrostatic testing of Safety Injection, Residual Heat Removal, and Containment Spray Systems in accordance with ASME Code Section XI Rules (1974 Edition) was performed on Unit 1 systems during refueling outage in April, 1977, and performed on Unit 2 systems during refueling outage in November, 1977.

Extent and dates of volumetric examinations --

The first portion of this response identifies those systems and welds that were examined specifically as a result of the recommendations of IE Circular 76-06.

## Unit 1

Ultrasonic examinations were performed on the following systems during the April, 1977, outage:

<u>System</u>	<u>Line No</u>	<u>Weld No</u>
RHR Suction	12-SI-34A 12-SI-34B	15 and 16 5 and 6
Safety Injection	8-SI-18	80, 234, 235, 88, 86W, 243, 92, and 54

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<u>System</u>	<u>Line No</u>	<u>Weld No</u>
Containment Spray	8-CS-5	220W, 217, 114, 115W, and 118W
RHR Discharge	6-RH-12	6 and 7

## Unit 2

Ultrasonic examinations were performed on the following systems during the November, 1976, outage:

<u>System</u>	<u>Line No</u>	<u>Weld No</u>
Safety Injection	8-2SI-18	34, 32, 33, 85, 27R, 26, 29W, 22, 18, 278, 275, and 83

In addition to the above examinations, approximately 15 to 20 percent of the circumferential butt welds on ASME Class 1 systems have been completed to date for Prairie Island Unit 1, and approximately 10 percent has been completed for Unit 2 with 15 to 20 percent expected to be completed after the next refueling outage.

## Description of NDE Procedure --

### Units 1 and 2

The NDE procedure used for the above ultrasonic examinations was written to the ASME Section XI 1971 Edition through and including the Winter, 1971, Addenda. The same procedure was used for the examination performed on Unit 1 and Unit 2. Calibration blocks were of the same material specification and size as the piping being examined and used 10 percent flat bottom notches as calibration reflectors.

## NDE Procedure Qualification --

### Units 1 and 2

The NDE procedure was qualified, as identified in the NDE contractor's project plan, in accordance with the contractor's quality assurance program. The quality assurance program identifies that procedures that have been approved and demonstrated and that have produced satisfactory results are considered qualified.

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## Acceptance Criteria --

### Units 1 and 2

Evaluation of indications was performed in accordance with the terms of ASME Section XI, Paragraph IS-311, 1971 Edition, through and including the Winter, 1971, Addenda. The procedure required that any ultrasonic reflector producing a response 50 percent or greater of the reference level be recorded and any indication that produced a response 20 percent or greater of the reference level and that was suspected by the operator to be other than geometrical in nature to be investigated to the extent necessary to determine the shape, identity, and location of the reflector.

## Sampling Plan --

### Unit 1

The sampling plan consisted of examining those areas, of the systems identified above, considered to be potential high stress areas. This included pipe to valve, pipe to elbow, pipe to tee, and valve to elbow welds.

### Unit 2

The sampling plan consisted of examining the supply piping to the safety injection pumps in areas of potential high stress including piping and welds between rigid restraints, piping subjected to increased weight due to the elevation considerations between the boric acid storage tank and the safety injection pumps where the possibility existed for difficult weld fit-ups during construction phases including field welds and, finally, where transition changes in pipe schedule or weld thicknesses existed. This included pipe to tee, pipe to valve, valve to tee, valve to elbow, and pipe to elbow configurations.

## Examination Results --

During the ultrasonic examinations of Prairie Island Units 1 and 2, no recordable indications were observed.

## Corrective Actions --

There was no indication of degradation to these systems and no corrective action was required.

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- 1(b). Water chemistry controls on the boric acid storage tanks at Prairie Island through April, 1977, consisted of boron measurements only. After that date, chlorides were measured with a minimum sensitivity of 0.2 ppm and fluorides were measured with a minimum sensitivity of 0.4 ppm each time the tank was sampled for boron. A review of plant records through August 16, 1979, revealed less than halogen values except for one instance. During the period June 22, 1977, to June 28, 1977, 121 boric acid storage tank was at a value of 0.8 ppm chloride. The tank was drained and flushed and returned to a <0.2 ppm chloride level on June 28, 1977. All chemistry determinations on boric acid storage tanks are made at least twice weekly.

Refueling water storage tanks were analyzed for chloride, fluoride, and boron weekly through October, 1976. From November, 1976, through April, 1978, the analyses included pH, chloride, fluoride, and boron on a weekly basis. After May, 1978, the tanks were analyzed for boron, chloride, and fluoride weekly. The minimum sensitivity for chloride was 0.05 ppm and for fluoride was 0.1 ppm. The plant records examined through August 16, 1979, showed no detectable halogens.

Accumulators were examined for boron concentration through March, 1977. After this date, chloride, fluoride, and boron were determined on the same monthly basis. The minimum sensitivity is 0.05 ppm for chloride and 0.10 ppm for fluoride. Plant records were examined through August 16, 1979, and no instance of detectable levels was found with regard to chloride and fluoride.

In the case of all three of these specific tanks, no oxygen analysis was done on a routine basis. Any chloride or fluoride level above the minimum detection limit would be considered an out-of-specification value.

1(c). Units 1 and 2

Preservice examinations, both ultrasonic and visual, were performed on ASME Class 1 systems; this includes the ASME Class 1 portions of the systems identified by Item 1. The examinations were performed in accordance with the 1971 Edition of ASME Section XI including the Summer, 1971, Addenda.

Yours very truly,

*GE Roberts for L. J. Wachter*

L. J. Wachter  
Vice President - Power Production  
and System Operation

cc: Mr. G. Charnoff

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