

NSP

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

Red Wing, Minnesota

UNITS 1 AND 2



INSERVICE INSPECTION-EXAMINATION SUMMARY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 2

December 3 to December 15, 1979

IE BULLETIN No. 79-17 and ASME CLASS 2 EXAMINATIONS
Inspection Period 2

POOR ORIGINAL

NORTHERN STATES POWER COMPANY
MINNEAPOLIS, MINNESOTA

1762 137

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT II

INSERVICE INSPECTION-EXAMINATION SUMMARY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT II
December 3 to December 15, 1979

IE BULLETIN No. 79-17 and ASME CLASS 2 EXAMINATIONS
Inspection Period 2

Report Date:
December 20, 1979

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Commercial Service Date:
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1762 138

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT II
INSERVICE INSPECTION-EXAMINATION SUMMARY

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INSERVICE INSPECTION-EXAMINATION SUMMARY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT II
December 3 to December 15, 1979

1.0 INTRODUCTION

This report summarized the inservice inspection examinations that were performed at Prairie Island Nuclear Generating Plant - Unit II. The examinations were performed with the Unit in operation during the period from December 3 to December 15, 1979. This was the second inservice inspection conducted in inspection period two and was performed to satisfy the examination requirements of IE Bulletin No. 79-17, Revision 1, entitled "PIPE CRACKS IN STAGNANT BORATED WATER SYSTEMS AT PWR PLANTS," dated October 29, 1979. Prairie Island - Unit II began commercial operation on December 21, 1974.

The examinations were performed on circumferential pipe welds in systems or portions of systems that were identified as containing stagnant oxygenated borated water. In addition, examinations were performed on integrally-welded supports and support components of ASME Class 2 systems.

Northern States Power Company contracted Lambert, MacGill, Thomas, Inc. to perform the examinations. Hartford Steam Boiler Inspection and Insurance Company, representing ANI, provided the Authorized Inspection.

2.0 DISCUSSION OF EXAMINATION PLAN

2.1 Inspection Boundary

The examination plan focused on piping circumferential butt welds of safety-related stainless-steel piping systems that were identified as containing stagnant oxygenated borated water. This included the Safety Injection, Residual Heat Removal, Containment Spray, Chemical and Volume Control, and Caustic Addition Systems. In addition, examinations were performed on integrally-welded supports and support components of ASME Class 2 systems that were located in the same areas as the piping examinations.

The examination plan was based on the sampling scheme identified in IE Bulletin No. 79-17, Revision 1. This scheme approached selection of welds to be examined on the following basis:

- 1st - Pipe Material Chemistry--The first consideration was to examine those welds in austenitic stainless-steel piping (Types 304 and 316) having 0.05 to 0.08 wt.% carbon content.
- 2nd - Pipe Size and Thickness--The second consideration was to select an unbiased mixture of pipe diameters and actual wall thicknesses distributed among both horizontal and vertical piping runs.
- 3rd - System Importance--The third consideration was to focus the examinations primarily on those systems required to function in the emergency core cooling mode and secondly, on the containment spray system.

A table was formulated to aid in selecting the appropriate welds based on the above criteria. This table identified the system, line number, size and thickness of the piping, and the total number of welds.

All available material test reports for those systems, or portions of systems, identified for Prairie Island - Unit II were reviewed to determine both the carbon content of the piping and fittings, and also if the material was in the solution annealed condition. Three columns were added to the table that identified the number of welds that joined the following combination of material properties:

- 1) >.05% C and not solution annealed-to- >.05% C and not solution annealed.
- 2) >.05% C and not solution annealed-to- >.05% C and solution annealed.
- 3) >.05% C and solution annealed-to- >.05% C and solution annealed.

This information was also color-coded on a set of isometric drawings.

Using the information identified on the table and the color-coded isometric drawings, the remaining two considerations, Pipe Size and Thickness and System Importance, were used to identify the welds to be examined. There was a total of 577 circumferential butt welds in the systems identified; of these, 80 welds, or approximately 13.8%, were examined.

A number of the above welds were previously scheduled for examination in accordance with the program submitted to the United States Regulatory Commission February 1, 1978 entitled "ASME Code Section XI Inservice Inspection and Testing Program and Information Required for NRC Review of Requests for Relief from ASME Code Section XI Requirements." This examination plan was based on the examination requirements of the ASME Boiler and Pressure Vessel Code Section XI, 1974 Edition through and including the Summer 1975 Addenda, and complies with Prairie Island's Technical Specification, Section TS.4.2.

The components examined, examination methods, and the examination report number are summarized in the tables of the attached appendices as follows:

Appendix A - ASME Class 1--Examination
- No Examinations Scheduled

Appendix B - ASME Class 2--Examination

Tables S2.2.1, S2.2.5 and S2.2.6--Identifies the examinations performed on systems and portions of systems that are included in the Inservice Inspection Program. The examinations are identified by report numbers beginning with "79-".

Table II--Identifies all examinations performed during this inservice inspection, along with any indications and limitations to the examination.

Appendix C - FSAR Augmented Examinations
- No Examinations Scheduled

Appendix D - Seismic Bolting and Supports Augmented Examination
- No Examinations Scheduled

2.2 Examination Methods

Ultrasonic examination methods and techniques were used to perform the volumetric examinations. The ultrasonic test systems consisted of an ultrasonic digital analog tester and a two-channel strip chart recorder. One channel of the recorder was calibrated to reflect ultrasonic screen height (amplitude) and the second channel was calibrated to indicate metal path (range) to the reflector. This approach gives a permanent record of the examinations and allows further evaluation of any indications by the contractors Level III and Northern States Power Company.

Transducers used for the majority of the examinations were 1/4" x 1/4" in size and 2.25 or 3.5 MHZ. They were mounted on pitch-catch type, 45-degree wedges that were "focused" for the thin wall piping being examined. A 1-1/2 V metal path was used for all piping with a wall thickness of .250" or greater, and a 2-1/2 V metal path was used for less than .250" wall thickness.

Liquid penetrant examination methods were used to perform the surface examinations. All of these examinations were performed using color contrast solvent removable materials.

All visual examinations were aided when necessary with artificial lighting and verified for adequacy with an 18% neutral grey card with a 1/32-inch black line.

2.3 Examination Procedures

The ultrasonic examination procedure for pipe welds complied with the requirements of Appendix III of ASME Section XI that was issued in the Winter 1975 Addenda. A field change was issued to this procedure to require a 2-1/2 V metal path examination of all piping circumferential butt welds with less than .250" wall thickness. All the other examination procedures used complied with the requirements of the 1974 Edition through and including the Summer 1975 Addenda of ASME Section XI. A listing of the procedures used for the examinations is shown in Table III of Appendix E.

2.4 Equipment and Materials

All equipment and expendable materials used in the examination are listed by either serial number or type along with their respective calibration date or batch number in Table IV of Appendix E.

The ultrasonic calibration standards used in the examination are listed in Table II of Appendix E. These standards are owned and maintained by Northern States Power Company at the plant site.

2.5 Personnel

Northern States Power Company contracted Lambert, MacGill, Thomas, Inc. to perform the examinations. Hartford Steam Boiler Inspection and Insurance Company, representing ANI, provided the Authorized Inspection.

All personnel involved in the performance or evaluation of examinations are listed along with their title, organization, and ASNT Level of certification in Table I of Appendix E.

Certifications for examination personnel are maintained on file by Northern States Power Company.

2.6 Evaluation

Any indications disclosed in the examinations were evaluated by the examiner at that time, in accordance with the rules of the procedure and ASME Section XI.

The ultrasonic examiner was aided in his evaluation by a calibration performed on a calibration standard before each day's examination, checked before and after each individual examination and at intervals not exceeding four (4) hours. In addition, all ultrasonic data was recorded on two channel strip charts which were made a part of the inspection report and permitted further evaluation.

2.7 Examination Reports and Documentation

All examination reports and documentation are maintained on file by Northern States Power Company. Tables S2.2.1, S2.2.5 and S2.2.6 of Appendix B identifies the examinations performed on those systems or portions of systems that are included in the Inservice Inspection Program. These tables also summarize all the examinations that have been performed to date and identifies the amount that will be examined in the future to complete the ten-year examination requirements. For retrieval purposes, the prefix of the inspection report number corresponds with the year that the inspection was performed. The examination reports for this inservice inspection are prefixed with "79-".

Table II of Appendix B identifies all the examinations, both ISI and Non-ISI systems, that were performed. This table identifies the results obtained during this examination and any limitations to the examinations. Table III of Appendix B identifies the isometric drawings that were used for the examinations. The personnel, ultrasonic calibration blocks, procedures, equipment and materials that were used for the inspection are identified in the tables of Appendix E. Appendix F contains the Form NIS-1 entitled "Owner's Data Report for Inservice Inspections."

3.0 SUMMARY OF RESULTS

The results of these examinations indicated that the integrity of these systems were maintained. There was no indication of intergranular stress corrosion cracking in any of the areas examined. The visual examinations revealed two loose nuts on Safety Injection Pump 22 Suction Hanger No. SIH-30/A. The Liquid Penetrant examinations revealed a 9/16" linear indication (coldlap) on Residual Heat Removal Pump B Suction Hanger No. RHRH-59/E. In addition, two of the integrally-welded hangers were noted to have a weld surface condition that would not enable an acceptable liquid penetrant examination. The only indications revealed by ultrasonic examinations were geometrical reflectors.

All indications disclosed during the examinations were resolved. The loose nuts on hanger SIH-30/A were tightened and the 9/16" linear indication was removed by light hand blending. The welds with a rough surface on hangers SIH-19/D and RHRH-26/J were ground smooth. All indications were corrected and the areas were re-examined with the same method that located them.

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APPENDIX A

ASME CLASS 1 - EXAMINATION

- No Examinations Scheduled This Outage -

APPENDIX B

ASME CLASS 2 - EXAMINATION

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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1
PAGE 1 OF 5
MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER.	REQ'D. AMT.	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
C2.1	C-G	<u>CIRCUMFERENTIAL BUTT WELDS</u>					
		MAIN STEAM A					
		32-2MS-1	-	-	-		
		MAIN STEAM B					
		32-2MS-2	-	-	-		
		MAIN STEAM A					
		30-2MS-1	TWO	1	-		
		MAIN STEAM B	THREE	1	-		
		30-2MS-2	-	-	-		
		MAIN STEAM A					
		31-2MS-1	ONE	1	1	MS-17	77-101,31
		MAIN STEAM B	TWO	1	-		
		31-2MS-2	-	-	-		
		MAIN STEAM A					
		RELIEF HDR., 30-2MS-1	ONE	1	1	MS-188	77-99,15
		MAIN STEAM B					
		RELIEF HDR., 30-2MS-2	-	-	-		
		MAIN STEAM A					
		6-2MS-1	-	-	-		
		MAIN STEAM B					
		6-2MS-2	ONE	1	1	MS-113	77-96,37
1762 147		FEEDWATER A					
		16-2FW-13	ONE	1	1	FW-161	77-45,55
		16-2FW-12	-	-	-		
		16-2FW-11	-	-	-		
		FEEDWATER B					
		16-2FW-16	-	-	-		
		16-2FW-15	ONE	1	1	FW-116	77-97,3

FORM 17-2476

FORM NO. ISI-1001

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TABLE S2.2.1
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MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP PER.	REQ'D AMT	AMT EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO
1762 148	C-G	(CONT'D)					
		FEEDWATER A					
		(8 in) 3-2AF-11	-	-	-		
		FEEDWATER B					
		(8 in) 3-2AF-12	-	-	-		
		REFUELING WATER STORAGE TANK DISCHARGE					
		14-2S1-1	TWO	1	1	W-58 (Pt only)	79-41
		12-2S1-3A	TWO	1	1	W-60	79-83
		12-2S1-3B	-	-	-		
		12-2S-11	-	-	-		
		12-2S1-4	THREE	1	-		
		10-2S1-8	TWO	1	1	W-68W	79-84
		STREAM 1	THREE	1	-		
		STREAM 2	TWO	2	2	W-88,289	79-77, 76
		CONTAINMENT SUMP B DISCHARGE LINES					
		14-2S1-33A	-	-	-		
		14-2S1-33B	-	-	-		
		12-2S1-34A	TWO	1	1	W-17	79-25
		12-2S1-34B	TWO	1	1	W-5	79-26
		12-2RH-6A	-	-	-		
		12-2RH-6B	-	-	-		

NORTHERN STATES POWER CO.
 PRAIRIE ISLAND UNIT 2
 INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1
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 MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER	REQ'D. AMT.	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
C2.1	C-G	(CONT'D)					
		SAFETY INJECTION PUMP NO. 21 SUCTION 6-2RH-10A BRANCH 1	TWO	5	5	W-285, 93, 161, 96 95 96	79-59, 78, 79, 82, 80
		BRANCH 2	THREE	1	-		
		SAFETY INJECTION PUMP NO. 22 SUCTION 6-2RH-10B BRANCH 1	TWO	2	2	W-286, 135	79-57, 81
		BRANCH 2	THREE	1	-		
		RESIDUAL HEAT REMOVAL DISCHARGE 8-2RH-9A	TWO	1	1	W-68	79-67
		8-2RH-9B	THREE	1	-		
			TWO	1	1	W-53	79-65
		8-2RH-7A	-	-	-		
		8-2RH-7B	TWO	1	1	W-201	79-63
		BORIC ACID SUPPLY TO SAFETY INJECTION 6-2S1-13A	TWO	1	1	W-272R	79-53
			THREE	1	-		
		6-2S1-13B	TWO	1	1	W-271	79-52
		8-2S1-17	-	-	-		
		8-2S1-18	THREE	1	-		
			TWO	1	1	W-85	79-94
		RESIDUAL HEAT REMOVAL SUCTION 10-2S1-9A	TWO	1	1	W-212	79-54
		10-2S1-9B	TWO	1	1	W-143	79-55

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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1
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MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER	REQ'D. AMT	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
1762 150	C2.1	C-G (CONT'D) ACCUMULATOR DISCHARGE LINES 12-2S1-28A 12-2S1-28B 12-2S1-29A 12-2S1-29B	-	-	-		
			-	-	-		
			-	-	-		
			ONE	1	1	S1-316	77-49
	C2.1	C-F RESIDUAL HEAT REMOVAL DISCHARGE 10-2RH-11 6-2RH-12 6-2S1-10B RESIDUAL HEAT REMOVAL SUCTION 12-2RH-5A 12-2RH-5B 8-2RH-4A 8-2RH-4B 10-2RH-3 8-2RH-5A 8-2RH-5B	ONE	1	1	RH-294	77-33
			TWO	1	1	W-176	79-30
			THREE	1	-		
			TWO	1	-		
			THREE	1	-		
			TWO	1	1	W-105	79-27
			TWO	1	1	W-142	79-47,50
			TWO	1	1	W-100	79-68
			THREE	1	-		
			ONE	2	2	RH-255, RH-256	77-50,51
			TWO	2	2	W-225, 226	79-28,29
			THREE	2	-		
			TWO	1	1	W-104	79-69
			TWO	1	1	W-138	79-64

FORM 17-2475

FORM NO. ISI-1001

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT 2

INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

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MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER	REQ'D AMT.	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
C2.1	C-F	(CONT'D)					
		REACTOR VESSEL SAFETY INJECTION 6-2S1-25A	ONE TWO THREE	1 1 1	1 - -	S1-332	77-52
		6-2S1-25B	ONE	1	1	S1-26	77-46A

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PP9-B-15

NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.5
PAGE 1 OF 3
MAJOR ITEM: PIPING-INTEGRALLY WELDED SUPPORTS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP PER	REQ'D AMT	AMT EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
1762 152	C-E-1	<u>INTEGRALLY WELDED SUPPORTS</u>					
		MAIN STEAM A	TWO	2	-		
		30-2MS-1	THREE	2	-		
		MAIN STEAM B	ONE	1	1	I	77-147
		30-2MS-2	TWO	2	-		
			THREE	2	-		
		MAIN STEAM A	ONE	3	3	J,K,M	77-154,140
		31-2MS-1	TWO	1	-		
		MAIN STEAM B					
		31-2MS-2	THREE	2	-		
		MAIN STEAM A					
		30-2MS-1 (R-HDR)	THREE	1	-		
		MAINSTEAM B					
		30-2MS-2 (R-HDR)	-	-	-		
		MAIN STEAM A					
		6-2MS-1	-	-	-		
		MAIN STEAM B					
		6-2MS-2	ONE	1	1	P	77-103
		FEEDWATER A					
		16-2FW-13	ONE	1	1	K	77-105
		16-2FW-12	TWO	2	-		
		16-2FW-11	THREE	3	-		
		FEEDWATER B					
		16-2FW-16	ONE	2	2	G,H	77-104,148
		16-2FW-15	TWO	1	-		
			THREE	1	-		
		REFUELING WATER STORAGE TANK DISCHARGE					
		12-2S1-4	TWO	1	1	C	79-42,34

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TABLE S2.2.5
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MAJOR ITEM: PIPING-INTEGRALLY WELDED SUPPORTS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER.	REQ'D AMT	AMT EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO
C2.5	C-E-1	(CONT'D)					
		CONTAINMENT SUMP B DISCHARGE LINES 12-2S1-33A 12-2S1-33B	- -	- -	- -		
		SAFETY INJECTION PUMP NO. 21 SUCTION BRANCH 1 6-2RH-10A	ONE	1	1	B	77-119
		BRANCH 2 6-2RH-10A	ONE	1	1	G	77-119
		SAFETY INJECTION PUMP NO. 22 SUCTION BRANCH 1 6-2RH-10B	TWO	1	1	D	79-35,38,38R
		BRANCH 2 6-2RH-10B	THREE	1	-		
		RESIDUAL HEAT REMOVAL SUCTION PUMP A 8-2RH-4A	TWO	1	1	A	79-19,44
		RESIDUAL HEAT REMOVAL DISCHARGE PUMP B 8-2RH-9B	-	-	-		
		RESIDUAL HEAT REMOVAL DISCHARGE PUMP A 10-2RH-11	ONE THREE	1 1	1 -	L	77-115
		RESIDUAL HEAT REMOVAL DISCHARGE PUMP B 6-2S1-10B	-	-	-	-NONE-	

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PRAIRIE ISLAND UNIT 2

INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.6

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PIPING-NON WELDED SUPPORTS

MAJOR ITEM:

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER.	REQ'D AMT.	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
C2.6	C-E-2	<u>SUPPORT COMPONENTS</u>					
		MAIN STEAM A 31-2MS-1	TWO	1	-		
		MAIN STEAM B 31-2MS-2	THREE	1	-		
		MAIN STEAM A 30-2MS-1	TWO	1	-		
		MAIN STEAM B 30-2MS-2	THREE	1	-		
		MAIN STEAM A RELIEF HDR., 30-2MS-1	ONE	1	1	O	77-140
		MAIN STEAM B RELIEF HDR., 30-2MS-2	TWO	1	-		
		FEEDWATER A 16-2FW-13	TWO THREE	1 1	- -		
		REFUELING WATER STORAGE TANK DISCHARGE 12-2S1-4	TWO	1	1	B	79-45

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TABLE S2.2.6
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MAJOR ITEM: PIPING-NON WELDED SUPPORTS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER	REQ'D AMT	AMT EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
1762 155	C-E-2	(CONT'D)					
		10-2S1-8					
		BRANCH 1	THREE	1	-		
		BRANCH 2	-	-	-		
		SAFETY INJECTION PUMP NO. 21 SUCTION					
		BRANCH 1					
		6-2RH-10A	-	-	-	-NONE-	
		BRANCH 2					
		6-2RH-10A	TWO	1	1	E	79-46
			THREE	1	-		
		SAFETY INJECTION PUMP NO. 22 SUCTION					
		BRANCH 1					
		6-2RH-10B	-	-	-	-NONE-	
		BRANCH 2					
		6-2RH-10B	TWO	1	1	A	79-33,33R
			THREE	1	-		
		RESIDUAL HEAT REMOVAL DISCHARGE					
		PUMP A					
		6-2RH-12	ONE	1	1	M	77-136
		PUMP B					
		6-2S1-10B	-	-	-		
		RESIDUAL HEAT REMOVAL SUCTION PUMP B					
		10-2RH-3	ONE	2	2	A,B	77-155
			TWO	1	1	F	79-9
			THREE	2	-		
		PUMP A					
		8-2RH-4A	TWO	1	1	B	79-18
		PUMP B					
		8-2RH-4B	THREE	1	-		

NORTHERN STATES POWER CO.
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 INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.6
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 MAJOR ITEM: PIPING-NON WELDED SUPPORTS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PER	REQ'D AMT	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
1762 156	C-E-2	(CONT'D)					
		RESIDUAL HEAT REMOVAL DISCHARGE					
		PUMP A					
		8-2RH-9A	-	-	-		
		PUMP B					
		8-2RH-9B	THREE	1	-		
		ACCUMULATOR DISCHARGE LINES					
		LINE A					
		12-2S1-28A	ONE	1	1	B,	77-137
		12-2S1-29A	-	-	-		
		LINE B					
		12-2S1-28B	THREE	1	-		
		12-2S1-29B	-	-	-		
		BORIC ACID SUPPLY TO SAFETY INJECTION					
		6-2S1-13A	ONE	1	1	B	77-153
		6-2S1-13B	-	-	-		
		REACTOR VESSEL SAFETY INJECTION					
		LINE A					
		6-2S1-25A	ONE	1	1	H	77-150
		LINE B					
		6-2S1-25B	TWO	1	-		
		CONTAINMENT SUMP DISCHARGE LINES					
		LINE A	-	-	-	-NONE-	
		LINE B	-	-	-	-NONE-	

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

TABLE II
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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 CIRCUMFERENTIAL BUTT WELDS							
--RWST DISCHARGE--							
14-2SI-1	66	PT	W-58	79-41	N/A	none	none
12-2SI-3A	66	UT	W-60	79-83	N/A	none	none
12-2SI-4	66	UT	W-68W	79-84	N/A	none	none
10-2SI-8	66	UT	W-88	79-77	N/A	none	none
	66	UT	W-289	79-76	N/A	none	none
--CONTAINMENT SUMP B DISCHARGE LINES--							
12-2SI-34A	60	UT	W-17	79-25	N/A	S-2, OD GEO, 50% S-4, ID GEO, 50% S-5&6 ID GEO, 60%	NO S-1, Valve S-2, 12:00, Branch
12-2SI-34B	58	UT	W-5	79-26	N/A	S-2, OD GEO, 50% S-5&6 ID GEO, 80%	NO S-1, Valve S-2, 12:00, Branch
--SI PUMP 21 SUCTION--							
6-2RH-10A	64	UT	W-285	79-59	N/A	none	NO S-1, Flange
	64	UT	W-93	79-78	N/A	none	none
	64	UT	W-161	79-79	N/A	none	S-1, 10:00-2:00 and 4:00-8:00, TEE
	64	UT	W-96	79-82	N/A	none	none
	64	UT	W-95	79-80	N/A	none	none
--SI PUMP 22 SUCTION--							
6-2RH-10B	62	UT	W-286	79-57	N/A	none	NO S-1, Flange
	62	UT	W-135	79-81	N/A	none	S-2, Best Effort, TEE

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PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 continued							
--RHR DISCHARGE--							
8-2RH-9A	56	UT	W-68	79-67	N/A	none	none
8-2RH-9B	54	UT	W-53	79-65	N/A	none	none
8-2RH-7B	54	UT	W-201	79-63	N/A	none	All Scans, 12:00, Branch Connection
--BORIC ACID SUPPLY TO SAFETY INJECTION--							
6-2SI-13A	68	UT	W-272R	79-53	N/A	S-2, ID GEO, 60%	none
6-2SI-13B	68	UT	W-271	79-52	N/A	S-2, ID GEO, 50%	S-1, 3:00, TEE
8-2SI-18	68	UT	W-85	79-94	N/A	none	S-2, 5:00-7:00, Branch All Scans, 2:00-3:00 and 6:00-7:00 and 9:00-10:00, Heat Trace
--RHR SUCTION--							
10-2SI-9A	52	UT	W-212	79-54	N/A	S-1, OD GEO, 40%	S-2, Best Effort, TEE
10-2SI-9B	50	UT	W-143	79-55	N/A	none	NO S-1, Valve
--RHR DISCHARGE--							
10-2RH-11	56	UT	W-176	79-30	N/A	none	S-2, 11:00-1:00 Pipe Support

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 continued							
--RHR SUCTION--							
12-2RH-5A	52	UT	W-105	79-27	N/A	S-1, OD GEO, 50% S-2, OD GEO, 70%	S-1, Reducer GEO
12-2RH-5B	50	UT	W-142	79-50	N/A	S-1, OD GEO, 80% S-2, ID GEO, 50% S-3, OD GEO, 50% S-5&6 ID&OD GEO, 50%	S-2, 11:00-1:00, TEE
				79-47	N/A	S-1&2 ID GEO, 50-80% S-5&6 OD GEO, 90-100%	S-2, 11:00-1:00, TEE
8-2RH-4A	52	UT	W-100	79-68	N/A	none	none
10-2RH-3	50	UT	W-225	79-28	N/A	S-1, OD GEO, 60%	none
	50	UT	W-226	79-29	N/A	S-1, OD GEO, 45% S-2, OD GEO, 45%	none
8-2RH-5A	52	UT	W-104	79-69	N/A	none	S-2, Best Effort, Reducer
8-2RH-5B	50	UT	W-138	79-64	N/A	none	S-2, Best Effort, Reducer
C2.5 INTEGRALLY-WELDED SUPPORTS							
--RWST DISCHARGE--							
12-2SI-4	67	VT PT	C	79-34 79-42	N/A N/A	none none	none none

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.5 continued							
--SI PUMP 22 SUCTION-- 6-2RH-10B	63	VT PT	D	79-35 79-38 79-38R	N/A N/A	none Unable to Examine Due to Weld Surface Condition none	none Due to Weld none
--RHR PUMP A SUCTION-- 8-2RH-4A	53	VT PT	A	79-19 79-44	N/A N/A	none none	none none
--RHR PUMP B SUCTION-- 10-2RH-3	51	VT PT	E	79-37 79-40 79-40	N/A N/A	none 9/16" Long, Cold lap none	none 45% Unaccessible for Exam, Hanger
8-2RH-4B	51	VT PT	J	79-36 79-39 79-39R	N/A N/A	none Unable to Examine Due to Weld Surface Condition none	none Due to Weld none
C2.6 SUPPORT COMPONENTS							
--RWST DISCHARGE-- 12-2SI-4	67	VT	B	79-45	N/A	none	none
--SI PUMP 21 SUCTION-- 6-2RH-10A	65	VT	E	79-46	N/A	none	none

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PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
<u>C2.6 continued</u>							
--SI PUMP 22 SUCTION-- 6-2RH-10B	63	VT	A	79-33 79-33R	N/A	2-Loose Nuts none	none none
--RHR PUMP B SUCTION-- 10-2RH-3	51	VT	F	79-9	N/A	none	none
--RHR PUMP A SUCTION-- 8-2RH-4A	53	VT	B	79-9	N/A	none	none

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
NON ISI LINES							
--RHR PUMP B SUCTION-- 12-2RH-5B	50	UT	W-145	79-48	N/A	S-1, OD GEO, 35% S-2, OD GEO, 100% S-5, ID GEO, 100%	S-6, Limited to 9 $\frac{1}{2}$ "
--RHR PUMP A SUCTION-- 12-2RH-5A	52	UT	W-115	79-17	N/A	S-1, OD GEO, 40% S-2, OD GEO, 100% S-5&6 ID GEO, 50%	S-6, Limited to 9 $\frac{1}{2}$ "
	52	UT	W-113	79-16	N/A	S-1, OD GEO, 36% S-2, OD GEO, 50% S-4, OD GEO, 50%	S-1, 12:00, Branch NO S-2, Flange none
--RHR PUMP B DISCHARGE-- 8-2RH-9B	54	UT	W-229	79-71	N/A	none	NO S-2, Flange
	54	UT	W-82	79-66	N/A	none	S-1, 9:00, TEE
6-2SI-10B	54	UT	W-85	79-60	N/A	none	none
	54	UT	W-91	79-62	N/A	none	NO S-2, Flange
	54	UT	W-92	79-61	N/A	none	NO S-1, Flange
	54	UT	W-86	79-56	N/A	none	none
--RHR PUMP A DISCHARGE-- 8-2RH-7A	56	UT	W-189WR	79-70	N/A	none	none
10-2RH-11	56	UT	W-168W	79-31	N/A	none	none
	56	UT	W-173	79-32	N/A	S-2, ID GEO, 30% & Flange GEO 70%	NO S-1, Flange
8-2RH-9A	56	UT	W-230	79-72	N/A	none	NO S-2, Flange

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
NON ISI LINES continued							
---RWST DISCHARGE---							
14-2SI-1	66	PT	W-51	79-43	N/A	none	none
12-2SI-3B	66	UT	W-54	79-86	N-A	none	S-1, Best Effort 12:00 & 6:00, TEE
---BORIC ACID SUPPLY TO SAFETY INJECTION---							
12-2SI-11	68	UT	W-45	79-87	N/A	S-5&6, OD GEO, 100%	none
	68	UT	W-39	79-85	N/A	none	All Scans, 3:00 & 9:00, Heat Trace
6-2SI-13B	68	UT	W-164	79-51	N/A	none	NO S-1, Flange
---CHEMICAL & VOLUME CONTROL---							
3-2VC-23D	A-6672	UT	W-154	79-21	N/A	S-1, ID GEO, 50% S-2, ID GEO, 62%	S-2, Valve
3-2VC-23E	A-6678	UT	W-160	79-8	N/A	none	S-1, 1:00-6:00, Elbow, NO S-2, TEE
---CONTAINMENT SPRAY---							
10-2CS-3	A-7622	UT	W-90W	79-75	N/A	none	none
	A-7622	UT	W-92	79-73	N/A	S-6, ID GEO, 50%	none
	A-7622	UT	W-95	79-74	N/A	S-5, ID GEO, 80% S-6, ID&OD GEO, 60%	none
4-2CS-3	A-7622	PT	W-109	79-2	N/A	none	none
	A-7622	PT	W-110W	79-2	N/A	none	none
	A-7622	PT	W-112WR	79-2	N/A	none	none

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PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
NON ISI LINES continued							
--CONTAINMENT SPRAY-- (continued)							
8-2CS-5	A-7622	UT	W-133	79-14, 20	N/A	S-1, ID GEO, 70% S-5, ID GEO, 162% S-6, OD GEO, 170%	NO S-2, Flange
	A-7622	UT	W-124W	79-15, 22	N/A	S-1, ID GEO, 80% S-2, ID GEO, 70% S-5&6 ID GEO, 100%	none
8-2CS-4	A-7622	UT	W-135	79-23	N/A	S-1, ID GEO, 100% S-2, ID GEO, 141% S-5 thru S-8, ID GEO	none
6-2CS-6	A-7623	UT	W-148	79-58	N/A	none	NO S-1, Valve
--SAFETY INJECTION--							
8-2SI-18	A-7624	UT	W-18	79-92	N/A	none	All Scans, 3:00 & 9:00, Heat Trace
	A-7624	UT	W-17X	79-88	N/A	none	All Scans, 3:00 & 9:00, Heat Trace
	A-7624	UT	W-16	79-91	N/A	none	All Scans, 3:00 & 9:00, Heat Trace
	A-7624	UT	W-275	79-89	N/A	none	All Scans, 1:00 & 6:00, Heat Trace
	A-7624	UT	W-280	79-93	N/A	none	All Scans, 4:00-8:00 Pipe Restr; 3:00 & 9:00, Heat Trace
	A-7624	UT	W-276	79-90	N/A	none	All Scans, 12:00 & 6:00, Heat Trace
4-2SI-14A	A-7626	UT	W-168	79-4	N/A	none	S-1, 6:00-8:00, Branch S-2, Best Effort 4:00-8:00, Elbow

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PRAIRIE ISLAND UNIT 2
BASELINE COMPARISON SUMMARY

TABLE II
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COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
--SAFETY INJECTION-- (continued)							
3-2SI-15A	A-7626	UT	W-174	79-10	N/A	none	S-1, Best Effort, Reducer
	A-7626	UT	W-185	79-6	N/A	none	NO S-2, Flange
	A-7626	UT	W-269W	79-24	N/A	none	none
3-2SI-15C	A-7626	UT	W-200	79-7	N/A	none	S-2, Best Effort, 4:00-7:00, Elbow
4-2SI-14B	A-7626	UT	W-204	79-3	N/A	none	NO S-1, Flange
3-2SI-15B	A-7626	UT	W-212	79-11	N/A	none	S-1, Best Effort, Reducer
	A-7626	UT	W-219	79-5	N/A	none	NO S-1, Flange
	A-7626	UT	W-262	79-12	N/A	none	none
3-2SI-15D	A-7626	UT	W-228	79-13	N/A	none	S-1, 4:00-7:00, Elbow
--CAUSTIC ADDITION--							
4-2CA-6	-	PT	W-335	79-1	N/A	none	none
FF-64-110	-	PT	W-340	79-1	N/A	none	none
FF-64-111	-	PT	W-348	79-1	N/A	none	none
	-	PT	W-351	79-1	N/A	none	none

NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
ISOMETRIC SUMMARY - CLASS 2

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TABLE III - APPENDIX B

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-37	0	STEAM GENERATORS	A&B	-	-	NO. 26
2-ISI-46	0	MAIN STEAM (GENERAL VIEW)	L	-	-	-
2-ISI-46A	0		A	32"	32-2MS-1	NO. 24
2-ISI-46B	0		A	31"	31-2MS-1	24
				30"	30-2MS-1	23
				6"	6-2MS-1	7
2-ISI-47	0	MAIN STEAM (GENERAL VIEW)	B	-	-	-
2-ISI-47A	0		B	32"	32-2MS-2	NO. 24
2-ISI-47B	0		B	31"	31-2MS-2	24
				30"	30-2MS-2	23
				6"	6-2MS-2	7
2-ISI-48	0	FEEDWATER (GENERAL VIEW)	A	-	-	-
2-ISI-48A	0		A	16"	16-2FW-13	13
2-ISI-48B	0		A	16"	16-2FW-12	13
				16"	16-2FW-11	13
				8"	3-2AF-11	NO. 22
2-ISI-49	0	FEEDWATER (GENERAL VIEW)	B	-	-	-
2-ISI-49A	0		B	16"	16-2FW-16	13
2-ISI-49B	0		B	16"	16-2FW-15	13
				8"	3-2AF-12	NO. 22
2-ISI-50	0	RHR PUMP B SUCTION (WELDS)	B	10"	10-2RH-3	22
2-ISI-51	0	RHR PUMP B SUCTION (HANGERS)	B	8"	8-2RH-4B	NO. 29
			B	8"	8-2RH-5B	NO. 29
			B	12"	12-2RH-5B	NO. 32
			B	10"	10-2SI-9B	NO. 22
2-ISI-52	0	RHR PUMP A SUCTION (WELDS)	A	8"	8-2RH-4A	NO. 29
2-ISI-53	0	RHR PUMP A SUCTION (HANGERS)	A	8"	8-2RH-5A	NO. 29
			A	12"	12-2RH-5A	NO. 32
			A	10"	10-2SI-9A	NO. 22

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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
ISOMETRIC SUMMARY - CLASS 2

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TABLE III - APPENDIX B

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-54	0	RHR PUMP B DISCHARGE (WELDS)	B	8"	8-2PH-7B	NO. 29
2-ISI-55	0	RHR PUMP B DISCHARGE (HANGERS)	B	8"	8-2RH-9B	NO. 29
			B	6"	6-2SI-10B	NO. 27
2-ISI-56	0	RHR PUMP A DISCHARGE (WELDS)	A	8"	8-2RH-7A	NO. 29
2-ISI-57	0	RHR PUMP A DISCHARGE (HANGERS)	A	8"	8-2RH-9A	NO. 29
			A	10"	10-2RH-11	22
			A	6"	6-2RH-12	NO. 27
2-ISI-58	0	CONTAINMENT SUMP B DISCHARGE (WELDS)	B	12"	12-2RH-6B	NO. 32
2-ISI-59	0	CONTAINMENT SUMP B DISCHARGE (HANGERS)	B	14"	14-2SI-33B	NO. _____
			B	12"	12-2SI-34B	NO. _____
2-ISI-60	0	CONTAINMENT SUMP B DISCHARGE (WELDS)	A	12"	12-2RH-6A	NO. 32
2-ISI-61	0	CONTAINMENT SUMP B DISCHARGE (HANGERS)	A	14"	14-2SI-33A	NO. _____
			A	12"	12-2SI-34A	NO. _____
2-ISI-62	0	SAFETY INJECTION PUMP 22 SUCTION (WELDS)	B	6"	6-2RH-10B	NO. 27
2-ISI-63	0	SAFETY INJECTION PUMP 22 SUCTION (HANGERS)				
2-ISI-64	0	SAFETY INJECTION PUMP 21 SUCTION (WELDS)	A	6"	6-2RH-10A	NO. 27
2-ISI-65	0	SAFETY INJECTION PUMP 21 SUCTION (HANGERS)				
2-ISI-66	0	REFUELING WATER STORAGE (WELDS)	-	14"	14-2SI-1	NO. _____
		TANK DISCHARGE		12"	12-2SI-3A	NO. 33
2-ISI-67	0	REFUELING WATER STORAGE (HANGERS)		12"	12-2SI-3B	NO. 33
		TANK DISCHARGE		12"	12-2SI-4	NO. 33
				10"	10-2SI-8	NO. 31
				12"	12-2SI-11	NO. 33
2-ISI-68	0	BORIC ACID SUPPLY TO (WELDS)	-	6"	6-2SI-13A	NO. 28
		SAFETY INJECTION		6"	6-2SI-13B	NO. 28
2-ISI-69	0	BORIC ACID SUPPLY TO (HANGERS)		8"	8-2SI-17	NO. 30
		SAFETY INJECTION		8"	8-2SI-18	NO. 30

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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2
ISOMETRIC SUMMARY - CLASS 2

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TABLE III - APPENDIX B

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-70	0	REACTOR VESSEL SAFETY INJECTION (WELDS)	B	6"	6-2SI-25B	6
2-ISI-71	0	REACTOR VESSEL SAFETY INJECTION (HANGERS)				
2-ISI-72	0	REACTOR VESSEL SAFETY INJECTION (WELDS)	A	6"	6-2SI-25A	6
2-ISI-73	0	REACTOR VESSEL SAFETY INJECTION (HANGERS)				
2-ISI-74	0	BORIC ACID SUPPLY (WELDS)	-	8"	8-2SI-18	NO. 30
2-ISI-75	0	ACCUMULATOR DISCHARGE (WELDS)	A	12"	12-2SI-28A	11
2-ISI-76	0	ACCUMULATOR DISCHARGE (HANGERS)		12"	12-2SI-29A	11
			B	12"	12-2SI-28B	11
				12"	12-2SI-29B	11

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APPENDIX C

FSAR AUGMENTED EXAMINATION

- No Examinations Scheduled This Outage -

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APPENDIX D

SEISMIC BOLTING EXAMINATION

- NO EXAMINATIONS SCHEDULED THIS OUTAGE -

APPENDIX E

TABLE I - PERSONNEL LISTING

TABLE II - ULTRASONIC CALIBRATION BLOCKS

TABLE III - PROCEDURE LISTING

TABLE IV - EQUIPMENT AND MATERIALS

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND - UNIT 2
PERSONNEL LISTING

APPENDIX E
TABLE I
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EXAMINER	TITLE	ORGANIZATION	ASNT LEVEL			
			UT	PT	MT	VT
D. A. HALL	TECHNICIAN	LMT(3)	I	--	--	--
R. KELLERHALL	TECHNICIAN	LMT	II	II	II	II(2b)
R. W. PECHACEK	TECHNICIAN	LMT	II	II	--	II(2b)
E. L. THOMAS	SUPERVISOR	LMT	III	III	III	II(2a,b)
W. M. TIGHE	TECHNICIAN	LMT	I	--	--	--
L. C. DAHLMAN	M&SP SPECIAL-IST	NSP				
D. B. HANSEN	ASST M&SP ENGINEER	NSP	III	II	II	II(2a,b)
P. J. KRUMPOS	SUPT MATERIALS & SPECIAL PROCESSES SECTION	NSP				
C. LINSTROM	ANII	HARTFORD STEAM BOILER INSPECTION & INSURANCE COMPANY				

FOOTNOTES:

- 1) Level I Trainee.
- 2a) Certified by Northern States Power Company to perform visual determination of structural integrity for hanger assemblies in accordance with Procedure NSP-VT-2.
- 2b) Inspection experience and NDE qualifications were judged to be adequate to perform visual examinations in accordance with NSP-VT-1.
- 3) Organization: LAMBERT, MacGILL, THOMAS, INC. (LMT)
771 East Brokaw Road
San Jose, CA 95112

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND - UNIT 2
ULTRASONIC CALIBRATION BLOCKS - CLASS 1

APPENDIX E
TABLE II
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NSP	SIZE & DIAMETER	PIPE SCHEDULE & THICKNESS	MATERIAL	SERIAL OR HEAT NUMBER	CALIBRATION REPORTS	DATE
4	3" DIA	SCH 160 .438"	A-376,TP-316	M5900	RP-1 RP-2 RP-3 RP-6	12-04-79 12-04-79 12-05-79 12-06-79
5	4" DIA	SCH 120 .438"	A-376,TP-316	2P0091	RK-1	12-05-79
22	10" DIA	SCH 40 .365"	A-312,TP-304	F60917	RP-7 RP-8	12-08-79 12-10-79
27	6" DIA	SCH 40 .280"	A-312,TP-304	2P5951	RP-9 RP-10 RP-11 RP-14	12-10-79 12-11-79 12-12-79 12-13-79
28	6" DIA	SCH 10 .133"	A-312,TP-304	750262	ET-3	12-10-79
29	8" DIA	SCH 40 .322"	A-312,TP-304	2P4086	RK-4 RK-5	12-11-79 12-12-79
30	8" DIA	SCH 10 .148"	A-312,TP-304	547148	RP-4 RP-5 RP-15 RP-16	12-06-79 12-07-79 12-14-79 12-14-79
31	10" DIA	SCH 10 .165"	A-312,TP-304	5P6405	RP-12 RP-13	12-12-79 12-13-79
32	12" DIA	SCH 40 .375"	A-312,TP-304	F41542	RK-2 RK-3 ET-1 ET-2 ET-4	12-07-79 12-08-79 12-07-79 12-10-79 12-11-79
33	12" DIA	SCH 10 .180"	A-312,TP-304	27030	RK-6	12-13-79

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND - UNIT 2
PROCEDURE LISTING

APPENDIX E
TABLE III
PAGE 1 of 1

PROCEDURE NUMBER AND REVISION	FIELD CHANGE	PROCEDURE TITLE	PLANT APPROVAL DATE	FIELD CHANGE REMARKS	CHANGE DESCRIPTION
NSP-VT-1, REV. 1	NONE	VISUAL EXAMINATION	4-4-79	NONE	FIELD CHANGE INCLUDED TO LENGTHEN SWEEP RANGE FOR PIPING .250" WALL THICK- NESS AND LESS.
NSP-VT-2, REV. 1	NONE	VISUAL EXAMINATION OF ASSEMBLED HANGER ASSEMBLIES	4-4-79	NONE	
NSP-PT-1, REV. 1	NONE	LIQUID PENETRANT EXAMINATION	4-4-79	NONE	
NSP-MT-1, REV. 1	NONE	MAGNETIC PARTICLE EXAMINA- TION, YOKE METHOD	4-4-79	NONE	
NSP-UT-1, REV. 0	1	ULTRASONIC EXAMINATION OF PIPE WELDS	4-4-79 & 12-5-79	NONE	
NSP-UT-2, REV. 0	NONE	AUTOMATIC DATA RECORDING	4-4-79	NONE	

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NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND - UNIT 2
EQUIPMENT AND MATERIALS

APPENDIX E
TABLE IV
PAGE 1 of 2

MATERIAL OR EQUIPMENT	TYPE OR SERIAL NUMBER	CALIBRATION DATE OR BATCH NUMBER	REMARKS
<u>ULTRASONIC:</u>			
NORTEC 131 D	S/N 126	CAL: 11-01-79	
NORTEC 131 D	S/N 128	CAL: 11-13-79	
NORTEC 131 D	S/N 311	CAL: 9-20-79	
<u>RECORDERS:</u>			
GOULD 220	S/N 3018	CAL: 10-15-79	
GOULD 222	S/N 00647	CAL: 9-18-79	
GOULD 220	S/N 14596	CAL: 12-03-79	
GOULD 220	S/N 14120	CAL: 12-05-79	
GOULD 220	S/N 14012	CAL: 12-07-79	
<u>TEMPERATURE GAUGES:</u>			
PTC SURFACE THERMOMETERS	S/N 192	CAL: 9-20-79	CERTIFIED BY MANUFACTURER
	S/N 193	CAL: 9-20-79	
	S/N 202	CAL: 10-22-79	
	S/N 224	CAL: 11-14-79	
<u>MAGNETIC PARTICLE:</u>			
MAGNAFLUX YOKE	S/N LMT-100	CAL: 12-03-79	ON SITE QUALIFICATION
<u>ROPAS BLOCKS:</u>			
4140 C.S.	S/N 012	*CERT. 9-08-77	*BY ORLAS MACHINE SHOP
304 S.S	S/N 15	*CERT. 5-17-78	
304 S.S	S/N 022	**CERT. 9-13-79	**CERTIFIED BY LMT
<u>CALIPER:</u>			
DIAL	S/N 104	CAL: 11-29-79	CERTIFIED BY MANUFACTURER
<u>MATERIALS:</u>			
ULTRASONIC COUPLANT	LMT-GEL GEL 3000	BATCH NO. LMT111778 BATCH NO. 1378	
PENETRANT MAGNAFLUX SPOTCHECK	PENETRANT DEVELOPER CLEANER	BATCH NO. 7A004 BATCH NO. 78L050 BATCH NO. 786035	TYPE: SKL-HF/S TYPE: SKD-NF TYPE: SKC-NF

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND - UNIT 2
EQUIPMENT AND MATERIALS

APPENDIX E
TABLE IV
PAGE 2 of 2

MATERIAL OR EQUIPMENT	TYPE OR SERIAL NUMBER	CALIBRATION DATE OR BATCH NUMBER	REMARKS
ULTRASONIC TRANSDUCERS:		<u>size</u>	<u>frequency</u>
HARISONICS	R3142	.25" x .25"	2.25 MHZ
HARISONICS	R9168	.25" x .25"	5 MHZ
HARISONICS	R9167	.25" x .25"	5 MHZ
HARISONICS	R30103	.375" x .375"	3.5 MHZ
HARISONICS	Q604	.375" x .375"	3.5 MHZ
HARISONICS	Q1265	.5" x .25" DUAL	1.5 MHZ
HARISONICS	Q1032	.5" x .5" DUAL	1.5 MHZ
HARISONICS	R244	.5" x .5"	2.25 MHZ
HARISONICS	R10050	.25" x .25"	3.5 MHZ
HARISONICS	R1150	.25" x .25"	2.25 MHZ
HARISONICS	R169	.375" x .375"	3.5 MHZ
HARISONICS	R10049	.25" x .25"	3.45 MHZ
HARISONICS	R428	.25" DIA	2.25 MHZ
HARISONICS	R10020	.25" DIA	5 MHZ
HARISONICS	Q11123	.5" DIA	2.25 MHZ
HARISONICS	Q6104	.25" x .25"	5 MHZ
HARISONICS	R12200	.25" x .25"	2.25 MHZ

APPENDIX F

FORM NIS-1

OWNERS' DATA REPORT FOR INSERVICE INSPECTION

FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL: MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address Welsh, Minnesota
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>C2.1 CIRCUMFERENTIAL BUTT WELDS</u>				
RWST DISCHARGE 12-2SI-3A 12" W-60	NAVCO	---	---	---
CONT. SUMP B DISCHARGE LINES 12-2SI-34B 12" W-5	NAVCO	---	---	---
SI PUMP 21 SUCTION 6-2RH-10A 6" W-285,93 96,95, 161	NAVCO	---	---	---
SI PUMP 22 SUCTION 6-2RH-10B 6" W-286, 135	NAVCO	---	---	---
RHR DISCHARGE 8-2RH-9A 8" W-68	NAVCO	---	---	---
8-2RH-7B 8" W-201	NAVCO	---	---	---
RHR DISCHARGE 10-2RH-11 10" W-176	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>C2.1 CONTINUED</u>				
RHR SUCTION 12-2RH-SA 12" W-105	NAVCO	---	---	---
8-2RH-4A 8" W-100	NAVCO	---	---	---
10-2RH-3 10" W-225,226	NAVCO	---	---	---
RHR PUMP B SUCTION 10-2SI-9B 10" W-143	NAVCO	---	---	---
12-2RH-5B 12" W-142	NAVCO	---	---	---
8-2RH-5B 8" W-138	NAVCO	---	---	---
RHR PUMP A SUCTION 10-2SI-9A 10" W-212	NAVCO	---	---	---
8-2RH-5A 8" W-104	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS
(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>C2.1 CONTINUED</u>				
RHR PUMP B DISCHARGE 8-2RH-9B 8" W-53	NAVCO	---	---	---
CONT. SUMP B DISCHARGE 12-2SI-34A 12" W-17	NAVCO	---	---	---
RWST DISCHARGE 14- 2SI-I 14" W-58	NAVCO	---	---	---
12-2SI-4 12" W-68W	NAVCO	---	---	---
10-2SI-8 10" W-88, 289	NAVCO	---	---	---
BORIC ACID SUPPLY TO SI 6-2SI-13B 6" W-271	NAVCO	---	---	---
6-2SI-13A 6" W-272R	NAVCO	---	---	---
8-2SI-18 8" W-85	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL: MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>C2.5 INTEGRALLY WELDED SUPPORTS</u>				
RWST DISCHARGE 12-2SI-4 c, SIH-15	NAVCO	---	---	---
SI PUMP 22 SUCTION 6-2RH-10B D, SIH-19	NAVCO	---	---	---
RHR PUMP A SUCTION 8-2RH-4A A, RHRH-23	NAVCO	---	---	---
RHR PUMP B SUCTION 10-2RH-3 E, RHRH-59	NAVCO	---	---	---
8-2RH-4B J, RHRH-26	NAVCO	---	---	---
<u>C2.6 SUPPORT COMPONENTS</u>				
RWST DISCHARGE 12-2SI-4 B, SIH-16	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>C2.6 CONTINUED</u>				
SI PUMP 21 SUCTION 6-2RH-10A E, SIH-23	NAVCO	---	---	---
SI PUMP 22 SUCTION 6-2RH-10B A, SIH-30	NAVCO	---	---	---
RHR PUMP B SUCTION 10-2RH-3 F, RHRH-20	NAVCO	---	---	---
RHR PUMP A SUCTION 8-2RH-4A B, RHRH-14	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>NON ISI-CIRCUMFERENTIAL BUTT WELDS</u>				
RHR PUMP B SUCTION 12-2RH-5B 12" W-145	NAVCO	---	---	---
RHR PUMP A SUCTION 12-2RH-5A 12" W-115,113	NAVCO	---	---	---
RHR PUMP B DISCHARGE 8-2RH-9B 8" W-82, 229	NAVCO	---	---	---
6-2SI-10B 6" W-85,86,91,92	NAVCO	---	---	---
RHR PUMP A DISCHARGE 8-2 RH-7A 8" W-189WR	NAVCO	---	---	---
10-2RH-11 10" W-168W,173	NAVCO	---	---	---
8-2RH-9A 8" W-230	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner * NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
<u>NON ISI- CIRCUMFERENTIAL BUTT WELDS CONTINUED</u>				
RWST DISCHARGE 14-2SI-I 14" W-51	NAVCO	---	---	---
12-2SI-3 B 12" W-54	NAVCO	---	---	---
BORIC ACID SUPPLY TO SI 12-2SI-11 12" W-39,45	NAVCO	---	---	---
6-2SI-13B 6" W-164	NAVCO	---	---	---
CHEMICAL AND VOLUME CONTROL SYSTEM 3-2VC-23D 3" W-154	NAVCO	---	---	---
3-2VC-23E 3" W-160	NAVCO	---	---	---
CONTAINMENT SPRAY SYSTEM 10-2CS-3 10" W-90W, 92,95	NAVCO	---	---	---
4-2CS-3 4" W-109, 110W, 112WR	NAVCO	---	---	---
8-2CS-5 8" W-133, 124W	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
 Address WELSH, MINNESOTA
- 3.) Plant Unit 2 4.) Owner (Certificate of Authorization) ---
- 5.) Commercial Service Date 12-21-74 6.) National Board Number for Unit ---
- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
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NON ISI CIRCUMFERENTIAL BUTT WELDS CONTINUED

8-2CS-4 8" W-135	NAVCO	---	---	---
6-2CS-6 6" W-148	NAVCO	---	---	---
SAFETY INJECTION SYSTEM				
8-2SI-18 8" W-13, 17X, 16, 275, 280, 276	NAVCO	---	---	---
4-2SI-14A 4" W-168	NAVCO	---	---	---
3-2SI-15A 3" W-174, 185, 269W	NAVCO	---	---	---
3-2SI-15C 3" W-200	NAVCO	---	---	---
4-2SI-14B 4" W-204	NAVCO	---	---	---
3-2SI-15B 3" W-212, 219, 262	NAVCO	---	---	---
3-2SI-15D 3" W-228	NAVCO	---	---	---

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FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

(As Required by the Provisions of the ASME Code Rules)

- 1.) Owner NORTHERN STATES POWER COMPANY
 Address 414 NICOLLET MALL; MINNEAPOLIS, MINNESOTA
- 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2
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- 7.) Components Inspected

<u>Component or Appurtenance</u>	<u>Manufacturer or Installer</u>	<u>Manufacturer or Installer Serial No.</u>	<u>State or Province No.</u>	<u>National Board No.</u>
CAUSTIC ACID SYSTEM				
4-2CA-6	NAVCO	---	---	---
4" W-335,340, 348,351				

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FORM NIS-1 (back)

- 8.) Examination Dates 12-3-79 to 12-15-79 9.) Inspection Interval 12-21-74 to 12-21-84
- 10.) Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. This was the second Inservice Inspection conducted during the second inspection period of the first ten year inspection interval. The examinations completed 100% of the piping welds required by IE Bulletin No. 79-17. These examinations also included approximately 80% of the required ASME Class 2 circumferential butt welds. In addition, 50% of the required ASME Class 2 integrally welded supports and support components were examined.
- 11.) Abstract of Conditions Noted. The results of these examinations indicated that the integrity of these systems were maintained. The only anomalies detected during the examinations were: Loose nuts on safety injection Pump 22 suction hanger No. SIH-30/A; A 9/16" Linear indication (Coldlap) on RHR Pump 22 suction hanger No. RHRH-59/E; and, two integrally welded hangers that the weld surface required grinding to allow an acceptable liquid penetrant examination. There was no indication of intergranular stress corrosion cracking in any of the areas examined.
- 12.) Abstract of Corrective Measures Recommended and Taken. The loose nuts on hanger No. SIH-30/A were tightened. The 9/16" linear indication was blended smooth to the surrounding surface and reexamined. The weld surfaces on hangers SIH-19/D and RHRH-26/J were ground smooth and the entire area examined. All indications were corrected and the area reexamined with the same NDE method that detected them.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date December 20 19 79 Signed NORTHEAST STATES POWER by Douglas B. Hansen
Owner

Certificate of Authorization No. (if applicable) N/A Expiration Date N/A

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Minnesota and employed by Hartford Steam Boiler Insp & Ins. Co. of Hartford Conn. have inspected the components described in this Owner's Data Report during the period 12-3-79 to 12-15-79, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owners' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date 12-21 19 79

Charles P. Lindstrom
Inspector's Signature

Commissions N.B. 6932 M.N. 200-69
National Board, State, Province & No.