September 3, 1980

Revision No. 5 to Prairie Island 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, dated February 1, 1978

Remove the Following Pages	Insert the Following Revision No. 5 Pages
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Use the "Record of Revisions," pages iii and iv to verify your copy of the program manual is complete and up-to-date following entry of this revision.

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NOS. 50-282 LICENSE NOS. DPR-42
50-306 DPR-60

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

SUBMITTED: February 1, 1978

REVISED: Revision 1
September 15, 1978

Revision 2
June 8, 1979

Revision 3
September 19, 1979

Revision 4
April 17, 1980

Revision 5
September 3, 1980

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2.5-10 thru 2.5-11	2
2.5-11A	2
2.5-12	1
2.5-13	Original
2.5-14	1
2.5-15 thru 2.4-24	Original
2.5-25	1
2.5-26	1
2.5-26A	1
2.5-27	Original
2.5-28	Original
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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

PAGE 1 OF 5

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B1.1	B-A	LONGITUDINAL AND CIRCUMFERENTIAL SHELL WELDS IN CORE REGION								REQUIRES THE REMOVAL OF CORE BARREL
		LONGITUDINAL WELDS	NONE	—	—	—		—	—	
		CIRCUMFERENTIAL WELDS	1	U.T.	WELD NO. 3 (ISI-48)	21 FEET (MIN.)	THREE	LOWER SHELL ASSEMBLY TO INTERMEDIATE WELD	50	RELIEF NO. 55
B1.2	B-B	LONGITUDINAL AND CIRCUMFERENTIAL WELDS IN SHELL (OTHER THAN THOSE OF CATEGORY B-A AND B-C) AND MERIDIONAL AND CIRCUMFERENTIAL SEAM WELDS IN BOTTOM HEAD AND CLOSURE HEAD (OTHER THAN THOSE OF CATEGORY B-C)								REQUIRES THE REMOVAL OF CORE BARREL
		LONGITUDINAL WELDS	NONE	—	—	—	—	—	—	
		MERIDIONAL WELDS	NONE	—	—	—	—	—	—	
		CIRCUMFERENTIAL WELDS	3	U.T.	WELD NO.2 (ISI-48)	25 INCHES (MIN.)	THREE	UPPER SHELL ASSEMBLY TO LOWER SHELL ASSEMBLY	5	RELIEF NO. 55
					WELD NO.4 (ISI-48)	25 INCHES (MIN.)	THREE	LOWER TRANSITION HEAD TO SHELL WELD	5	
					WELD NO. 5 (ISI-48)	25 INCHES (MIN.)	THREE	BOTTOM HEAD RING TO LOWER TRANSITION HEAD WELD	5	
B1.3	B-C	VESSEL-TO-FLANGE AND HEAD-TO-FLANGE CIRCUMFERENTIAL WELDS								RELIEF NO. 55
		VESSEL TO FLANGE	1	U.T.	WELD NO.1 (ISI-48)	CLOCKWISE, 14 FT (MIN.)	ONE	VESSEL FLANGE	33	
						CLOCKWISE, 7 FT. (MIN.)	TWO	VESSEL FLANGE	50	
						CLOCKWISE, 21 FT. (MIN.)	THREE	VESSEL FLANGE	100	

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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
		HEAD TO FLANGE	1	U.T.	WELD NO. 6 (ISI-49)	CLOCKWISE, 14 FEET (MIN.)	ONE	HEAD FLANGE	33	
						CLOCKWISE, 14 FEET (MIN.)	TWO	HEAD FLANGE	66	
						CLOCKWISE, 14 FEET (MIN.)	THREE	HEAD FLANGE	100	
B1.4	B-D	PRIMARY NOZZLE-TO-VESSEL WELDS AND NOZZLE INSIDE RADIUSED								EXAMINATION OF INLET NOZZLES REQUIRE REMOVAL OF CORE BARREL RELIEF NO. 55
		REACTOR CORE COOLANT NOZZLES								
		OUTLET NOZZLES	2	U.T.	RCC-A-1(ISI-50)	1 WELD (100%)	ONE	180° (29-RC-1A)	25	
					RCC-B-1(ISI-50)	1 WELD (100%)	TWO	0° (29-RC-1B)	50	
		INLET NOZZLES	2	U.T.	RCC-A-14(ISI-50)	1 WELD (100%)	THREE	120° (27.5-RC-3A)	75	
					RCC-B-14(ISI-50)	1 WELD (100%)	THREE	300° (27.5-RC-3B)	100	
		SAFETY INJECTION NOZZLES	2	U.T.	LOOP A(ISI-30)	1 WELD (100%)	THREE	260° (4-RC-14A)	50	
					LOOP B(ISI-30)	1 WELD (100%)	THREE	80° (4-RC-14B)	100	
B1.5	B-E	VESSEL PENETRATIONS, INCLUDING CONTROL ROD DRIVE AND INSTRUMENTATION PENETRATIONS								
		CONTROL ROD PENETRATIONS	40	V		3 PENETRATIONS (MIN.)	ONE	TOP OF REACTOR	9	PLANT OPERATIONS
						3 PENETRATIONS (MIN.)	TWO	VESSEL CLOSURE HEAD	15	
						4 PENETRATIONS (MIN.)	THREE		25	
		INSTRUMENTATION PENETRATIONS	36	V		3 PENETRATIONS (MIN.)	ONE	UNDER REACTOR VESSEL	8	PLANT OPERATIONS
						3 PENETRATIONS (MIN.)	TWO	BOTTOM HEAD	17	
						3 PENETRATIONS (MIN.)	THREE		25	

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REVISION 5
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NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

PAGE 3 OF 5

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
		REACTOR VESSEL HEAD VENT	1	V	1-RC-36 to RC-8-5	1 PENETRATION EXAMINATION IN ACCORDANCE WITH CATEGORY B-P		1-RC-36 TO RC-8-5		
B1.6	B-F	NOZZLE-TO-SAFE END WELDS								NOZZLE-TO-SAFE END WELD AND SAFE END-TO-PIPE WELD (B4.1) EXAMINE AS ONE. (SAND PLUG REMOVAL REQD.) RELIEF NO. 55
		REACTOR CORE COOLANT NOZZLES			(ISI-50)					
		OUTLET NOZZLE SAFE END WELDS	2	S-U.T.	RCC-A-1S.E.	1 WELD (100%)	ONE	180° (29-RC-1A)	25	
					RCC-B-1S.E.	1 WELD (100%)	TWO	0° (29-RC-1B)	50	
		INLET NOZZLE SAFE END WELDS	2	S-U.T.	RCC-A-14S.E.	1 WELD (100%)	THREE	120° (27.5-RC-3A)	75	
					RCC-B-14S.E.	1 WELD (100%)	THREE	300° (27.5-RC-3B)	100	
		REACTOR VESSEL SAFETY INJECTION NOZZLES	2	S-U.T.	(ISI-30)					
		NOZZLE A SAFE END WELD			WELD NO. 1 S.E.	1 WELD (100%)	ONE	260° (4-RC-14A)	50	
		NOZZLE B SAFE END WELD			WELD NO. 1 S.E.	1 WELD (100%)	THREE	80° (4-RC-14B)	100	
B1.8	B-G-1	CLOSURE STUDS AND NUTS	48	S-U.T.	1 THRU 16	16 (100%)	ONE	0° THRU 120°	33	RELIEF NO. 43
					17 THRU 32	16 (100%)	TWO	120° THRU 240°	66	
					33 THRU 48 (ISI-37)	16 (100%)	THREE	240° THRU 360°	100	
B1.9	B-G-1	LIGAMENTS BETWEEN THREADED STUD HOLES	48	U.T.	4 THRU 14&23 THRU 29	16 (100%)	ONE	VESSEL FLANGE	33	RELIEF NO. 55 CLOSURE HEAD REMOVED
					5,6,16,17 & 37 THRU 42	16 (100%)	TWO	VESSEL FLANGE	54	
					REMAINDER (ISI-48)	16 (100%)	THREE	VESSEL FLANGE	100	
B1.10	B-G-1	CLOSURE WASHERS AND BUSHINGS			(ISI-37)					
		WASHERS	48PRS.	V	1 THRU 16	16 PAIRS (100%)	ONE		33	
					17 THRU 32	16 PAIRS (100%)	TWO		66	
					33 THRU 48	16 PAIRS (100%)	THREE		100	
		BUSHINGS	NONE	—	—	—	—	—	—	

NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B1.1	B-A	LONGITUDINAL AND CIRCUMFERENTIAL WELDS IN CORE REGION								REQUIRES THE REMOVAL OF CORE BARREL
		LONGITUDINAL WELDS	NONE	—	—	—	—	—		
		CIRCUMFERENTIAL WELDS	1	U.T.	WELD NO. 3 (2-ISI-42)	21 FEET (MIN.)	THREE	LOWER SHELL ASSEMBLY TO INTERMEDIATE WELD	50	RELIEF NO. 55
B1.2	B-B	LONGITUDINAL AND CIRCUMFERENTIAL WELDS IN SHELL (OTHER THAN THOSE OF CATEGORY B-A AND B-C) AND MERIDIONAL AND CIRCUMFERENTIAL SEAM WELDS IN BOTTOM HEAD AND CLOSURE HEAD (OTHER THAN THOSE OF CATEGORY B-C)								REQUIRES THE REMOVAL OF THE CORE BARREL
		LONGITUDINAL WELDS	NONE	—	—	—	—	—		
		MERIDIONAL WELDS	NONE	—	—	—	—	—		
		CIRCUMFERENTIAL WELDS	3	U.T.	WELD NO. 2 (2-ISI-42)	25 INCHES (MIN.)	THREE	UPPER SHELL ASSEMBLY TO LOWER SHELL ASSEMBLY	5	RELIEF NO. 55
					WELD NO. 4 (2-ISI-42)	25 INCHES (MIN.)	THREE	LOWER TRANSITION HEAD TO SHELL WELD	5	
					WELD NO. 5 (2-ISI-42)	25 INCHES (MIN.)	THREE	BOTTOM HEAD RING TO LOWER TRANSITION HEAD WELD	5	
B1.3	B-C	VESSEL-TO-FLANGE AND HEAD-TO-FLANGE CIRCUMFERENTIAL WELDS								RELIEF NO. 55
		VESSEL TO FLANGE	1	U.T.	WELD NO. 1 (2-ISI-42)	CLOCKWISE, 14 FT. (MIN.)	ONE	VESSEL FLANGE	33	
						CLOCKWISE, 7 FT. (MIN.)	TWO	VESSEL FLANGE	50	
						CLOCKWISE, 21 FT. (MIN.)	THREE	VESSEL FLANGE	100	

NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
		HEAD TO FLANGE	1	U.T.	WELD NO. 6 (2-ISI-41)	CLOCKWISE, 14 FT. (MIN.)	ONE	HEAD FLANGE	33	
						CLOCKWISE, 14 FT. (MIN.)	TWO	HEAD FLANGE	66	
						CLOCKWISE 14 FT. (MIN.)	THREE	HEAD FLANGE	100	
B1.4	B-D	PRIMARY NOZZLE-TO-VESSEL WELDS AND NOZZLE INSIDE RADIUSED SECTIONS								RELIEF NO. 55 EXAMINATION OF INLET NOZZLES REQUIRE REMOVAL OF CORE BARREL
		REACTOR CORE								
		COOLANT NOZZLES								
		OUTLET NOZZLES	2	U.T.	RCC-A-1 (2-ISI-40)	1 WELD (100%)	ONE	237° (29-2RC-1A)	25	
					RCC-B-1 (2-ISI-40)	1 WELD (100%)	TWO	57° (29-2RC-1B)	50	
		INLET NOZZLES	2	U.T.	RCC-A-14 (2-ISI-40)	1 WELD (100%)	THREE	174° (27.5-2RC-3A)	75	
					RCC-B-14 (2-ISI-40)	1 WELD (100%)	THREE	354° (27.5-2RC-3B)	100	
		SAFETY INJECTION NOZZLES	2	U.T.	LOOP A (2-ISI-40)	1 WELD (100%)	THREE	137° (4-2RC-14A)	50	
					LOOP B (2-ISI-40)	1 WELD (100%)	THREE	317° (4-2RC-14B)	100	
B1.5	B-E	VESSEL PENETRATIONS, INCLUDING CONTROL ROD DRIVE AND INSTRUMENTATION PENETRATIONS								
		CONTROL ROD PENETRATIONS	40	V		3 PENETRATIONS (MIN.)	ONE	TOP OF REACTOR VESSEL CLOSURE HEAD	8	PLANT OPERATIONS
						3 PENETRATIONS (MIN.)	TWO		15	
						4 PENETRATIONS (MIN.)	THREE		25	

NORTHERN STATES POWER CO.
PRAIRIE ISLAND UNIT 2

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

MAJOR ITEM: REACTOR VESSEL

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B1.9	B-G-1	LIGAMENTS BETWEEN THREADED STUD HOLES	48	U.T.	12THRU 22 & 29 THRU 35	16 (100%)	ONE	VESSEL FLANGE	33	RELIEF NO. 55 CLOSURE HEAD REMOVED
					(REPORT LATER)	16 (100%)	TWO	VESSEL FLANGE	54	
					(REPORT LATER)	16 (100%)	THREE	VESSEL FLANGE	100	
					(2-ISI-42)					
B1.10	B-G-1	CLOSURE WASHERS AND BUSHINGS								
		WASHERS	48	V	1 THRU 16	16 PAIRS (100%)	ONE		33	
					17 THRU 32	16 PAIRS (100%)	TWO		66	
					33 THRU 48	16 PAIRS (100%)	THREE		100	
					(2-ISI-39)					
		BUSHINGS	NONE	---	---	---	---	---	---	
B1.11	B-G-2	PRESSURE RETAINING BOLTING	9	V	3 CONOSEAL BOLTS PER MARMON CLAMP (3)	3 BOLTS (100%)	ONE	CLOSURE HEAD 120"	33	
						3 BOLTS (100%)	TWO	CLOSURE HEAD 240"	66	
						3 BOLTS (100%)	THREE	CLOSURE HEAD 360"	100	
					(2-ISI-38)					
B1.12	B-H	INTEGRALLY WELDED VESSEL SUPPORTS	2	U.T.	SUPPORT LUGS A & B	2 LUGS 100%	THREE	LUG A-117° LUG B-297°	100	RELIEF NO. 54 AND 55
					(2-ISI-40)					
B1.13	B-I-1	CLOSURE HEAD CLADDING	6	V-S	HCP-1 & HCP-2	TWO, 36 SQ. IN. AREA	ONE	INTERIOR OF CLOSURE HEAD	---	RELIEF REQUEST NO. 51
					HCP-3 & HCP-4	TWO, 36 SQ. IN. AREAS	TWO		---	
					HCP-5 & HCP-6	TWO, 36 SQ. IN. AREAS	THREE		---	