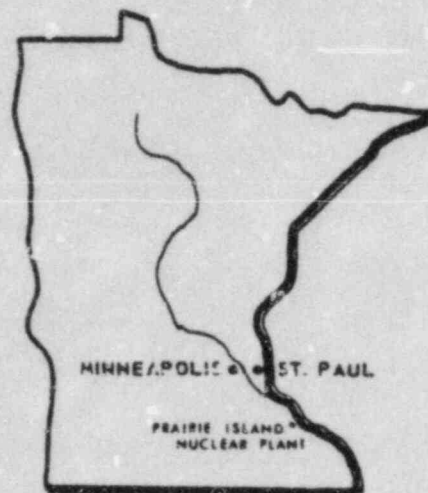




# PRAIRIE ISLAND NUCLEAR GENERATING PLANT

Red Wing, Minnesota

UNITS 1 AND 2



INSERVICE INSPECTION - EXAMINATION SUMMARY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 1

SEPTEMBER 27, 1983 THRU SEPTEMBER 29, 1983

**NORTHERN STATES POWER COMPANY**  
MINNEAPOLIS, MINNESOTA

Report Date:

December 28, 1983

Commercial Service Date:

December 16, 1973

8401160135 840109  
PDR ADDCK 05000282  
G PDR

NORTHERN STATES POWER COMPANY  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 1

INSERVICE INSPECTION - EXAMINATION SUMMARY  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 1

AUGUST 29, 1983 THRU OCTOBER 1, 1983

INSPECTION PERIOD 3

Report Date:  
December 28, 1983

Prepared by: L.C. Dahlman  
M & SP Specialist

Reviewed by:

*Michael T. Anderson*  
M.T. Anderson  
M & SP Engineer

Commercial Service Date:  
December 16, 1973

Approved by:

*P.J. Krumpal*  
P.J. Krumpal  
Superintendent,  
Materials and Special  
Processes

Inservice Inspection - Examination Summary  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 1

- INDEX -

1.0 INTRODUCTION

2.0 SUMMARY

3.0 DISCUSSION OF EXAMINATION

- 3.1 Inspection Boundary
- 3.2 Examination Methods
- 3.3 Examination Procedures
- 3.4 Equipment and Materials
- 3.5 Personnel
- 3.6 Evaluation
- 3.7 Examination Reports and Documentation

APPENDIX A - ASME Class 2 Examinations

- Inservice Inspection - Examination Summary Tables
  - Table S2.2.1 - Piping - Circumferential Butt Welds
- Table II - Baseline Comparison Summary
- Table III - Isometric Drawing Summary

APPENDIX B -

- Table I - Personnel Listing
- Table II - Ultrasonic Calibration Blocks
- Table III - Procedure Listing
- Table IV - Equipment and Materials

APPENDIX C - Form NIS-1, Owner's Data Report for Inservice Inspections

INSERVICE INSPECTION - EXAMINATION SUMMARY  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT - UNIT 1  
September 27, 1983 to September 29, 1983

1.0 INTRODUCTION

This report summarizes the inservice inspection examinations performed at Prairie Island Nuclear Generating Plant - Unit 1. This inspection was conducted during the period from September 27 to September 29, 1983 in response to the NRC Staff Evaluation Meeting documented April 18, 1983. Specifically, item 5 of Section 6 states that 10 welds will be examined every six months. The examinations were performed with the Unit in operation. Prairie Island - Unit 1 began commercial operation on December 16, 1973.

The examinations were performed on circumferential pipe welds in portions of the Safety Injection system that were identified as containing stagnant oxygenated borated water, and selection was based on those welds that are considered the most susceptible to trans-granular stress corrosion cracking.

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 INSPECTION SUMMARY

The evaluation of the results from the inservice examinations indicated that the integrity of the system has been maintained.

3.0 DISCUSSION OF EXAMINATION

3.1 Inspection Boundary

The examination plan focused on piping circumferential butt welds in portions of the Safety Injection system containing stagnant oxygenated borated water. This piping consists of 8" diameter, Schedule 10 (0.148" wall) and 12" diameter, Schedule 10 (0.180" wall) austenitic stainless steel. The components examined and the examination report numbers are summarized in the attached Appendix B - ASME Class 2 Examinations, Table S2.2.1.

### 3.2 Examination Methods

Ultrasonic examination methods and techniques were used to perform the volumetric examinations. The ultrasonic test system consisted of an ultrasonic digital/analog tester and a two-channel strip chart recorder. One channel of the recorder was calibrated to represent 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 contractor's Level III and Northern States Power Company.

The ultrasonic techniques utilized miniature (1/4" x 1/4"), 5.0 MHz transducers. These were mounted on high temperature wedges which provided refracted shear wave angles of 45 degrees and 52 degrees in the parts to be examined. A 2-1/2 V metal path was used for all examinations.

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

### 3.3 Examination Procedures

The ultrasonic examination procedure for pipe welds complied with the requirements of Appendix III of ASME Section XI issued in the Winter 1975 Addenda. All other examination procedures 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.

### 3.4 Equipment and Materials

All equipment and expendable materials used in the examinations are listed either by 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 NSP at the plant site.

### 3.5 Personnel

Northern States Power Company contracted Lambert, MacGill, Thomas, Inc. to perform the ultrasonic 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.

### 3.6 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 standard reference before each day's examination, checked before and after each individual examination, and at intervals not exceeding four (4) hours. In addition, the ultrasonic data was recorded on strip charts which were made a part of the inspection report, and permitted further evaluation.

### 3.7 Examination Reports and Documentation

All examination reports and documentation are maintained on file by Northern States Power Company. Table I of Appendix B identifies the examination report number(s) for each item examined. Many of the items identify more than one examination report because of the difference types of examinations performed on the item.

Table I of Appendix B summarizes 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 report numbers for this outage are prefixed with "83A-".

Table II of Appendix B compares the baseline examination results with the results obtained during this examination. Table II 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, titled, "Owner's Data Report for Inservice Inspections".

APPENDIX A

ASME CLASS 2 EXAMINATIONS

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2 2.1

PAGE 1 OF 8

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-MS-1	-	-	-		
		MAIN STEAM B 32-MS-2	-	-	-		
		MAIN STEAM A 30-MS-1	TWO	1	1	MS-7	79-125, 128
		MAIN STEAM B 30-MS-2	-	-	-		
		MAIN STEAM A 31-MS-1	ONE	1	1	MS-12	77-25, 30
		MAIN STEAM B 31-MS-2	-	-	-		
		MAIN STEAM A RELIEF HDR, 30-MS-1	-	-	-		
		MAIN STEAM B RELIEF HDR, 30-MS-2	THREE	1	1	MS-186	81-162, 189
		MAIN STEAM A 6-MS-1	TWO	4	4	MS-147 MS-148 MS-149 MS-150	80A-1, 14 80A-3, 13 80A-2, 12 80A-10, 34
		MAIN STEAM B 6-MS-2	ONE TWO	1 4	1 4	MS-136 MS-135 MS-136 MS-137 MS-138	77-22, 8 80A-4, 16 80A-7, 17 80A-5, 15 80A-6, 44

NORTHEAST STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 2 OF 8

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)  FEEDWATER A 16-FW-12 16-FW-13	THREE TWO	1 18	2 19	FW-144, 164 FW-147 FW-161, 162 FW-164  FW-164 FW-148 FW-149 FW-150 FW-227  FW-151 FW-152 FW-153 FW-154 FW-155 FW-156 FW-157 FW-158 FW-159  FW-159 Baseline FW-159 FW-160  FW-213 FW-161 FW-162 FW-164	81-144, 179, 90, 75, 87 79-129 79-SP-5, 4 79-SP-2, 1/80A-26, 78 81-104 82-029, 068, 087 79-SP2-1, 72, 74, 105 79-SP2-1, 9, 60, 106 79-SP2-1, 10, 61, 107 79-SP2-6, 6R, 11, 65, 108/80A-31, 50 79-SP2-1, 12, 64, 109 79-SP2-1, 13, 69, 110 79-SP2-5, 14, 68, 111 79-SP2-1, 15, 67, 112 79-SP2-1, 16, 71, 113 79-SP2-1, 17R, 85, 114 79-SP2-1, 4, 55, 115 79-SP2-1, 21, 59, 116 79-SP2-7, 7R, 22, 52, 117, 97, 98, 99 79-SP2-103, 104, 118 80A-24, 48 79-SP2-8R, 23, 63, 119, 80A-25, 49 79-SP2-2, 53, 24, 120 79-SP2, 2, 25, 57, 121 79-SP2-2, 26, 56, 122 79-SP2-2, 28, 58, 123

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 3 OF 8

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)					
		FEEDWATER B 16-FW-15 16-FW-16	ONE TWO	1 4	1 4	FW-220 FW-214, FW-216 FW-214 FW-216	77-15, 9 79-SP-7, 8, 1 79-SP2-19, 32, 70 79-SP2-19, 30, 79, 125/ 80A-23, 51, 52, 105 81-89, 76, 76R, 88 82-023, 030, 03CR, 067, 088
		FEEDWATER A (8 IN) 3-AF-11	TWO	2	2	FW-165, AFW-202 FW-165, AFW-202	79-SP-17, 18 79-SP2-127, 128
		FEEDWATER B (8 IN) 3-AF-12	TWO	2	2	FW-127, AFW-129 FW-127, AFW-129	79-SP-19, 20 79-SP2-129, 130
		REFUELING WATER STORAGE TANK DISCHARGE 12-SI-1	TWO THREE	1 1	1 1	W-195 W-178, 187	80-60 81-198, 30
		12-SI-3A	TWO THREE	2 2	2 4	W-186, W-261 W-184, W-261, 186 W-187	80-54, 55 83-82, 104, 40 83-67, 105, 68, 116 83-69, 117
		12-SI-3B	TWO THREE	1 1	1 4	W-194 W-194, 258 W-191, 190	80-56 83-74, 122, 73, 121 83-71, 120, 72, 119

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 4 OF 8

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)					
		12-SI-11	THREE	1	1 7	W-187 W-188, 189 W-100, 101 W-102, 103 W-104 W-104	81-130 83-070, 118, 83, 161 83-84, 129, 85, 123 83-86, 124, 90, 128 83-89, 125 83B-002, 006
		12-SI-4	TWO THREE	1 1	1 1	W-196 W-202	80-57 82-076, 092
		10-SI-8 STREAM 1 STREAM 2	TWO THREE	1 -	1 1	W-206 W-213	80-50 82-089, 090
		CONTAINMENT SUMP B DISCHARGE LINES					
		14-SI-33A	-	-	-		
		14-SI-33B	-	-	-		
		12-SI-34A	-	-	-		
		12-SI-34B	TWO	1	1	W-5	80-82
		ALTERNATE CONTAINMENT SPRAY PUMP SUCTION					
		6-RH-10A BRANCH 1 BRANCH 2	TWO TWO	1 2	1 2	W-269 W-5 W-7	80-53 80-65 80-67
		6-RH-10B BRANCH 1	TWO THREE	2 2	2 2	W-230, W-270 W-229, W-283	80-52, 51 81-66, 65

NORTHEN STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 5 OF 8

MAJOR ITEM: PIPING-CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATE- GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	INSP. PCR.	REQ'D. AMT.	AMT. EXAM	ITEM IDENTIFICATION	INSPECTION REPORT NO.
C2.1	C-G	(CONT'D)					
		BRANCH 2	TWO THREE	2 1	2 1	W-113, W-128 W-129	80-33, 66 81-64
		RESIDUAL HEAT REMOVAL DISCHARGE					
		12-RH-6A	TWO	1	1	W-17	80-81
		12-RH-6B	TWO	1	1	W-6	80-83
		8-RH-9A	TWO	1	1	W-112	80-46
		8-RH-9B	TWO THREE	2 1	2 1	W-195, W-193 W-243	80-21, 22 81-45
		8-RH-7A	TWO	1	2	W-88, 89	80-49, 47
		9-RH-7B	TWO	3	3	W-138, W-206, W-143	80-19, 23, 20
		SAFETY INJECTION PUMPS SUCTION					
		6-SI-13A	TWO	1	1	W-17W	80-3
		6-SI-13B	TWO	2	2	W-134, 141W	80-58, 2
		8-SI-17	TWO THREE	2 1	2 1 4	W-239, W-99 W-98 W-99, 239 W-98, 97	80-97, 95 81-32 83-55, 61, 54, 60 83-56, 59, 51, 58
		8-SI-18	TWO THREE	7 2	7 2 56	W-243, 235, 236 W-74, 75, 80, 81 W-68/W-58 W-92, 91 W-238, 86W W-85, 243 W-94, 237	80-96, 99, 104 80-106, 107, 105, 103 81-67/83-98, 42 83-52, 20, 48, 19 83-49, 18, 32, 17 83-34, 46, 53, 62 83-57, 63, 64, 141

NORTH DAKOTA STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 6 OF 8

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)				W-88, 87 W-235, 83 W-234, 236 W-81, 80 W-79, 78 W-76, 77 W-75, 74 W-73, 72 W-71, 70 W-233, 69 W-68, 67 W-66, 64 W-63, 62 W-61, 60 W-59, 58 W-57, 242 W-52, 51 W-50, 53 W-277, 278 W-279, 280 W-281, 282 W-54, 46 W-47, 48 W-49, 55  W-282, 235 W-92, 59 W-66, 73 W-75, 77 W-78	83-65, 140, 66, 47 83-33, 50, 28, 26 83-24, 25, 23, 16 83-22, 15, 21, 14 83-12, 9, 11, 7 83-10, 3, 2, 4, 5 83-6, 8, 75, 142 83-87, 143, 88, 147 83-91, 149, 92, 150 83-93, 155, 94, 156 83-101, 152, 102, 153 83-103, 154, 97, 29 83-96, 27, 81, 30 83-80, 31, 79, 35 83-78, 36, 77, 37 83-41, 38, 76, 39 83-145, 139, 127, 138 83-115, 151, 126, 137 83-111, 136, 110, 135 83-109, 134, 108, 44 83-107, 133, 100, 132 83-99, 131, 148, 159 83-112, 157, 117, 158 83-114, 160, 45, 43  83A-009, 016, 001, 004 83A-003, 005, 007, 014 83A-008, 015, 010, 017 83A-011, 018, 012, 019 83A-013, 020
		8-VC-71A 8-VC-71B	- -	- -	- -		

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT 1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 7 OF 8

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)					
		RESIDUAL HEAT REMOVAL SUCTION					
		10-SI-9A	-	-	-		
		10-SI-9B	TWO	1	1	W-39W	80-10
		ACCUMULATOR DISCHARGE LINES					
		12-SI-28A	ONE	1	1	SI-1317	77-35, 56
		12-SI-28B	-	-	-		
		12-SI-29A	-	-	-		
		12-SI-29B	TWO	1	1	SI-33	79-49, 47
		RESIDUAL HEAT REMOVAL SUCTION					
		12-RH-5A	TWO	1	1	W-66	80-87
			THREE	2	2	W-72, W-63	81-40, 43
		12-RH-5B	TWO	2	2	W-37, W-42	80-11, 25
		8-RH-5A	TWO	1	1	W-64	80-92
			THREE	1	1	W-27	82-093, 094
		8-RH-5B	TWO	1	1	W-35	80-18
		8-RH-4A	TWO	2	2	W-60, W-59	80-94, 93
		8-RH-4B	TWO	1	1	W-31	80-17
		10-RH-3	ONE	2	2	RH-1045R, RH-1048	77-76, 77
			TWO	1	1	W-23	80-101
			THREE	2	1	W-27	82-93, 94
		RESIDUAL HEAT REMOVAL DISCHARGE					
		10-RH-11	TWO	3	3	RH-1, W-177	79-103/80-89, 88
			THREE	2	2	W-176 W-170/ W-3	81-42/82-042

NORTHERN STATES POWER CO.

PRAIRIE ISLAND UNIT

1

## INSERVICE INSPECTION-EXAMINATION SUMMARY

TABLE S2.2.1

PAGE 8 OF 8

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)					
		6-PH-12	THREE	1	1	W-8	82-101
		8-RH-7A	TWO	2	2	W-88, 89	80-49, 47
		8-RH-7B	TWO	3	3	W-138, 143, 206	80-19, 20, 23
		8-RH-9A	TWO	1	1	W-112	80-46
		8-RH-9B	TWO	2	2	W-195, 193	80-21, 22
		SAFETY INJECTION					
		6-SI-10B	ONE	1	1	SI-1290	77-48, 57
		6-SI-10A	TWO	3	3	W-128, 131, 126	80-72, 73, 71
		REACTOR VESSEL					
		SAFETY INJECTION					
		6-SI-25A	TWO	1	1	SI-1291	79-75
			THREE	1	1	W-1292	82-099
		6-SI-25B	ONE	1	1	SI-15	77-35, 58

COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 CIRCUMFERENTIAL BUTT WELDS							
BORIC ACID SUPPLY	82	UT	W-235	83A-001	NONE	NONE	HEAT TRACE (H.T.) 11:30, 12:30, 3:00, 5:30, 7:00; S-2, BEST EFFORT (B.E.) 2:00 to 4:00 & 8:00 to 10:00 INNER RADIUS "T"
		UT		83A-004	NONE	NONE	SAME AS ABOVE
		UT	W-104	83A-002	NONE	NONE	NO S-1, 5:00 TO 7:00 INNER RADIUS "T"
		UT		83A-006	NONE	NONE	SAME AS ABOVE
		UT	W-92	83A-003	S-1, 2, 3, 50% @ 7:00 & 4:00	NONE	H.T. 2:00 to 4:00 7:30, 8:30 & 9:00; NO S-2, 2:00 TO 4:00 INNER RADIUS "T"
		UT		83A-005	NONE	NONE	SAME AS ABOVE

COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 CON'T	82	UT	W-59	83A-007	NONE	NONE	H.T. 3:00 & 9:00; NO S-2, 2:00 TO 4:00 ELBOW INNER RADIUS (E.I.R.)
		UT		83A-014	S-1, 40% @12:00; S-2, 35% @6:00; & 45% @ 3:00	NONE	SAME AS ABOVE
		UT	W-66	83A-008	NONE	NONE	H.T. 2:00 & 9:00; NO S-1, PENETRATION; NO S-2, 4:00 TO 5:00 & 10:00 TO 11:00 RES- TRAINT
		UT		83A-015	NONE	NONE	SAME AS ABOVE
		UT	W-73	83A-010	NONE	NONE	H.T. 3:30, 4:00, 9:00 & 11:00; NO S-1, 11:00 TO 1:00 E.I.R.
		UT		83A-017	NONE	S-3 ID/OD GEO., < 50%, LONG SEAM	SAME AS ABOVE
		UT	W-75	83A-011	NONE	NONE	H.T. 10:30 & 12:00; NO S-2, 2:00 TO 4:00 E.I.R.

COMPONENT/SYSTEM	NSP ISO	NDE METHOD	W BASELINE IDENT.	REPORT NO.	BASELINE INDICATIONS	ISI INDICATIONS	EXAMINATION LIMITATIONS
C2.1 CON'T	84	UT	W-77	83A-018	NONE	NONE	SAME AS ABOVE
		UT		83A-012	NONE	NONE	H.T. 3:00 & 10:30; NO S-2, 7:30 TO 10:30 E.I.R.
		UT		83A-019	NONE	S-3 ID/OD GEO., 50%, LONG SEAM; S-4 ID/OD GEO., 50%, LONG SEAM	SAME AS ABOVE
		UT	W-78	83A-013	S-3, 4, 100% @ 9:00 & 1:00	S-4 ID SPOT 225%	H.T. 3:00 & 10:00; NO S-1, 7:30 TO 10:30 E.I.R.
		UT		83A-020	S-3, 40% @ 1:30	S-3 OD GEO., 30% LONG SEAM; S-4 ID SPOT 112%; S-4 OD GEO., 40% LONG SEAM	SAME AS ABOVE
		UT	W-282	83A-009	NONE	NONE	H.T. 3:00, 9:00 & 12:00; NO S-1, 2:00 TO 4:00 E.I.R.
				83A-016	S-1, 2, 3 109% SPOT @ 12:00 TYP 360°	NONE	SAME AS ABOVE

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

TABLE 3  
PAGE 1 OF 3

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-37	0	STEAM GENERATORS	A&B	-	-	26
2-ISI-46	0	MAIN STEAM (GENERAL VIEW)	A	-	-	-
2-ISI-46A	0		A	32"	32-2MS-1	NO. 24
2-ISI-46B	0		A	31"	31-2MS-1	23
				30"	30-2MS-1	7
				6"	6-2MS-1	
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	23
				30"	30-2MS-2	7
				6"	6-2MS-2	
2-ISI-48	0	FEEDWATER (GENERAL VIEW)	A	-	-	13/36
2-ISI-48A	0		A	16"	16-2FW-13	13
2-ISI-48B	0		A	16"	16-2FW-12	13
				16"	16-2FW-11	NO. 13
				8"	3-2AF-11	
2-ISI-49	0	FEEDWATER (GENERAL VIEW)	B	-	-	13/36
2-ISI-49A	0		B	16"	16-2FW-16	13
2-ISI-49B	0		B	16"	16-2FW-15	NO. 13
				8"	3-2AF-12	
2-ISI-50	1	RHR PUMP B SUCTION (WELDS)	B	10"	10-2RH-3	22
2-ISI-51	1	RHR PUMP B SUCTION (HANGERS)	B	8"	8-2RH-4B	29
			B	8"	8-2RH-5B	29
			B	12"	12-2RH-5B	32
			B	10"	10-2SI-9B	22
2-ISI-52	1	RHR PUMP A SUCTION (WELDS)	A	8"	8-2RH-4A	29
2-ISI-53	1	RHR PUMP A SUCTION (HANGERS)	A	8"	8-2RH-5A	29
			A	12"	12-2RH-5A	32
			A	10"	10-2SI-9A	22

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

TABLE 3

PAGE 2 of 3

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-54	1	RHR PUMP B DISCHARGE (WELDS)	B	8"	8-2RH-7B	29
2-ISI-55	0	RHR PUMP B DISCHARGE (HANGERS)	B	8"	8-2RH-9B	29
			B	6"	6-2SI-10B	27
2-ISI-56	1	RHR PUMP A DISCHARGE (WELDS)	A	8"	8-2RH-7A	29
2-ISI-57	0	RHR PUMP A DISCHARGE (HANGERS)	A	8"	8-2RH-9A	29
			A	16"	10-2RH-11	22
			A	6"	6-2RH-12	27
2-ISI-58	1	CONTAINMENT SUMP B DISCHARGE	B	12"	12-2RH-6B	32
			B	14"	14-2SI-33B	NO. _____
			B	12"	12-2SI-34B	NO. _____
2-ISI-59	1	CONTAINMENT SUMP B DISCHARGE	A	12"	12-2RH-6A	32
			A	14"	14-2SI-33A	NO. _____
			A	12"	12-2SI-34A	NO. _____
2-ISI-60	1	SAFETY INJECTION PUMPS SUCTION	A & B	6"	6-2SI-13A	28
					6-2SI-13B	28
2-ISI-61	1	BORIC ACID SUPPLY TO SAFETY INJECTION	-	12"	12-2SI-11	33
				8"	8-2SI-17	30
				8"	8-2SI-18	30
2-ISI-62	0	SAFETY INJECTION PUMP 22 SUCTION (WELDS)	B	6"	6-2RH-10B	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	27
2-ISI-65	0	SAFETY INJECTION PUMP 21 SUCTION (HANGERS)				
2-ISI-66	1	REFUELING WATER STORAGE (WELDS)	-	14"	14-2SI-1	NO. _____
		TANK DISCHARGE		12"	12-2SI-3A	33
2-ISI-67	0	REFUELING WATER STORAGE (HANGERS)		12"	12-2SI-3B	33
		TANK DISCHARGE		12"	12-2SI-4	33

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

TABLE 3  
PAGE 3 OF 3

NSP ISO NUMBER	REVISION	COMPONENT OR SYSTEM	LOOP	LINE SIZE	LINE NUMBER	UT - CAL. STANDARD
2-ISI-67	0	Continued		10" 12"	10-2SI-8 12-2SI-11	31 33
2-ISI-68	1	BORIC ACID TANK 21	#21			
2-ISI-69	1	RESIDUAL HEAT EXCHANGERS	#21 & #22	-	-	NO. _____
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	1	BORIC ACID SUPPLY (WELDS)	-	8"	8-2SI-18	30
2-ISI-75	1	ACCUMULATOR DISCHARGE	A	12"	12-2SI-28A	11
				12"	12-2SI-29A	11
			B	12"	12-2SI-28B	11
				12"	12-2SI-29B	11
2-ISI-76	1	ACCUMULATOR TANKS	#21 & 22	-	-	NO. _____

APPENDIX B

TABLE I	-	PERSONNEL LISTING
TABLE II	-	ULTRASONIC CALIBRATION BLOCKS
TABLE III	-	PROCEDURE LISTING
TABLE IV	-	EQUIPMENT AND MATERIALS

NORTHERN STATES POWER COMPANY  
PRAIRIE ISLAND UNIT I  
PERSONNEL LISTING

APPENDIX E  
TABLE I  
PAGE 1 of 1

EXAMINER	TITLE	ORGANIZATION	ASNT LEVEL					
			UT	PT	MT	VT	ET	RT
R.G. AUER	TECHNICIAN	LMT	II	II	II	II (1a)	-	-
A.J. HARRY	TECHNICIAN	LMT	I	-	-	-	-	-
R.A. KELLERHALL	SUPERVISOR	LMT	III	III	III	III (1a)	-	-
P.N. NASH	TECHNICIAN	LMT	II	-	II	II (1a)	-	-
K.E. SCHRIVNER	TECHNICIAN	LMT	I	-	-	-	-	-
L.C. DAHLMAN	M & SP SPECIALIST	NSP	II	III	III	III (1a)	-	III
J.F. SCHANEN	M & SP SPECIALIST	NSP	II	II	II	II (1a)	-	-
M.T. ANDERSON	M & SP ENGINEER	NSP	III	II	-	II (1a)	-	III
C. LINDSTROM	ANI	HARTFORD STEAM BOILER INSURANCE COMPANY						

FOOTNOTES:

- (1a) Inspection experience and NDE qualifications were judged to be adequate to perform visual examinations in accordance with NSP-VT-1.
- (2) Organization: (LMT) Lambert, MacGill, Thomas, Inc.  
515 Aldo Avenue Santa Clara, CA 95050

## ULTRASONIC CALIBRATION BLOCKS

PAGE 1 OF

NSP NO.	SIZE & DIA.	PIPE SCHEDULE & THICKNESS	MATERIAL	SERIAL OR HEAT NUMBER	CALIBRATION REPORTS	DATE
30	8"	Sch. 10 .148"	A312 TP-304	647148	RGA-001 RGA-002 RGA-004 RGA-005 PNN-001 PNN-003 PNN-004 PNN-005	9-27-83 9-27-83 9-29-83 9-28-83 9-27-83 9-27-83 9-29-83 9-28-83
33	12"	Sch. 10 .180"	A312 TP-304	27030	RGA-003 PNN-002	9-27-83 9-27-83

NORTHERN STATES POWER COMPANY  
PRAIRIE ISLAND UNIT I  
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-UT-1, REV.1	1	ULTRASONIC EXAMINATION OF PIPE WELDS	6-9-82	NONE	COVER EXAMINATION VOLUME OF S/S PIPING WELDS LESS THAN .200 INCH WALL THICKNESS
NSP-UT-2, REV.1	N/A	AUTOMATIC DATA RECORDING	6-22-83	NONE	
NSP-VT-1, REV.2	N/A	VISUAL EXAMINATION	6-22-83	NONE	

NORTHERN STATES POWER COMPANY  
PRAIRIE ISLAND UNIT I  
EQUIPMENT AND MATERIALS

APPENDIX E  
TABLE IV  
PAGE 1 OF 1

MATERIAL OR EQUIPMENT	TYPE OR SERIAL NUMBER	CALIBRATION DATE OR BATCH NUMBER	REMARKS
<u>ULTRASONIC:</u>			
NORTEC 131D	S/N 128	CAL. 8-10-83	
NORTEC 131D	S/N 167	CAL. 8-29-83	
<u>RECORDERS:</u>			
GILTON	S/N 2091001	CAL. 4-27-83	
GOULD 2200S	S/N 01192	CAL. 8-30-83	
GOULD 220	S/N 17466	CAL. 9-01-83	
<u>TEMPERATURE GAUGES:</u>			
PTC SURFACE THERMOMETER	S/N 536	CAL. 7-26-83	CERTIFIED BY MANUFACTURER
<u>ROMPAS BLOCKS:</u>			
304 S/S	S/N #1	CERT 8-4-81	EARLE M. JORGENSEN CO. APPLIED TEST SYSTEM, INC.
304 S/S	S/N 790392	CERT 6-29-82	
<u>MATERIALS:</u>			
ULTRASONIC COUPLANT	LMT - GEL	BATCH 1110812	
<u>ULTRASONIC TRANSDUCERS:</u>			
	<u>S/N</u>	<u>SIZE</u>	<u>FREQUENCY</u>
HARISONIC	R941	1/4" x 1/4"	5.0 MHZ
HARISONIC	R9167	1/4" x 1/4"	5.0 MHZ
HARISONIC	Q6104	1/4" x 1/4"	5.0 MHZ
HARISONIC	W2124	1/4" x 1/4"	5.0 MHZ
HARISONIC	W2165	1/4" x 1/4"	5.0 MHZ

APPENDIX C

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 55401  
 2.) Plant PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
 Address WELSH, MINNESOTA  
 3.) Plant Unit I 4.) Owner (Certificate of Authorization) ---  
 5.) Commercial Service Date 12-16-73 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>
ASME CLASS II				
C2.0 PIPING PRESSURE BOUNDARY				
C2.1 CIRCUMFERENTIAL BUTT WELDS				
BORIC ACID SUPPLY TO SAFETY INJECTION W-235, 104, 92, 59, 66, 73, 75, 77, 78, 282	NAVCO	---	---	---

FORM NIS-1 (back)

- 8.) Examination Dates 9-27-83 to 9-29-83 9.) Inspection Interval 12-16-73 to 12-16-83
- 10.) Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval.

This report summarizes the inservice inspection examination performed at Prairie Island Nuclear Generating Plant - Unit 1. This inspection was conducted during the period from September 27 to September 29, 1983 in response to the NRC Staff Evaluation Meeting documented April 18, 1983, specifically item 5 of Section 6 which states that 10 welds be examined every six months.

- 11.) Abstract of Conditions Noted.

The results from the inservice inspection examinations indicated that the integrity of the system has been maintained.

- 12.) Abstract of Corrective Measures Recommended and Taken.

No corrective measures were required.

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 12-28 1983 Signed NORTHERN STATES POWER CO. By Ray Chelmer  
 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 & Ice Co. of Hartford Conn. have inspected the components described in this Owner's Data Report during the period 9-27-83 to 9-29-83, 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 December 28 19 83

Ray Chelmer  
 Inspector's Signature

Commissions NB 6932 MIN 200-69  
 National Board, State, Province & No.