NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263 LICENSE NOS. DPR-22

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: March 15, 1978

REVISED: Revision 1
August 28, 1978

Revision 2
January 5, 1979

Revision 3
February 26, 1979

Revision 4
July 27, 1979

Revision 5
March 5, 1980

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This report contains a description of our proposed program of inservice inspection and testing of components of the Monticello Nuclear Generating Plant. This program conforms to the requirements of 10 CFR 50, Section 50.55a(g).

The information presented in this section follows the recommendations contained in a letter dated November 24, 1976 from Mr D L Ziemann, Chief, Operating Reactors Branch #2, Division of Operating Reactors, USNRC, and in a letter dated January 16, 1978 from Mr D K Davis, Acting Chief, Operating Reactors Branch #2. The program is updated as required by changes to Section 50.55a(g) published in the Federal Register on October 7, 1979.

Inservice inspection and testing requirements are updated at 120 month intervals to conform to the latest edition and addenda of Section XI of the ASME Code referenced in paragraph (b) of 10 CFR 50, Section 50.55a. This manual will be updated each time changes are made to the inservice inspection and testing program. Deviations from Code requirements are also documented for NRC Staff review in this manual.

The program description is arranged in the following manner:

Nondestructive Examination	
Class 1	- Section 1.1
Class 2	- Section 1.2
Class 3	- Section 1.3
Pressure Testing Program	- Section 2
Inservice Tests of Pumps and Valves	- Section 3
Deviations from Section XI Requirements	- Section 4

Proposed changes to the Technical Specifications which implement this program were submitted to the Commission on August 30, 1977. A summary of these proposed changes is contained in Section 5 of this report.

System drawings showing ASME Code classification boundaries are included in Section 6 of this report. These drawings are used to define pressure test boundaries and identify those Class 3 components subject to visual inspection as part of the nondestructive examination program.

ASME Section XI Nondestructive Examination Program - Class 1

ASME Code Edition and Addenda: 1974 Edition through and including Summer 1975 Addenda

Program Period: February 28, 1978 to June 30, 1981 (Third Inspection Period)

NOTES:

1. The following tables identify the specific Class 1 components and parts to be examined. These tables can be directly correlated with Table IWB-2500 and Table IWB-2600 of Section XI identify the examination method for each listed item. The inspections that were completed during period one and period two are identified in the tables, along with the running percent completed during each of these periods. No effort was made to retrofit items into the first two periods that were not previously required for examination. The tables show the amount of items required to be examined during period three and the corresponding percentage that will have been completed by the end of this period.

2. Repairs will be performed in accordance with the applicable requirements of the latest edition and addenda of the ASME Code, Section XI. However, if rules for a particular repair are not specified in Section XI, the original design specification and Construction Code of the component or system, or later editions of the Construction Code or ASME Code Section III, either in their entirety or portions thereof, may be used.

LEGEND

Examination method:
- V - visual
- U.T. - ultrasonic
- R.T. - radiography
- S - surface examination, either liquid penetrant or magnetic particle

Inspection Period
- ONE - June 30, 1971 to October 30, 1974
- TWO - October 30, 1974 to February 28, 1978
- THREE - February 28, 1978 to June 30, 1981

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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 METHOD	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								RELIEF REQUEST NO. 15
		LONGITUDINAL WELDS	4	UT	VLAA-1 VLAA-2	WELDS ARE NOT ACCESSIBLE	- -	SHELL COURSE 1 75° SHELL COURSE 1 255°	- -	(WELD LENGTHS = 11 FEET) TOP 27" OF WELD SEAMS (SHELL COURSE 1) IN CORE REGION
					VLBA-1 VLBA-2	WELDS ARE NOT ACCESSIBLE	- -	SHELL COURSE 2 45° SHELL COURSE 2 225°	- -	BOTTOM 117" OF WELD SEAMS (SHELL COURSES 2) IN CORE REGION
		CIRCUMFERENTIAL WELDS	1	UT	VCBA-2	WELD IS NOT ACCESSIBLE	-	SHELL COURSE 1 TO 2 ELEVATION 19'6"	-	(WELD LENGTH = 57 FEET)
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)								
		SHELL								(WELD LENGTHS = 11 FEET)
		LONGITUDINAL WELDS	6	UT	VLAA-1 VLAA-2	WELDS ARE NOT ACCESSIBLE	- -	SHELL COURSE 1 75° SHELL COURSE 1 255°	-	RELIEF REQUEST NO. 15
					VLCB-1 VLCB-2	RELIEF REQ'T NO. 16 RELIEF REQ'T NO. 16	- -	SHELL COURSE 3 105° SHELL COURSE 3 285°	- -	RELIEF REQUEST NO. 16
					VLDB-1	(24" EXAMINED) (NONE) 33" 100%	ONE TWO THREE	SHELL COURSE 4 150°	(18%) (18%) 43%	ONLY 57" (43%) OF EACH WELD SEAM, VLDB-1 AND VLDB-2, ARE EXTERNALLY ACCESSIBLE
					VLDB-2	(NONE) (57" EXAMINED) NONE	ONE TWO THREE	SHELL COURSE 4 330°	(0) (43%) 43%	
										RELIEF REQUEST NO. 16
					VLBA-1 VLBA-2	RELIEF REQ'T NO. 16 RELIEF REQ'T NO. 16	- -	SHELL COURSE 2 45° SHELL COURSE 2 225°	- -	TOP 15" OF WELD SEAMS NOT IN CORE REGION

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B1.2	B-B	(CONTINUED)								
		CIRCUMFERENTIAL WELDS	3	UT	VCBB-1	WELD IS NOT ACCESSIBLE	-	BOTTOM HEAD TO COURSE 1 ELEVATION 8'7"	-	RELIEF REQUEST NO. 15
					VCBB-3	WELD IS NOT ACCESSIBLE	-	SHELL COURSE 2 TO 3 ELEVATION 30'6"	-	RELIEF REQUEST NO. 15
					VCBB-4	RELIEF REQ'T NO. 16	-	SHELL COURSE 3 TO 4 ELEVATION 41'6"	-	RELIEF REQUEST NO. 16
		CLOSURE HEAD								
		MERIDIONAL WELDS	6	UT	HMCB-1	(1½ FEET EXAMINED)	ONE	CLOSURE HEAD 30°	(7)	(WELD LENGTHS = 7 FEET)
					HMCB-2	(1½ FEET EXAMINED)		CLOSURE HEAD 90°		
					HMCB-1	(7 FEET EXAMINED)	TWO	CLOSURE HEAD 30°	(57)	
					HMCB-3	(7 FEET EXAMINED)		CLOSURE HEAD 150°		
					HMCB-5	(7 FEET EXAMINED)		CLOSURE HEAD 270°		
					HMCB-4	7 FEET 100%	THREE	CLOSURE HEAD 210°	87	
					HMCB-6	7 FEET 100%		CLOSURE HEAD 330°		
		CIRCUMFERENTIAL WELD	1	UT	HCCB-2	(NONE)	ONE	DOLLAR PLATE WELD	-	(WELD LENGTH = 25 FEET)
						(25 FEET EXAMINED)	TWO		(100%)	
						NONE	THREE		100	
		BOTTOM HEAD			FIGURE 5					
		MERIDIONAL WELDS	8	UT	HMAB-1	WELDS ARE NOT ACCESSIBLE	-	BOTTOM HEAD 0°	-	RELIEF REQUEST NO. 16
					HMAB-2			45°		
					HMAB-3			90°		
					HMAB-4			135°		
					HMAB-5			180°		
					HMAB-6			225°		
					HMAB-7			270°		
					HMAB-8			315°		
		MERIONAL WELDS THROUGH DOLLAR PLATE ASSEMBLY	2	UT	HMAB-9	WELDS ARE NOT ACCESSIBLE	-	BOTTOM HEAD 12°	-	RELIEF REQUEST NO. 16
					HMAB-10			195°		

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B1.2	B-B	(CONTINUED)								
		CIRCUMFERENTIAL WELD (PLATE)	1	UT	HCAB-1	(2.2 FT EXAMINED)	ONE	0° TO 18°	(5%)	(WELD LENGTH = 44 FEET)
						(NONE)	TWO	-	(5%)	
						2.2 FEET 100%	THREE	180° TO 198°	10%	
B1.3	B-C	VESSEL-TO-FLANGE AND HEAD-TO-FLANGE CIRCUMFERENTIAL WELDS								(WELD LENGTH = 57 FEET)
		VESSEL-TO-FLANGE	1	UT	VCBC-5	(18.8 FT EXAMINED)	ONE	STUD HOLE NO. 64 TO 21	(33%)	EXAMINATION FROM FLANGE SURFACE.
						(19.4 FT EXAMINED)	TWO	STUD HOLE NO. 21 TO 43	(67%)	
						18.8 FEET 100%	THREE	STUD HOLE NO. 43 TO 64	100%	
		HEAD-TO-FLANGE	1	UT	HCCC-1	(18.8 FT EXAMINED)	ONE	STUD HOLE NO. 64 TO 22	(33%)	(WELD LENGTH = 57 FEET)
						(46.3 FT EXAMINED)	TWO	STUD HOLE NO. 21 TO 1 AND NO. 36 TO 43	(100%)	
						18.8 FEET 100%	THREE	STUD HOLE NO. 43 TO 64	100%	
B1.4	B-D	PRIMARY NOZZLE-TO-VESSEL WELDS AND NOZZLE INSIDE RADIUSED SECTION	29	-	FIGURE 4					
		CLOSURE HEAD								
		HEAD VENT (N7)	1	UT	HVAD-1	(EXAMINED)	ONE	CLOSURE HEAD TDC	(33)	
		HEAD SPRAY (N6A)	1	UT	HHDD-1	(EXAMINED)	ONE	CLOSURE HEAD 90°	(67)	
		HEAD SPARE (N6B)	1	UT	HSBD-1	1 WELD 100%	THREE	CLOSURE HEAD 180°	100	
		BOTTOM HEAD								
		STANDBY LIQUID CONTROL (N10)	1	UT	CPAD-1	TO THE EXTENT POSSIBLE	TWO	BOTTOM HEAD 350°	-	RELIEF REQUEST NO. 15
		VESSEL SHELL								
		MAIN STEAM A (N3A)	4	UT	MSAD-1	(EXAMINED)	ONE	SHELL COURSE 4 72°	(25%)	
		MAIN STEAM B (N3B)			MSBD-1	1 WELD 100%	THREE	SHELL COURSE 4 108°	75%	
		MAIN STEAM C (N3C)			MSCD-1	(EXAMINED)	TWO	SHELL COURSE 4 252°	(50%)	
		MAIN STEAM D (N3D)			MSDD-1	1 WELD 100%	THREE	SHELL COURSE 4 288°	100%	
		FEEDWATER A (N4A)	4	UT	FWAD-1	(EXAMINED)	ONE	SHELL COURSE 3 45°	(25%)	
		FEEDWATER B (N4B)			FWBD-1	(EXAMINED)	TWO	SHELL COURSE 3 135°	(50%)	
		FEEDWATER C (N4C)			FWCD-1	(EXAMINED)	TWO	SHELL COURSE 3 225°	(75%)	
		FEEDWATER D (N4D)			FWDD-1	1 WELD 100%	THREE	SHELL COURSE 3 315°	100%	

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B1.4	B-D	(CONTINUED)								
		VESSEL SHELL								
		CORE SPRAY A (N5A)	2	UT	CSAD-1	(EXAMINED)	THREE	SHELL COURSE 3 90°	100	
		CORE SPRAY B (N5B)			CSBD-1	(EXAMINED)	TWO	SHELL COURSE 3 270°	(50)	
		CONTROL ROD HYDRAULIC RETURN (N9)	1	UT	CRAD-1	(EXAMINED)	ONE&TWO	SHELL COURSE 3 65°	(100)	
		RECIRCULATION OUTLET A (N1A)	2	UT	RCAD-1	(EXAMINED)	ONE	SHELL COURSE 1 0°	(100)	
		RECIRCULATION OUTLET B (N1B)			RCBD-1	(EXAMINED)	ONE	SHELL COURSE 1 180°	(100)	
						1 WELD 100%	THREE		100	RESCHEDULED FOR EXAMINATION
		RECIRCULATION INLET NOZZLES	10	UT						
		INLET A (N2A)			RRAD-1	(EXAMINED)	ONE	SHELL COURSE 1 30°	(10)	
		INLET D (N2D)			RRDD-1	(EXAMINED)	ONE	SHELL COURSE 1 120°	(20)	
		INLET J (N2J)			RRJD-1	(EXAMINED)	ONE	SHELL COURSE 1 300°	(30)	
		INLET C (N2C)			RRCD-1	(EXAMINED)	TWO	SHELL COURSE 1 90°	(40)	
		INLET E (N2E)			RRED-1	(EXAMINED)	TWO	SHELL COURSE 1 150°	(50)	
		INLET G (N2G)			RRGD-1	(EXAMINED)	TWO	SHELL COURSE 1 240°	(60)	
		INLET B (N2B)			RRBD-1	1 WELD 100%	THREE	SHELL COURSE 1 60°	70	
		INLET F (N2F)			RRFD-1	1 WELD 100%	THREE	SHELL COURSE 1 210°	80	
		INLET H (N2H)			RRHD-1	1 WELD 100%	THREE	SHELL COURSE 1 270°	90	
		INLET K (N2K)			RRKD-1	1 WELD 100%	THREE	SHELL COURSE 1 330°	100	
		JET PUMP INSTRUMENT NOZZLE	2	UT						
		NOZZLE A (N8A)			JPAD-1	(EXAMINED)	ONE	SHELL COURSE 1 60°	(50)	
		NOZZLE B (N8B)			JPBD-1	1 WELD 100%	THREE	SHELL COURSE 1 240°	100	
B1.5	B-E	VESSEL PENETRATIONS, INCLUDING CONTROL ROD DRIVE AND INSTRUMENTATION PENETRATIONS								
		CONTROL ROD DRIVE PENETRATIONS	121	V	FIGURE 1	RELIEF REQ'T NO. 17	-	UNDER REACTOR VESSEL BOTTOM HEAD	-	RELIEF REQUEST NO. 17

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B1.5	B-E	(CONTINUED)								
		INSTRUMENTATION PENETRATIONS	4	V	FIGURE 4	1 WELD 100%	THREE		25	
		NOZZLE N11A			VIAE-1			SHELL COURSE 4 40°		
		NOZZLE N11B			VIBE-1			SHELL COURSE 4 220°		
		NOZZLE N12A			VICE-1			SHELL COURSE 3 40°		
		NOZZLE N12B			VIDE-1			SHELL COURSE 3 220°		
		REACTOR VESSEL BOTTOM HEAD DRAIN (N15)	1	V	HDAE-1	RELIEF REQ'T NO. 17	-	BOTTOM HEAD	-	RELIEF REQUEST NO. 17
		REACTOR VESSEL CLOSURE HEAD FLANGE LEAKAGE SENSORS	2	V						
		NOZZLE N13			VFAE-1	RELIEF REQ'T NO. 18	-	VESSEL FLANGE (DRYWELL)	-	RELIEF REQUEST NO. 18
		NOZZLE N14			VFBE-1			VESSEL FLANGE (DRYWELL)		
B1.6	B-F	NOZZLE-TO-SAFE END WELDS	(19)							
		CLOSURE HEAD								
		HEAD VENT (N7)	1	PT-UT	HVAF-2	(EXAMINED)	ONE	CLOSURE HEAD TDC	(33)	
		HEAD SPRAY (N6A)	1		RHDF-2	(EXAMINED)	ONE	CLOSURE HEAD 90°	(67)	
		HEAD SPARE (N6B)	1		HSBF-2	1 WELD 100%	THREE	CLOSURE HEAD 180°	100	
		BOTTOM HEAD								
		STANDBY LIQUID CONTROL (N10)	1	PT-UT	CPAF-2	PARTIALLY ACCESSIBLE	THREE	BOTTOM HEAD 350°	100	RELIEF REQUEST NO. 19
		VESSEL SHELL								
		CORE SPRAY A (N5A)	2	PT-UT	CSAF-2	(EXAMINED)	TWO	SHELL COURSE 3 90°	(50)	
		CORE SPRAY B (N5B)			CSBF-2	(EXAMINED)	TWO	SHELL COURSE 3 270°	(100)	
		CONTROL ROD HYDRAULIC RETURN (N9)	1	PT-UT	CRAF-2	(EXAMINED)	TWO	BASELINE	(100)	REPLACED WITH CAP 1977
						1 WELD 100%	THREE	SHELL COURSE 3 65°	100%	

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B1.6	B-F	(CONTINUED)								
		VESSEL SHELL								
		RECIRCULATION OUTLET A (N1A)	2	PT-UT	RCAF-2	(EXAMINED)	ONE	SHELL COURSE 1 0°	(50)	BOTH SAFE END WELDS (A&B) WERE EXAMINED DURING PERIOD ONE PER PLANT TECH. SPEC.
		RECIRCULATION OUTLET B (N1B)			RCBF-2	(EXAMINED) 1 WELD 100%	ONE THREE	SHELL COURSE 1 180°	(100) 100	
		RECIRCULATION INLET	(10)	PT-UT						
		INLET A (N2A)			RRAF-2	(EXAMINED)	ONE	SHELL COURSE 1 30°	(10)	
		INLET D (N2D)			RRDF-2	(EXAMINED)	ONE	SHELL COURSE 1 120°	(20)	
		INLET J (N2J)			RRJF-2	(EXAMINED)	ONE	SHELL COURSE 1 300°	(30)	
		INLET C (N2C)			RRCF-2	(EXAMINED)	TWO	SHELL COURSE 1 90°	(40)	
		INLET E (N2E)			RREF-2	(EXAMINED)	TWO	SHELL COURSE 1 150°	(50)	
		INLET G (N2G)			RRGF-2	(EXAMINED)	TWO	SHELL COURSE 1 240°	(60)	
		INLET B (N2B)			RRBF-2	1 WELD 100%	THREE	SHELL COURSE 1 60°	70	
		INLET F (N2F)			RRFF-2	1 WELD 100%	THREE	SHELL COURSE 1 210°	80	
		INLET H (N2H)			RRHF-2	1 WELD 100%	THREE	SHELL COURSE 1 270°	90	
		INLET K (N2K)			RRKF-2	1 WELD 100%	THREE	SHELL COURSE 1 330°	100	
		JET PUMP INSTRUMENTATION	2	PT-UT						
		NOZZLE A (N8A)			JPAF-2	(EXAMINED)	ONE	SHELL COURSE 1 60°	(50)	
		NOZZLE B (N8B)			JPBF-2	1 WELD 100%	THREE	SHELL COURSE 1 240°	100	
		INSTRUMENTATION LINES	4	PT-UT						
		NOZZLE A (N11A)			VIAF-2	1 WELD 100%	THREE	SHELL COURSE 4 40°	25	
		NOZZLE B (N11B)			VIBF-2	1 WELD 100%	THREE	SHELL COURSE 4 220°	50	
		NOZZLE C (N12A)			VICF-2	1 WELD 100%	THREE	SHELL COURSE 3 40°	75	
		NOZZLE D (N12B)			VIDF-2	1 WELD 100%	THREE	SHELL COURSE 3 220°	100	
B1.7 & B1.8	B-G-1	CLOSURE STUDS AND NUTS	64		FIGURE 3					
		INPLACE		UT		(23 EXAMINED)	ONE	-	(36)	
		or				(23 EXAMINED)	TWO	-	(72)	
	B-G-2	WHEN REMOVED		SURFACE & UT		23 STUDS 100%	THREE	-	100	

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B1.9	B-G-1	LIGAMENTS BETWEEN THREADED STUD HOLES	64	UT	FIGURE 3	(24 EXAMINED) (23 EXAMINED) 21 EXAMINE	ONE TWO THREE	STUD HOLE 1 THRU 22 STUD HOLE 21 THRU 43 STUD HOLE 43 THRU 64	(37) (73) 100	
B1.10	B-G-1	CLOSURE WASHERS	64	V	WASHER PAIRS	(64 EXAMINED)	ONE	REMOVED FROM VESSEL	(100)	BUSHINGS COINCIDENT
		AND BUSHINGS	64	V	BUSHINGS (REMARKS)	(64 EXAMINED) 64 PAIRS 100%	TWO THREE		(100) 100	WITH STUD REMOVAL AND LIGAMENT EXAM
B1.11	B-G-2	PRESSURE RETAINING BOLTING		V						
		HEAD VENT (N7)	8			8 BOLTS 100%	THREE	CLOSURE HEAD TDC	100	
		HEAD SPRAY (N6A)	8			8 BOLTS 100%	THREE	CLOSURE HEAD 90°	100	
		HEAD SPARE (N6B)	8			8 BOLTS 100%	THREE	CLOSURE HEAD 180°	100	
B1.12	B-H	INTEGRALLY WELDED VESSEL SUPPORTS								
		SUPPORT SKIRT	1	UT	HCAH-2	(5'8" EXAMINED) ≥ 5' 100%	ONE THREE	BOTTOM HEAD-OPENINGS 120° THRU BIOLOGICAL SHLD 300°	(5) 10	ONLY TWO AREAS OF THE WELD ARE ACCESSIBLE
		VESSEL STABILIZER LUGS	4	S	RPV LUGS	ACCESSIBLE AREAS	THREE	SHELL COURSE 4 AT 0°, 90°, 180°, AND 270°	-	RELIEF REQUEST NO. 16
B1.13	B-I-1	CLOSURE HEAD CLADDING	6 PATCHES	V-PT	RELIEF REQUEST NO. 20	2-36 IN^2 PATCHES	THREE		-	RELIEF REQUEST NO. 20
B1.14	B-I-1	VESSEL CLADDING	6 PATCHES	V	-	2-36 IN^2 PATCHES	THREE		-	
B1.15	B-N-1	VESSEL INTERIOR	-	V	SPACE ABOVE AND BELOW THE REACTOR CORE THAT IS MADE ACCESSIBLE FOR EXAMINATION BY THE REMOVAL OF COMPONENTS DURING NORMAL REFUELING OUTAGE.	VISUALLY ACCESSIBLE COMPONENTS	THREE		100	PERFORMED IN CONJUNCTION WITH B1.16

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.1

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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
B1.16	B-N-2	INTERIOR ATTACHMENTS AND CORE SUPPORT STRUCTURES	-	V	ATTACHMENTS AND CORE SUPPORT STRUCTURES	VISUALLY ACCESSI-BLE ATTACHMENTS AND SUPPORTS	THREE		100	PERFORMED IN CONJUNC-TION WITH B1.15
B1.17	B-N-3	CORE SUPPORT STRUCTURES	-	-	-	-	-	-	-	NOT APPLICABLE TO BOILING WATER REACTORS
B1.18	B-O	CONTROL ROD DRIVE HOUSING	121	UT	HOUSING WELDS FICURE 1	3 WELDS 100%	THREE	UNDER VESSEL	10	24 PERIPHERAL HOUSINGS
B1.19	B-P	EXEMPTED COMPONENTS								
		CLOSURE HEAD FLANGE SENSORS	2	V	VFAE-1 VFBE-1	REMARKS REMARKS	THREE THREE	VESSEL FLANGE 0° VESSEL FLANGE 6°	-	HYDROSTATICALLY PRESSURE TESTED TO IWA-5000 AND IWB-5000 AT END OF TEN YEAR PERIOD PLUS SYSTEM LEAKAGE EXAM EACH SCHED-ULED REFUELING OUTAGE. NOTE B1.5

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.2

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MAJOR ITEM: PRESSURIZER

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
B2.0	-	PRESSURIZERS	NONE	-	REMARKS	- -	-	-	-	NOT APPLICABLE DUE TO THE DESIGN OF THIS PLANT.

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.3

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MAJOR ITEM: HEAT EXCHANGERS AND STEAM GENERATORS

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHOD	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B3.0	-	HEAT EXCHANGERS AND STEAM GENERATORS	NONE	-	REMARKS	- -	-	-	-	NOT APPLICABLE DUE TO THE DESIGN OF THIS PLANT.

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.4

MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.1	B-F	SAFE-END TO PIPING AND SAFE-END IN BRANCH PIPING WELDS								RELIEF REQUEST NO. 21
		CORE SPRAY A	3	PT-UT	BUTTWELDS 8" ISI-6A	(1 WELD EXAMINED) (2 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL TW7-8"EF	(33) (100) 100	AS THE RESULT OF AUGMENTED INSPECTIONS, THESE 3 WELDS WERE EXAMINED THREE TIMES DURING PERIOD TWO.
		CORE SPRAY B	3	PT-UT	BUTTWELDS 8" ISI-6B	(NONE) (3 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL TW11-8"EF	- (100) 100	AS THE RESULT OF AUGMENTED INSPECTIONS, THESE 3 WELDS WERE EXAMINED THREE TIMES DURING PERIOD TWO.
		HIGH PRESSURE COOLANT INJECTION - STEAM	2	PT-UT	BUTTWELDS 8" ISI-7	(NONE) (NONE) 2 WELDS 100%	ONE TWO THREE	DRYWELL PS18-8"ED	- - 100	
		REACTOR WATER CLEANUP	1	PT-UT	BUTTWELD 4" ISI-9	(NONE) (1 WELD EXAMINED) NONE	ONE TWO THREE	DRYWELL REW3-4"EF	- (100) 100	AS THE RESULT OF AUGMENTED INSPECTIONS, THIS WELD WAS EXAMINED TWICE DURING PERIOD TWO.
		RESIDUAL HEAT REMOVAL REW-10	1	PT-UT	BUTTWELD 18" ISI-11A	(1 WELD EXAMINED) (REMARKS) NONE	ONE TWO THREE	DRYWELL REW10-18"ED	(100) (100) 100	AS THE RESULT OF AUGMENTED INSPECTIONS, THIS WELD WAS EXAMINED AGAIN IN PERIOD TWO.
		RESIDUAL HEAT REMOVAL TW20	3	PT-UT	BUTTWELDS 16" ISI-11B	(NONE) (1 WELD EXAMINED) 2 WELD 100%	ONE TWO THREE	TW20-16"DB	- (33) 100	
		RESIDUAL HEAT REMOVAL TW30	3	PT-UT	BUTTWELDS 16" ISI-11C	(2 WELDS EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	TW30-16"DB	(67) (100) 100	
B4.2 B4.3 B4.4	B-G-1	PRESSURE-RETAINING BOLTS AND STUDS (2 INCH AND LARGER/DIA.)	NONE							NO ITEMS TO B-G-1

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TABLE 1.4

MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.5	B-J	CIRCUMFERENTIAL AND LONGITUDINAL WELDS								RELIEF REQUEST NO. 21
		LONGITUDINAL WELDS	REMARKS	UT	REMARKS	AS REQUIRED	-			MINIMUM OF ONE FOOT OF LONGITUDINAL WELD EACH DIRECTION IN CONJUNCTION WITH CIRCUMFERENTIAL WELD SCHEDULED, WHEN APPLICABLE
		CIRCUMFERENTIAL WELDS								
		MAIN STEAM A	21	UT	BUTTWELDS	(4 WELDS EXAMINED)	ONE		(19)	
					18"	(WELDS EXAMINED)	TWO		(29)	
					ISI-1	2 WELDS 100%	THREE	DRYWELL PS1-18"ED	38	
			6	UT	BUTTWELDS	(3 WELDS EXAMINED)	ONE		(50)	
					6"	(NONE)	TWO		(50)	
					ISI-1	1 WELD 100%	THREE	DRYWELL PS1-6"ED	67	
		MAIN STEAM B	26	UT	BUTTWELDS	(5 WELDS EXAMINED)	ONE		(19)	
					18"	(2 WELDS EXAMINED)	TWO		(27)	
					ISI-2	3 WELDS 100%	THREE	DRYWELL PS2-18"ED	38	
			3	UT	BUTTWELDS	(2 WELDS EXAMINED)	ONE		(67)	
					6"	(NONE)	TWO		(67)	
					ISI-2	(NONE)	THREE	DRYWELL PS2-6"ED	67	
		MAIN STEAM C	27	UT	BUTTWELDS	(8 WELDS EXAMINED)	ONE		(29)	
					18"	(2 WELDS EXAMINED)	TWO		(37)	
					ISI-3	3 WELDS 100%	THREE	DRYWELL PS3-18"ED	48	
			3	UT	BUTTWELDS	(2 WELDS EXAMINED)	ONE		(67)	
					6"	(NONE)	TWO		(67)	
					ISI-3	NONE	THREE	DRYWELL PS3-6"ED	67	
		MAIN STEAM D	24	UT	BUTTWELDS	(5 WELDS EXAMINED)	ONE		(21)	
					18"	(2 WELDS EXAMINED)	TWO		(29)	
					ISI-4	2 WELDS 100%	THREE	DRYWELL PS4-18"ED	38	

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TABLE 1.4

MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.5	B-J	(CONTINUED)								
		MAIN STEAM D	6	UT	BUTTWELDS 6" ISI-4	(3 WELDS EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL PS4-6"ED	(50) (66) 83	
		FEEDWATER A	12	UT	BUTTWELDS 10" ISI-5A	(1 WELD EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2B-10"ED	(8) (17) 25	
		FEEDWATER B	10	UT	BUTTWELDS 10" ISI-5A	(NONE) (3 WELDS EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2B-10"ED	- (30) 40	
		FEEDWATER A	12	UT	BUTTWELDS 14" ISI-5A	(5 WELDS EXAMINED) (1 WELDS EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2B-14"ED	(41) (50) 58	
		FEEDWATER C	10	UT	BUTTWELDS 10" ISI-5B	(NONE) (2 WELDS EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2A-10"ED	- (20) 30	
		FEEDWATER D	12	UT	BUTTWELDS 10" ISI-5B	(1 WELD EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2A-10"ED	(8) (17) 25	
		FEEDWATER D	12	UT	BUTTWELDS 14" ISI-5B	(5 WELDS EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL FW2A-14"ED	(42) (50) 58	
		CORE SPRAY A	18	UT	BUTTWELDS 8" ISI-6A	(5 WELDS EXAMINED) (6 WELDS EXAMINED) 1 WELD 100%	ONE TWO THREE	DRYWELL TW7-8"EF	(28) (61) 67	AS THE RESULT OF AUGMENTED INSPECTIONS, 2 OF THE 5 WELDS EXAMINED IN PERIOD ONE WERE RE-EXAMINED THREE TIMES IN PERIOD TWO. IN ADDITION, 5 OF THE WELDS EXAMINED IN PERIOD TWO WERE EACH EXAMINED THREE TIMES DURING THAT PERIOD.

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MAJOR ITEM: PIPING PRESSURE BOUNDARY

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 SYS A NUMBER	RUNNING PERCENT	REMARKS
B4.5	B-J	(CONTINUED)								
		CORE SPRAY 8	16	UT	BUTTWELDS 8" ISI-6A	(4 WELDS EXAMINED) (5 WELDS EXAMINED) 1 WELD 100%	ONE TWO THREE	VAULT TW11-8"EF	(25) (56) 63	AS THE RESULT OF AUGMENTED INSPECTION, 2 OF THE 4 WELDS EXAMINED IN PERIOD ONE WERE RE-EXAMINED THREE TIMES IN PERIOD TWO. IN ADDITION, 5 OF THE WELDS EXAMINED IN PERIOD TWO WERE EACH EXAMINED THREE TIMES DURING THAT PERIOD.
		HIGH PRESSURE COOLANT INJECTION - STEAM	16	UT	BUTTWELDS 8" ISI-7	(4 WELDS EXAMINED) (1 WELD EXAMINED) 1 WELD 100%	ONE TWO THREE	STEAM CHASE PS18-8"ED	(25) (31) 38	
		REACTOR WATER CLEANUP	17	UT	BUTTWELDS 8" ISI-9	(NONE) (5 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL REW3-4"EF	- (29) 41	AS THE RESULT OF AUGMENTED INSPECTIONS, 2 WELDS WERE EXAMINED TWICE IN PERIOD TWO.
		RESIDUAL HEAT REMOVAL RHW10	20	UT	BUTTWELDS 18" ISI-11A	(1 WELD EXAMINED) (7 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL REW10-18"ED	(5) (40) 30	
		RESIDUAL HEAT REMOVAL TW20	19	UT	BUTTWELDS 16" ISI-11B	(2 WELD EXAMINED) (3 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL TW20-16"DB	(10) (26) 37	
			2	UT	BUTTWELDS 18" ISI-11B	(NONE) (2 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL TW20-16"DB	- (100) 100	
		RESIDUAL HEAT REMOVAL TW30	20	UT	BUTTWELDS 16" ISI-11C	(8 WELDS EXAMINED) (NONE) 2 WELDS 100%	ONE TWO THREE	DRYWELL TW30-16"DB	(40) (40) 50	

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MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.5	B-J	(CONTINUED)								
		RESIDUAL HEAT REMOVAL TW30	2	UT	BUTTWELDS 18" ISI-11C	(NONE) (2 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL TW30-16"DB	- (100) 100	AS A RESULT OF AUGMENTED INSPECTIONS, THESE TWO WELDS WERE EXAMINED TWICE IN PERIOD TWO.
		RESIDUAL HEAT REMOVAL TW36	16	UT	BUTTWELDS 4" ISI-11D	(1 WELD EXAMINED) (4 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL TW36-4"ED	(6) (31) 44	
		REACTOR CORE INJECTION COOLANT - STEAM	15	UT	BUTTWELDS 3" ISI-12	(NONE) (2 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL TS17-3"ED	- (13) 27	
		RECIRCULATION A	16	UT	BUTTWELDS 28" ISI-13A	(1 WELD EXAMINED) (1 WELD EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL REW13A-28"	(6) (13) 25	
			1	UT	BUTTWELD 4" ISI-13A	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	DRYWELL REW26-4"	- - 100	
		RECIRCULATION B	15	UT	BUTTWELDS 28" ISI-13B	(1 WELD EXAMINED) (1 WELD EXAMINED) 2 WELDS 100%	ONE TWO THREE	DRYWELL REW13B-28"	(7) (13) 27	
			1	UT	BUTTWELD 4" ISI-13B	(NONE) (NONE) NONE	ONE TWO THREE	DRYWELL REW27-4"	- - -	PERCENTAGE COVERED BY RECIRC. A (REW26-4)
		RECIRCULATION BY-PASS LINE A & LINE B	29	UT	BUTTWELDS 4" ISI-13AA & ISI-13BB	(NONE) (100% EXAMINED) 4 WELDS 100%	ONE TWO THREE	DRYWELL REW24-4"	- (100) 14	LINES REPLACED IN PERIOD TWO AND A COMPLETE BASELINE WAS PERFORMED. AFTER TWO YEARS SERVICE 100% (29 WELDS) WAS EXAMINED.
		RECIRCULATION MANIFOLD (A&B)	17	UT	BUTTWELDS 22" ISI-13C & ISI-13D	(1 WELD EXAMINED) (1 WELD EXAMINED) 3 WELDS 100%	ONE TWO THREE	DRYWELL REW32-22"	(6) (12) 29	

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TABLE 1.4

MAJOR ITEM: PIPING PRESSURE BOUNDARY

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHOD	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B4.5	B-J	(CONTINUED)								
		RECIRCULATION RISERS								
		RISER F	4	UT	BUTTWELDS 12" ISI-13C	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	DRYWELL RSW14-12"	- - 25	
		RISER G	4	UT	BUTTWELDS 12" ISI-13C	(NONE) (4 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW15-12"	- (100) 100	
		RISER H	4	UT	BUTTWELDS 12" ISI-13C	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	DRYWELL RSW16-12"	- - 25	
		RISER J	4	UT	BUTTWELDS 12" ISI-13C	(1 WELD EXAMINED) (3 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW17-12"	(25) (100) 100	
		RISER K	4	UT	BUTTWELDS 12" ISI-13C	(1 WELD EXAMINED) (NONE) 1 WELD 100%	ONE TWO THREE	DRYWELL RSW18-12"	(25) (25) 50	
		RISER A	4	UT	BUTTWELDS 12" ISI-13D	(1 WELD EXAMINED) (3 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW23-12"	(25) (100) 100	
		RISER B	4	UT	BUTTWELDS 12" ISI-13D	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	DRYWELL RSW22-12"	- - 25	
		RISER C	4	UT	BUTTWELDS 12" ISI-13D	(NONE) (4 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW21-12"	- (100) 100	
		RISER D	4	UT	BUTTWELDS 12" ISI-13D	(1 WELD EXAMINED) (3 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW20-12"	(25) (100) 100	
		RISER E	4	UT	BUTTWELDS 12" ISI-13D	(NONE) (4 WELDS EXAMINED) NONE	ONE TWO THREE	DRYWELL RSW19-12"	- (100) 100	

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MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.5	B-J	(CONTINUED)								
		HEAD SPARE	1	UT	BUTTWELD	(NONE)	ONE		-	
					4"	(NONE)	TWO		-	
					ISI-14	1 WELD 100%	THREE	CLOSURE HEAD	100	
		HEAD VENT	1	UT	BUTTWELD	(NONE)	ONE		-	
					4"	(NONE)	TWO		-	
					ISI-15	1 WELD 100%	THREE	CLOSURE HEAD	100	
		JET PUMP (N8A)	2	UT	BUTTWELD	(2 WELDS EXAMINED)	ONE	COURSE I 60° & 240°	(100)	
		INSTRUMENTATION (N8B)			4"	(NONE)	TWO		(100)	
					ISI-16	(NONE)	THREE		100	
		REACTOR VESSEL BOTTOM HEAD DRAIN	37	UT	BUTTWELD	(NONE)	ONE		-	PORTION OF SYSTEM IS INACCESSIBLE
					2"	(NONE)	TWO		-	
					ISI-21	3 WELDS 100%	THREE	BOTTOM HEAD	8	
		MAIN STEAM CONDENSATE LEAK OFF	10	UT	BUTTWELDS	(NONE)	ONE		-	
					3"	(NONE)	TWO		-	
					ISI-23	1 WELD 100%	THREE	STEAM CHASE PS13-3"ED	10	
		CRD SCRAM HEADER								
		CRD26A-8"DB A 8"	3	UT	BUTTWELDS	(NONE)	ONE		-	
					8"	(NONE)	TWO		-	
					ISI-24A	1 WELD 100%	THREE	AUX. BLDG.	33	
		B 8"	3	UT	BUTTWELDS	(NONE)	ONE		-	
					8"	(NONE)	TWO		-	
					ISI-24B	1 WELD 100%	THREE	AUX. BLDG.	33	

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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
B4.5	B-J	(CONTINUED)										
		CRD13A-4"DB	A	4"	10	UT	BUTTWELDS 4" ISI-24A	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG.	- - 10	
			B	4"	10	UT	BUTTWELDS 4" ISI-24B	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG.	- - 10	
		CRD15A-4"DB	A	4"	4	UT	BUTTWELDS 4" ISI-24A	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG.	- - 25	
			B	4"	4	UT	BUTTWELDS 4" ISI-24B	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG.	- - 25	
		CRD14A-6"DB	A	6"	8	UT	BUTTWELD 6" ISI-24A	(NONE) (NONE) 1 WELD 10[illegible]	ONE TWO THREE	AUX. BLDG.	- - 13	
			B	6"	9	UT	BUTTWELD 6" ISI-24B	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG.	- - 11	
		SCRAM DISCHARGE VOLUME TANK			2	PT	BUTTWELDS 12" ISI-24C	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	AUX. BLDG. CRD18-12"DB	- - 50	
B4.6	B-J	BRANCH PIPE CONNECTION WELDS EXCEEDING SIX INCH DIAMETER						"RUNNING PERCENT" COVERS ALL BRANCH CONNECTIONS				RELIEF REQUEST NO. 21 LONGITUDINAL WELDS AS B4.5 COVERAGE REQUIRE-MENTS
		MAIN STEAM B			1	UT	WELD-MSBJ-22 8" ISI-2	(1 WELD EXAMINED)	TWO	DRYWELL PS2-18"ED	(20)	TO - 8" RPCI ISI-7
		RECIRCULATION A			1		WELD-RCAJ-7 18" ISI-13A	(1 WELD EXAMINED)	ONE	DRYWELL RRW13A-28"	(10)	TO - 18" RPR RRW 10 ISI-11A

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TABLE 1.4

MAJOR ITEM: PIPING PRESSURE BOUNDARY

SUB ITEM	EXAM. CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHOD	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPEC-TION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B4.6	B-J	(CONTINUED)								
		RECIRCULATION B	-		WELD-RHBJ-1 18" ISI-13B	- -	-	REW18-28"	-	FROM - RHR TW20 - ISI-11B
		RECIRCULATION MANIFOLD A								
		RISER F	1	UT	WELD-RMAJ-3 12" ISI-13C	1 WELD 100%	THREE	DRYWELL REW32-22"	50	
		RISER G	1		WELD-RMAJ-5 12" ISI-13C	- -	-	REW32-22"	-	
		RISER J	1		WELD-RMAJ-12 12" ISI-13C	- -	-	REW32-22"	-	
		RISER K	1		WELD-RMAJ-14 12" ISI-13C	- -	-	REW32-22"	-	
		RECIRCULATION MANIFOLD B								
		RISER A	1	UT	WELD-RMBJ-14 12" ISI-13D	- -	-	REW32-22"	-	
		RISER B	1		WELD-RMBJ-12 12" ISI-13D	(1 WELD EXAMINED)	TWO	DRYWELL REW32-22"	(30)	
		RISER D	1		WELD-RMBJ-5 12" ISI-13D	- -	-	REW32-22"	-	
		RISER E	1		WELD-RMBJ-3 12" ISI-13D	(1 WELD EXAMINED)	TWO	REW32-22"	(40)	

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MAJOR ITEM: PIPING PRESSURE BOUNDARY

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
B4.7	B-J	BRANCH PIPE CONNECTION WELDS SIX INCH DIAMETER AND SMALLER								
		MAIN STEAM A	6	S	BRANCH WELDS	(3 WELDS EXAMINED)	ONE		(50)	
					6"	(1 WELD EXAMINED)	TWO		(67)	
					ISI-1	1 WELD 100%	THREE	DRYWELL PS1-18"ED	83	
		MAIN STEAM B	3	S	BRANCH WELDS	(2 WELDS EXAMINED)	ONE		(67)	
					6"	(NONE)	TWO		(67)	
					ISI-2	NONE	THREE	DRYWELL PS2-18"ED	67	
		MAIN STEAM C	4	S	BRANCH WELDS	(2 WELDS EXAMINED)	ONE		(50)	
					6"	(NONE)	TWO		(50)	
					ISI-3	1 WELD 100%	THREE	DRYWELL PS3-18"ED	75	
		MAIN STEAM D	6	S	BRANCH WELDS	(4 WELDS EXAMINED)	ONE		(67)	
					6"	(NONE)	TWO		(67)	
					ISI-4	NONE	THREE	DRYWELL PS4-18"ED	67	
		RECIRCULATION A	3	S	BRANCH WELD	(NONE)	ONE		-	
					4"	(2 WELDS EXAMINED)	TWO		(67)	
					ISI-13A	NONE	THREE	DRYWELL REW13A-28"	67	
		RECIRCULATION B	4	S	BRANCH WELD	(NONE)	ONE		-	
					4"	(3 WELDS EXAMINED)	TWO		(75)	
					ISI-13B	NONE	THREE	DRYWELL REW13B-28"	75	
		CRD SCRAM HEADER CRD 18-12" DB	3	S	BRANCH WELD	(NONE)	ONE	REACTOR	-	
					2"	(NONE)	TWO		-	
					ISI-24C	1 WELD 100%	THREE	BLDG CRD 18-2" DB	33	
B4.8	B-J	SOCKET WELDS								
		MAIN STEAM A	11	S	SOCKET WELD	(1 WELD EXAMINED)	ONE		(9)	EXCLUDED FROM EXAM CATEGORY B-J REQUIREMENTS BY IWB-1220(b)(1) AND INCLUDED UNDER B4.11 OF THIS TABLE.
					2"	(NONE)	TWO		(9)	
					ISI-1	REMARKS*	THREE	PS15A-2"ED	9	
		MAIN STEAM B	8	S	SOCKET WELDS	(1 WELD EXAMINED)	ONE		(50)	
					2"	(NONE)	TWO		(50)	
					ISI-2	REMARKS*	THREE	PS15B-2"ED	50	
		MAIN STEAM C	8	S	SOCKET WELD	(1 WELD EXAMINED)	ONE		(100)	
					2"	(NONE)	TWO		(100)	
					ISI-3	REMARKS*	THREE	PS15C-2"ED	100	

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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
B4.8	B-J	(CONTINUED)								*EXCLUDED FROM EXAM CATEGORY B-J REQUIREMENTS BY IWB-1220(b)(1) AND INCLUDED UNDER B4.11 OF THIS TABLE.
		MAIN STEAM D	1	S	SOCKET WELD 2" ISI-4	(1 WELD EXAMINED) (NONE) REMARKS*	ONE TWO THREE	PS15D-2"ED	(100) (100) 100	
		REACTOR WATER CLEAN UP	3	S	SOCKET WELD 2" ISI-21	(NONE) (1 WELD EXAMINED) NONE	ONE TWO THREE	REW31-2"ED REW3-4"EF	- (33) 33	
		STANDBY LIQUID CONTROL	15	S	SOCKET WELDS 1½" ISI-22	NONE (15 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	CH2-1½"EF, CH2-1½"DC	- (100) 100	
		RECIRCULATION A (DRAIN TO CRW)	APPROX. 9 - 15	S	SOCKET WELDS 2"	RELIEF REQUEST NO. 22	-	REW28-2"EF	-	RELIEF REQUEST NO. 22
		RECIRCULATION B (DRAIN TO CRW)	APPROX. 9 - 15	S	SOCKET WELDS 2"	RELIEF REQUEST NO. 22	-	REW29-2"EF	-	RELIEF REQUEST NO. 22
		RECIRCULATION MANIFOLD A BYPASS 2" OF M02-65A	14	S	SOCKET WELDS 2" ISI-25	(NONE) (2 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	VB5-2"DC	- (14) 29	
		RECIRCULATION MANIFOLD B BYPASS 2" OF M02-65B	14	S	SOCKET WELDS 2" ISI-25	(NONE) (2 WELDS EXAMINED) 2 WELDS 100%	ONE TWO THREE	VB6-2"DC	- (14) 29	
		CRD SCRAM HEADER DISCHARGES								
		A	3	S	SOCKET WELDS 2" ISI-24C	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	CRD16A-2"DB	- - 13	
		B	28	S	SOCKET WELDS 2" ISI-24C	(NONE) (NONE) 3 WELDS 100%	ONE TWO THREE	CRD16B-2"DB	- - 11	
		CRD SCRAM HEADER DRAIN	8	S	SOCKET WELDS 2" ISI-24C	(NONE) (NONE) 1 WELD 100%	ONE TWO THREE	CRD18-2"DB	- - 13	
		INSTRUMENT LINES	4	S	SOCKET WELDS 3" x 1½" ISI-18, 19	(NONE) (NONE) NONE	ONE TWO THREE	1½"-DC	- - -	INCLUDED UNDER B4.11 OF THIS TABLE

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SUB ITEM	EXAM. CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPECTION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B4.9	B-K-1	INTEGRALLY WELDED SUPPORTS								RELIEF REQUEST NO. 21
		MAIN STEAM A	3	UT	WELDED SUPPORT	(NONE)	ONE		-	STEAMLINES (18") COMBINED FOR PERCENTAGE REQUIREMENT
					18"	(1 SUPPORT 100%)	TWO		(10)	
					ISI-1	NONE	THREE	PS1-18"ED	-	
		MAIN STEAM B	2	UT	WELDED SUPPORT	(NONE)	ONE		-	
					18"	(NONE)	TWO		-	
					ISI-2	NONE	THREE	PS2-18"ED	-	
		MAIN STEAM C	2	UT	WELDED SUPPORT	(NONE)	ONE		-	
					18"	(NONE)	TWO		-	
					ISI-3	1 SUPPORT 100%	THREE	PS3-18"ED	(20)	
		MAIN STEAM D	3	UT	WELDED SUPPORT	(NONE)	ONE		-	
					18"	(NONE)	TWO		-	
					ISI-4	1 SUPPORT 100%	THREE	PS4-18"ED	30	
		FEEDWATER A	2	UT	WELDED SUPPORT	(1 EXAMINED)	ONE		(16)	FEEDWATER 10" COMBINED FOR PERCENTAGE REQUIREMENT
					10"	(NONE)	TWO		-	
					ISI-5A	NONE	THREE	FW2B-10"ED	-	
		FEEDWATER B	1	UT	WELDED SUPPORT	(NONE)	ONE		-	
					10"	(NONE)	TWO		-	
					ISI-5A	NONE	THREE	FW2B-10"ED	-	
		FEEDWATER C	1	UT	WELDED SUPPORT	(NONE)	ONE		-	
					10"	(NONE)	TWO		-	
					ISI-5B	NONE	THREE	FW2A-10"ED	-	
		FEEDWATER D	2	UT	WELDED SUPPORT	(1 EXAMINED)	ONE		(33)	
					10"	(NONE)	TWO		-	
					ISI-5B	NONE	THREE	FW2A-10"ED	-	
		FEEDWATER A	2	UT	WELDED SUPPORT	(1 EXAMINED 100%)	ONE		(25)	
					14"	(NONE)	TWO		-	
					ISI-5A	NONE	THREE	FW2B-14"ED	-	
		FEEDWATER B	2	UT	WELDED SUPPORT	(NONE)	ONE		-	FEEDWATER 14" COMBINED FOR PERCENTAGE REQUIREMENT
					14"	(NONE)	TWO		-	
					ISI-5B	NONE	THREE	FW2A-14"ED	-	
		HIGH PRESSURE COOLANT INJECTION	1	UT	WELDED SUPPORT	(NONE)	ONE		-	
					8"	(NONE)	TWO		-	
					ISI-7	1 SUPPORT 100%	THREE	PS18-8"ED	100	

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SUB ITEM	EXAM. CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPECTION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B4.9	B-K-1	(CONTINUED)								
		REACTOR WATER CLEAN UP	1	UT	WELDED SUPPORT 4" ISI-9	(NONE) (NONE) 1 SUPPORT 100%	ONE TWO THREE	DRYWELL REW3-4"EF	- - 50	*RWCU (1) AND RHR (1) COMBINED FOR (4") PERCENTAGE REQUIREMENTS
		RESIDUAL HEAT REMOVAL TW36	1	UT	WELDED SUPPORT 4" ISI-11D	(NONE) (NONE) REMARKS*	ONE TWO THREE	TW36-4"ED	- - -	*RWCU (1) AND RHR (1) COMBINED FOR (4") PERCENTAGE REQUIREMENTS
		REACTOR CORE INJECTION COOLANT - STEAM	1	UT	WELDED SUPPORT 3" ISI-12	(NONE) (NONE) NONE	ONE TWO THREE	PSI7-3"ED	- - -	
		RESIDUAL HEAT REMOVAL REW10	2	UT	WELDED SUPPORT 18" ISI-11A	(NONE) (NONE) 1 SUPPORT 100%	ONE TWO THREE	REW10-18"ED	- - 50	
		RESIDUAL HEAT REMOVAL TW20	3	UT	WELDED SUPPORT 16" ISI-11B	(1 EXAMINED) (NONE) NONE	ONE TWO THREE	TW20-16"DB	(33) (33) 33	
		RESIDUAL HEAT REMOVAL TW30	3	UT	WELDED SUPPORT 16" ISI-11C	(1 EXAMINED) (NONE) NONE	ONE TWO THREE	TW30-16"DB	(33) (33) 33	
		RECIRCULATION A	11	UT	WELDED SUPPORT 28" ISI-13A	(NONE) (1 EXAMINED) 2 SUPPORT 100%	ONE TWO THREE	REW13A-28"	- (9) 27	
		RECIRCULATION B	11	UT	WELDED SUPPORT 28" ISI-13B	(NONE) (1 EXAMINED) 2 SUPPORTS 100%	ONE TWO THREE	REW13B-28"	REMARKS	RECIRCULATION A(11) AND B(11) COMBINED FOR PERCENTAGE
		RECIRCULATION MANIFOLD (A&B)	10	UT	WELDED SUPPORT 22" ISI-13C & ISI-13D	(NONE) (1 EXAMINED) 2 SUPPORTS 100%	ONE TWO THREE	REW32-22"	- (10) 30	
B4.10	B-K-2	SUPPORT COMPONENTS								RELIEF REQUEST NO. 23
		MAIN STEAM A	3	V	SUPPORTS 18" ISI-1	(3 EXAMINED) (NONE) NONE	ONE TWO THREE	PSI-18"ED	(100) (100) 100	

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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
B4.10	B-K-2	(CONTINUED)								
		MAIN STEAM B	2	V	SUPPORTS	(2 EXAMINED)	ONE		(100)	
					18"	(NONE)	TWO		(100)	
					ISI-2	2 SUPPORTS 100%	THREE	DRYWELL PS2-18"ED	100	
		MAIN STEAM C	2	V	SUPPORTS	(2 EXAMINED)	ONE		(100)	
					18"	(NONE)	TWO		(100)	
					ISI-3	NONE	THREE	PS3-18"ED	100	
		MAIN STEAM D	3	V	SUPPORTS	(2 EXAMINED)	ONE		(67)	
					18"	(1 EXAMINED)	TWO		(100)	
					ISI-4	1 SUPPORT 100%	THREE	DRYWELL PS4-18"ED	100	
		FEEDWATER A	3	V	SUPPORTS	(3 EXAMINED)	ONE		(100)	
					10"	(NONE)	TWO		(100)	
					ISI-5A	NONE	THREE	FW2B-10"ED	100	
		FEEDWATER A	2	V	SUPPORT	(2 EXAMINED)	ONE		(100)	
					14"	(NONE)	TWO		(100)	
					ISI-5A	1 SUPPORT 100%	THREE	DRYWELL FW2B-14"ED	100	
		FEEDWATER B	3	V	SUPPORT	(3 EXAMINED)	ONE		(100)	
					10"	(NONE)	TWO		(100)	
					ISI-5B	1 SUPPORT 100%	THREE	DRYWELL FW2A-10"ED	100	
		FEEDWATER B	2	V	SUPPORT	(2 EXAMINED)	ONE		(100)	
					14"	(NONE)	TWO		(100)	
					ISI-5B	NONE	THREE	FW2A-14"ED	100	
		CORE SPRAY A	2	V	SUPPORT	(2 EXAMINED)	ONE		(100)	
					8"	(NONE)	TWO		(100)	
					ISI-6A	NONE	THREE	TW7-8"EF	100	
		CORE SPRAY B	2	V	SUPPORT	(NONE)	ONE		-	
					8"	(1 EXAMINED)	TWO		(50)	
					ISI-6B	1 SUPPORT 100%	THREE	TW11-8"EF	100	
		REACTOR WATER CLEAN UP	2	V	SUPPORT	(NONE)	ONE		-	
					4"	(1 EXAMINED)	TWO		(50)	
					ISI-9	1 SUPPORT 100%	THREE	REW3-4"EF	100	
		RESIDUAL HEAT REMOVAL REW10	4	V	SUPPORT	(NONE)	ONE		-	
					18"	(2 EXAMINED)	TWO		(50)	
					ISI-11A	2 SUPPORTS 100%	THREE	REW10-18"ED	100	

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B4.10	B-K-2	(CONTINUED)								
		RESIDUAL HEAT REMOVAL TW20	3	V	SUPPORTS 16" ISI-11B	(NONE) (1 EXAMINED) 2 SUPPORTS 100%	ONE TWO THREE	DRYWELL TW20-16"DB	- (33) 100	
		RESIDUAL HEAT REMOVAL TW30	2	V	SUPPORTS 16" ISI-11C	(NONE) (NONE) 2 SUPPORTS 100%	ONE TWO THREE	DRYWELL TW30-16"DB	- - 100	
		REACTOR CORE INJECTION COOLANT - STEAM	2	V	SUPPORTS 3" ISI-12	(NONE) (1 EXAMINED) 1 SUPPORT 100%	ONE TWO THREE	DRYWELL PS17-3"ED	- (50) 100	
		RECIRCULATION A	10	V	SUPPORTS 28" ISI-13A	(NONE) (3 EXAMINED) 7 SUPPORTS 100%	ONE TWO THREE	DRYWELL REW13A-28"	- (36) 100	
		RECIRCULATION B	10	V	SUPPORTS 28" ISI-13B	(NONE) (3 EXAMINED) 7 SUPPORTS 100%	ONE TWO THREE	DRYWELL REW13B-28"	- (39) 100	
		RECIRCULATION BY-PASS (A & B)	2	V	SUPPORTS 4" ISI-13AA & ISI-13BB	(NONE) (NONE) 2 SUPPORTS 100%	ONE TWO THREE	DRYWELL REW24 & 25-4"	- - 100	
		RECIRCULATION MANIFOLD A & BYPASS LINE 2"	6	V	SUPPORTS 22" ISI-13C	(NONE) (2 EXAMINED) 4 SUPPORTS 100%	ONE TWO THREE	DRYWELL REW32-22"	- (33) 100	(2") BYPASS OF MO2-65A
		RECIRCULATION MANIFOLD B & BYPASS LINE 2"	6	V	SUPPORTS 22" ISI-13D	(NONE) (NONE) 6 SUPPORTS 100%	ONE TWO THREE	DRYWELL REW32-22"	- - 100	(2") BYPASS OF MO2-65B
		RECIRCULATION RISERS MANIFOLD A	5	V	SUPPORTS 12" ISI-13C	(NONE) (3 EXAMINED) 2 SUPPORTS 100%	ONE TWO THREE	RISER G REW15-12" RISER J REW17-12"	- (60) 100	
		RECIRCULATION RISERS MANIFOLD B	5	V	SUPPORTS 12" ISI-13D	(NONE) (3 EXAMINED) 2 SUPPORTS 100%	ONE TWO THREE	RISER C REW21-12" RISER D REW20-12"	- (60) 100	

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B4.10	B-K-2	(CONTINUED)								
		CRD SCRAM HEADER A			SUPPORTS		REMARKS			
			4	V	8"	1 SUPPORT 100%	THREE	CRD26A-8"DB	25	EXAMINATIONS NOT REQUIRED DURING PERIOD ONE AND TWO.
			4	V	4"	1 SUPPORT 100%	THREE	CRD13A-4"DB	25	
			3	V	6"	1 SUPPORT 100%	THREE	CRD14A-6"DB	33	
			3	V	4"	1 SUPPORT 100%	THREE	CRD15A-4"DB	33	
					ISI-24A					
		CRD SCRAM HEADER B			SUPPORTS		REMARKS			
			4	V	8"	1 SUPPORT 100%	THREE	CRD26B-8"DB	25	EXAMINATIONS NOT REQUIRED DURING PERIOD ONE AND TWO.
			4	V	4"	1 SUPPORT 100%	THREE	CRD13B-4"DB	25	
			3	V	6"	1 SUPPORT 100%	THREE	CRD14B-6"DB	33	
			4	V	4"	1 SUPPORT 100%	THREE	CRD15B-4"DB	25	
					ISI-24B					
B4.11	B-P	EXEMPTED COMPONENTS								
		HYDROSTATICALLY PRESSURE TEST-ED TO IWA-5000 AND IWB-5000 AT END OF TEN YEAR INTERVAL PLUS SYSTEM LEAKAGE EXAM EACH SCHEDULED REFUELING OUTAGE	-	V	COMPONENTS	EXAMINED TO IWA-5000 AND IWB-5000	-	PRIMARY SYSTEM LINES THAT ARE EXEMPTED BY IWB-1220(b)	-	
		VENT LINE					-	V15-1"ED		P & ID M-115
		INSTRUMENT LINES					-	1"DC N11A, N11B, N12A, N12B		M-117
							-	FROM 1"DC RECIRCULATION RISERS		M-117
							-	FROM 1"EF REW28-2" & REW29-2"		M-117
		CONTROL ROD DRIVE SYSTEM					-	1" LINES FROM CRD HYDRAULIC UNITS		M-119
		STANDBY LIQUID CONTROL					-	1" LINES FROM LIQUID CONTROL N-10		M-116
		OTHER COMPONENTS					-	LINES AS REQUESTED FOR RELIEF AND LINES AS INDICATED BY IWB-1220 EXCLUSIONS		—

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B4.12	B-G-2	PRESSURE-RETAINING BOLTING	REMARK*							RESCHEDULED ALL B-G-2 BOLTS FOR PERIOD THREE.
		MAIN STEAM A	4	V	BLIND FLANGE 6" ISI-1	(3 EXAMINED) (4 EXAMINED) 4 FLANGES 100%	ONE TWO THREE	DRYWELL PS1-18"ED	(75) (100) 100	
		MAIN STEAM B	1	V	BLIND FLANGE 6" ISI-2	NONE (1 EXAMINED) 1 FLANGE 100%	ONE TWO THREE	DRYWELL PS2-18"ED	- (100) 100	*THE NUMBER IN THIS COLUMN IDENTIFIES THE NUMBER OF FLANGES.
		MAIN STEAM C	1	V	BLIND FLANGE 6" ISI-3	(NONE) (1 EXAMINED) 1 FLANGE 100%	ONE TWO THREE	DRYWELL PS3-18"ED	- (100) 100	
		MAIN STEAM D	4	V	BLIND FLANGE 6" ISI-4	(NONE) (4 EXAMINED) 4 FLANGES 100%	ONE TWO THREE	DRYWELL PS4-18"ED	- (100) 100	
		RESIDUAL HEAT REMOVAL TW36	2	V	FLANGE/SPOOL 4" ISI-11D	(NONE) (2 EXAMINED) 2 FLANGES 100%	ONE TWO THREE	TW36-4"ED	- (100) 100	
		RECIRCULATION A	1	V	BLIND FLANGE 4" ISI-13A	(NONE) (NONE) 1 FLANGE 100%	ONE TWO THREE	DRYWELL REW26-4"	- - 100	
		RECIRCULATION B	1	V	BLIND FLANGE 4" ISI-13B	(NONE) (NONE) 1 FLANGE 100%	ONE TWO THREE	DRYWELL REW27-4"	- - 100	
		RECIRCULATION BYPASS LINE A	1	V	BLIND FLANGE 4" ISI-13AA	(1 EXAMINED) (NONE) 1 FLANGE 100%	ONE TWO THREE	DRYWELL REW24-4"	(100) (100) 100	
		RECIRCULATION BYPASS LINE B	1	V	BLIND FLANGE 4" ISI-13BB	(NONE) (1 EXAMINED) 1 FLANGE 100%	ONE TWO THREE	DRYWELL REW25-4"	- (100) 100	

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.5

MAJOR ITEM: PUMP PRESSURE BOUNDARY

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
B5.1 & B5.3	B-G-1	PRESSURE-RETAINING BOLTS AND STUDS, IN PLACE								RELIEF REQUEST NO. 24
	B-G-1	(2 INCH AND LARGER DIA.)								
		RECIRCULATION FLANGE BOLTS								
		PUMP A	16	V-UT	P-200A 2.75" X 19.25" ISI-13A	(1-16 EXAMINED) (1-10 EXAMINED) 6 BOLTS (11-16) NOTE B5.2	ONE TWO THREE	LOOP A, RECIRCULATION	(100) (163) 37	
		PUMP B	16	V-UT	P-200B 2.75" X 19.25" ISI-13B	(1-16 EXAMINED) (1-9 EXAMINED) 7 BOLTS (10-16)	ONE TWO THREE	LOOP B, RECIRCULATION	(100) (156) 43	
B5.2 & B5.3	B-G-1	PRESSURE-RETAINING BOLTS AND STUDS, WHEN REMOVED								
	B-G-1	(2 INCH AND LARGER DIA.)								
		RECIRCULATION FLANGE BOLTS								
		PUMP A OR B	16	V-S UT	P-200A /P-200B 2.75" X 19.25" ISI-13A /13B	(NONE) (NONE) 16 BOLTS (1-16) NOTE B5.7	ONE TWO THREE	RECIRCULATION LOOP A&B	- - 100	WHEN PUMP IS DISASSEM-BLED (RELIEF REQ NO. 41)
B5.4	B-K-1	INTEGRALLY WELDED SUPPORTS	-	-	REMARKS		-		-	INCLUDED IN B4.9 OF TABLE 1.4
B5.5	B-K-2	SUPPORT COMPONENTS	-	-	REMARKS		-		-	INCLUDED IN B4.10 OF TABLE 1.4
B5.6	B-L-1	PUMP CASING WELDS	NONE	-			-		-	

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.5

PAGE 2 OF 2

MAJOR ITEM: PUMP PRESSURE BOUNDARY

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	INSPECTION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B5.7	B-L-2	PUMP CASINGS								
		RECIRCULATION								
		PUMP A or B	1	V	P-200A/P-200B INTERIOR - ISI-13A/13B	(NONE) (NONE) 1 PUMP 100% INTERIOR SURFACE NOTE B5.2	ONE TWO *THREE	RECIRCULATION A or B	- - 100	*WHEN PUMP IS DISASSEMBLED (RELIEF REQUEST NO. 41)
B5.8	B-P	EXEMPTED COMPONENTS	-	-	REMARKS		-		-	INCLUDED IN SYSTEMS LISTED IN B4.11 OF TABLE 1.4
B5.9	B-G-2	PRESSURE-RETAINING BOLTING								PERIOD 1 REPLACED ALL GLAND BOLTS, PUMP A AND B.
		(LESS THAN 2 INCH DIA.)								
		RECIRCULATION GLAND BOLTS								
		PUMP A	10	V	P-200A 1.375" DIA. ISI-13A	(10 EXAMINED) (10 EXAMINED) 10 BOLTS 100%	ONE TWO THREE	LOOP A, RECIRCULATION	(100) (200) 100	VISUAL EXAMS FOR PERIOD ONE AND TWO INCLUDED VOLUMETRIC FOR GLAND BOLTS, PUMP A AND B.
		PUMP B	10	V	P-200B 1.375" DIA. ISI-13B	(10 EXAMINED) (10 EXAMINED) 10 BOLTS 100%	ONE TWO THREE	LOOP B, RECIRCULATION	(100) (200) 100	

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NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

MAJOR ITEM: VALVE PRESSURE BOUNDARY

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
B6.1 AND B6.3	B-G-1	PRESSURE-RETAINING BOLTS AND STUDS, IN PLACE								RELIEF REQUEST NO. 24
	B-G-1	(2 INCH AND LARGER DIA.)			VALVE TYPE NO.					
		RECIRCULATION A	24	V-UT	GATE MO2-53A 2" X 15.5" ISI-13A	(NONE) (1-12 EXAMINED) 12 BOLTS (13-24) NOTE B6.2	ONE TWO THREE	DRYWELL REW13A-28"	- (50) 100	
			24	V-UT	GATE MO2-43A 2" X 15.5" ISI-13A	(NONE) (1-12 EXAMINED) 12 BOLTS (13-24)	ONE TWO THREE	DRYWELL REW13A-28"	- (50) 100	
		RECIRCULATION B	24	V-UT	GATE MO2-53B 2" X 15.5" ISI-13B	(NONE) (1-12 EXAMINED) 12 BOLTS (13-24)	ONE TWO THREE	DRYWELL REW13B-28"	- (50) 100	
			24	V-UT	GATE MO2-43B 2" X 15.5" ISI-13B	(NONE) (1-12 EXAMINED) 12 BOLTS (13-24)	ONE TWO THREE	DRYWELL REW13B-28"	- (50) 100	
B6.2 AND B6.3	B-G-1	PRESSURE-RETAINING BOLTS AND STUDS, WHEN REMOVED								
	B-G-1	(2 INCH AND LARGER DIA.)								
		RECIRCULATION GATE VALVES MO2-53A MO2-43A MO2-53B MO2-43B	24	V-S UT	GATE VALVES 2" X 15.5" ISI-13A/13B	(NONE) (NONE) 24 BOLTS (1-24) NOTE B6.7	ONE TWO THREE	RECIRCULATION LOOP A & B	- - 100	WHEN VALVES DISASSEMBLED (RELIEF REQ NO. 42)
B6.4	B-K-1	INTEGRALLY WELDED SUPPORTS	-	-	REMARKS		-		-	SUPPORTS ARE LISTED UNDER B4.9 OF TABLE 1.4
B6.5	B-K-2	SUPPORT COMPONENTS	-	-	REMARKS		-		-	SUPPORTS ARE LISTED UNDER B4.10 OF TABLE 1.4
B6.6	B-M-1	VALVE BODY WELDS	NONE							

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NORTHERN STATES POWER CO.

MONTICELLO

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

MAJOR ITEM: VALVE PRESSURE BOUNDARY

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
B6.7	B-M-2	VALVE BODIES								
		ATWOOD MORRILL GLOBE VALVE	8	V	A02-80A A02-86A	EXAMINE THE INTER-NALS OF ONE VALVE.	THREE	MAIN STEAM A PS1-18-ED	100	
					A02-80B A02-86B			MAIN STEAM B PS2-18-ED		
					A02-80C A02-86C			MAIN STEAM C PS3-18-ED		
					A02-80D A02-86D			MAIN STEAM D PS4-18-ED		
		TARGET ROCK RELIEF VALVES	8	V	RV2-71A RV2-71E	EXAMINE THE INTER-NALS OF ONE VALVE.	THREE	MAIN STEAM A PS1-6"ED	100	VALVE LOCATIONS, NUMBERING AND AMOUNT SUBJECT TO CHANGE AT PLANTS OPTION.
					RV2-71B RV2-70G			MAIN STEAM B PS2-6"ED		
					RV2-71C RV2-71H			MAIN STEAM C PS3-6"ED		
					RV2-71D RV2-71F			MAIN STEAM D PS4-6"ED		
		ANCHOR CHECK VALVE	4	V	FW-97-2 FW-94-2	EXAMINE THE INTER-NALS OF ONE VALVE.	THREE	FEEDWATER A FW2B-14"ED	100	
					FW-97-1 FW-94-1			FEEDWATER B FW2A-14"ED		
		ATWOOD MORRILL CHECK VALVE	2	V	A010-46B	EXAMINE THE INTER-NALS OF ONE VALVE.	THREE	RHR - TW20 TW20-16"DB	100	
					A010-46A			RHR - TW30 TW30-16"DB		
		ROCKWELL CHECK VALVE	2	V	A014-13B	EXAMINE THE INTER-NALS OF ONE VALVE.	THREE	CORE SPRAY A TW7-8"EF	100	
					A014-13A			CORE SPRAY B TW11-8"EF		

NORTHERN STATES POWER CO.

MONTICELLO

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

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MAJOR ITEM: VALVE PRESSURE BOUNDARY

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
B6.7	B-M-2	(CONTINUED)								
		ANCHOR GATE VALVE	15	V	POS-1758 MO-1754	EXAMINE THE INTER-NALS OF ONE VALVE	THREE	CORE SPRAY A TW7-8"EF	100	
					POS-1757 MO-1753			CORE SPRAY B TW11-8"EF		
					MO-2034 MO-2035			HPCI - STM. PS18-8"ED		
					MO-2029 MO-2030 POS-2028			RHR - REW10 REW10-18"ED		
					FW-98-2			FEEDWATER A FW2B-14"ED		
					FW-98-1			FEEDWATER B FW2A-14"ED		
					POS-2019 MO-2015			RHR - TW20 TW20-16"DB		
					POS-2018 MO-2014			RHR - TW30 TW30-16"DB		
		CRANE CHAPMAN GATE VALVE	6	V	M02-65A M02-65B	EXAMINE THE INTER-NALS OF ONE VALVE.	* THREE	RECIRCULATION REW32-22"	100	*WHEN VALVES ARE DISASSEMBLED (RELIEF REQUEST NO. 42)
					M02-53A M02-43A M02-53B M02-43B			RECIRCULATION A REW13A-28" RECIRCULATION B REW13B-28"		
B6.8	B-P	EXEMPTED COMPONENTS	-	-	REMARK	-	-		-	INCLUDED IN B4.11 AT TABLE 1.4
B6.9	B-G-2	PRESSURE-RETAINING BOLTING								
		(LESS THAN 2 INCH DIA.)			VALVE TYPE / NO.					
		MAIN STEAM A	2	V	GLOBE A02-80A	(100% EXAMINED)	ONE		(50)	
					A02-86A	100%	THREE	PS1-18"ED	100	

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NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

MAJOR ITEM: VALVE PRESSURE BOUNDARY

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
B6.9	B-G-2	(CONTINUED)								
		MAIN STEAM B	2	V	GLOBE A02-80B A02-86B ISI-2	(100% EXAMINED) 100%	TWO THREE	PS2-18"ED	(50) 100	
		MAIN STEAM C	2	V	GLOBE A02-86C A02-80C ISI-3	(100% EXAMINED) 100%	TWO THREE	PS3-18"ED	(50) 100	
		MAIN STEAM D	2	V	GLOBE A02-80D A02-86D	(100% EXAMINED) 100%	TWO THREE	PS4-18"ED	(50) 100	
		MAIN STEAM A	2	V	RELIEF RV2-71E RV2-71A ISI-1	(100% EXAMINED) 100%	ONE THREE	PS1-6"ED	(50) 100	
		MAIN STEAM B	2	V	RELIEF RV2-71B RV2-71B&C ISI-2	(100% EXAMINED) 100%	ONE THREE	PS2-6"ED	(50) 100	
		MAIN STEAM C	2	V	RELIEF RV2-71C RV2-71B ISI-3	(100% EXAMINED) 100%	ONE THREE	PS3-6"ED	(50) 100	
		MAIN STEAM D	2	V	RELIEF RV2-71F RV2-71D ISI-4	(100% EXAMINED) 100%	ONE THREE	PS4-6"ED	(50) 100	
		FEEDWATER A	3	V	GATE FW-98-2 CHECK FW-97-2 CHECK FW-94-2 ISI-5A	(100% EXAMINED) (100% EXAMINED) 100%	ONE ONE THREE	FW2A-14"ED	- (67) 100	
		FEEDWATER B	3	V	CHECK FW-94-1 CHECK FW-97-1 GATE FW-98-1 ISI-5B	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	FW2A-14"ED	- (67) 100	
		HIGH PRESSURE COOLANT INJECTION - STEAM	2	V	GATE MO-2034 MO-2035 ISI-7	(100% EXAMINED) 100%	TWO THREE	PS18-8"ED	(50) 100	

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2/26/79

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

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MAJOR ITEM: VALVE PRESSURE BOUNDARY

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
B6.9	B-G-2	(CONTINUED)								
		CORE SPRAY A	3	V	GATE MO-1754 CHECK A014-13B GATE POS-1758 ISI-6A	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	TW7-8"EF	- (67) 100	
		CORE SPRAY B	3	V	GATE MO-1753 CHECK A014-13A GATE POS-1757 ISI-6B	(100% EXAMINED) 100% 100%	TWO THREE THREE	TW11-8"EF	(33) - 100	
		REACTOR WATER CLEAN UP	3	V	GATE MO-2398 GATE RC-1 GATE MO-2397 ISI-9	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	REW3-4"EF	- (67) 100	
		RESIDUAL HEAT REMOVAL REW10	3	V	GATE POS-2028 GATE MO-2030 GATE MO-2029 ISI-11A	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	REW10-18"ED	- (67) 100	
		RESIDUAL HEAT REMOVAL TW20	3	V	GATE POS-2019 CHECK A010-46B GATE MO-2015 ISI-11B	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	TW20-16"DB	- (67) 100	
		RESIDUAL HEAT REMOVAL TW30	3	V	GATE MO-2014 GATE POS-2018 CHECK A010-46A ISI-11C	(100% EXAMINED) (100% EXAMINED) 100%	TWO TWO THREE	TW30-16"DB	- (67) 100	
		RESIDUAL HEAT REMOVAL TW36	2	V	CHECK RHR-21 GATE MO-2027 ISI-11D	(100% EXAMINED) 100%	TWO THREE	TW36-4"ED	(50) 100	
		REACTOR CORE INJECTION COOLANT - STEAM	2	V	GATE MO-2076 MO-2075 ISI-12	(100% EXAMINED) 100%	TWO THREE	PS17-3"ED	(50) 100	
		RECIRCULATION A BYPASS	1	V	GATE MO2-54A - ISI-13AA	(100% EXAMINED) NONE	TWO THREE	REW24-4"	(100) -	

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8/28/79

NORTHERN STATES POWER CO.
MONTICELLO NUCLEAR GENERATING PLANT

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 1.6

MAJOR ITEM: VALVE PRESSURE BOUNDARY

SUB ITEM	EXAM. CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	TOTAL NO. PER ITEM	NDE METHODS	IDENTIFICATION	EXAMINATION AMOUNT AND EXTENT	INSPECTION PERIOD	LOCATION OR SYSTEM NUMBER	RUNNING PERCENT	REMARKS
B6.9	B-G-2	(CONTINUED)								
		RECIRCULATION B BYPASS	1	V	GATE M02-54B ISI-13BB	100%	THREE	REW25-4"	100	
		RECIRCULATION MANIFOLD A	2	V	GATE M02-65A M02-66A ISI-13C	(100% EXAMINED) 100%	TWO THREE	2 INCH BYPASS OFF REW32-22"	(50) 100	
		RECIRCULATION MANIFOLD B	2	V	GATE M02-66B M02-65B ISI-13D	(100% EXAMINED) 100%	TWO THREE	2 INCH BYPASS OFF REW32-22"	(50) 100	
		BOTTOM HEAD DRAIN	1	V	GLOBE XDV-4 ISI-21	-	-	REW31-2"ED	-	HAD NOT BEEN REQUIRED IN PREVIOUS ISI PROGRAM.
		STANDBY LIQUID CONTROL	3	V	GATE XP-7 CHECK XP-8 CHECK XP-6 ISI-22	ONE VALVE 100%	THREE	CH2-1½-DC	33 - -	HAD NOT BEEN REQUIRED IN PREVIOUS ISI PROGRAM.
		MAIN STEAM DRAIN	2	V	GATE MO-2373 GATE MO-2374 ISI-23	ONE VALVE 100% (100% EXAMINED)	THREE TWO	PS15-3-ED	100 (5C)	HAD NOT BEEN REQUIRED IN PREVIOUS ISI PROGRAM.
		RECIRCULATION A DRAIN LINE	2	V	GLOBE XR-6-1 GLOBE XR-7-1			REW28-2	- -	RELIEF REQUEST NO. 22 VALVES ARE NORMALLY CLOSED.
		RECIRCULATION B DRAIN LINE	2	V	GLOBE XR-6-2 GLOBE XR-7-2			REW29-2	- -	RELIEF REQUEST NO. 22 VALVES ARE NORMALLY CLOSED.
		CRD SCRAM HEADER DRAIN LINE	1	V	DIAPHRAM MV-3-33 ISI-24C	-	-	CRD18-2"DB	-	HAD NOT BEEN REQUIRED IN PREVIOUS ISI PROGRAM

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8/15/79

ASME Section XI Nondestructive Examination Program - Class 2

ASME Code Edition and Addenda: 1974 Edition through and including Summer 1975 Addenda

Program Period: February 28, 1978 to June 30, 1981 (Third Inspection Period)

NOTES:

1. The following tables identify the specific Class 2 components and parts to be examined. These tables can be directly correlated with Table IWC-2520 and Table IWC-2600 of Section XI and identify the examination method for each listed item. In period one and two, Class 2 components and parts were not required to be examined; because of this, the Class 2 inspection program will begin with period three. The tables identify the number of items required to be examined over a forty (40) year service lifetime, and the amount required for a ten (10) year inspection interval. The tables also show the amount of items required to be examined during period three (which is approximately 1/3 of that required for an inspection interval), and the percentage that will have been completed by the end of that period based on the 40 year requirements.

2. The scope of the inspection program for Class 2 components was based on the exemption criteria of IWC-1220.

3. In accordance with the requirements of IWC 2411 the nondestructive examinations were selected so that the total examinations completed over forty (40) years will be 100% of the required examinations of the system or portions of the systems with a single stream or be equivalent to having performed 100% of the required examinations in one of the streams of a multiple stream system. The only exception is that the selection of pressure retaining bolting for valves was based on the type, manufacturer, and design of valve and not on the total number of certain size valve bonnet bolts per system.

4. Repairs will be performed in accordance with the applicable requirements of the latest edition and addenda of the ASME Code, Section XI. However, if rules for a particular repair are not specified in Section XI, the original design specification and Construction Code of the component or system, or later editions of the Construction Code or ASME Code Section III, either in their entirety or portions thereof, may be used.

LEGEND:

Examination method:
- V - visual
- U.T. - ultrasonic
- R.T. - radiography
- S - surface examination, either liquid penetrant or magentic particle

Inspection Period
- ONE - June 30, 1971 to October 30, 1974
- TWO - October 30, 1974 to February 28, 1978
- THREE - February 28, 1978 to June 30, 1981

NORTHERN STATES POWER CO.
MONTICELLO UNIT 1

TEN YEAR EXTERNAL INSPECTION SUMMARY

TABLE 2.1

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MAJOR ITEM: PRESSURE VESSELS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C1.1	C-A	CIRCUMFERENTIAL BUTT WELDS	-	REMARKS	-	-	-	-		-	THERE ARE NO ITEMS INVOLVED IN CLASS 2 SYSTEMS REQUIRED FOR SCHEDULING TO IWC-2600 UNDER PRESSURE VESSELS
C1.2	C-A	NOZZLE TO VESSEL WELDS	-	REMARKS	-	-	-	-		-	
C1.3	C-C	INTEGRALLY WELDED SUPPORTS	-	REMARKS	-	-	-	-		-	
C1.4	C-D	PRESSURE-RETAINING BOLTING	-	REMARKS	-	-	-	-		-	

NORTHERN STATES POWER CO.
MONTICELLO UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.1

MAJOR ITEM: PIPING - CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCESSIBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.1	C-G	CIRCUMFERENTIAL BUTT WELDS							(1) (2)	PERIOD THREE STARTING DATE IS FEBRUARY 28, 1978 ELEVATIONS ARE GENERAL, ALL CATEGORIES	RELIEF REQUEST NO. 21 (1) THIRD PERIOD PERCENT COLUMN IS 1/3 INTERVAL OF EXAMS PROJECTED INTO REQUIRED EXAMINATION OF 40 YEAR EXAM COLUMN WHEN 10 YEAR AMOUNT IS ROUNDED OFF TO NEXT HIGHEST JOINT AMOUNT. (2) WHERE APPLICABLE, PERCENT INDICATES COMBINED PERCENTAGE OF MULTIPLE STREAMS.
	C-G	HIGH PRESSURE COOLANT INJECTION - WATER SIDE									ISI-31 SINGLE STREAM -DISCHARGE-
		TW3-12"ED	UT	22	22	11	3	1	9	EL 926' TORUS CHAMBER	
	C-G	HIGH PRESSURE COOLANT INJECTION - STEAM SIDE									ISI-32 SINGLE STREAM -INLET-
		PS18-8"ED	RT	27	27	14	4	1	7	EL 949' STEAM CHASE	
		PS18-6"ED	UT	2	2	1	-	-	-	EL 949' @PENET. X-11	
	C-G	HIGH PRESSURE COOLANT INJECTION - STEAM SIDE									ISI-33 SINGLE STREAM -DISCHARGE-
		RS2-18"RE	UT	4	4	2	-	-	-	EL 905' RPCI PUMP ROOM	
		RS2-16"RE	UT	19	19	10	3	1	10	EL 905' RPCI PUMP ROOM	
		RS2-20"RE	UT	4	4	2	-	-	-	EL 913' TORUS CHAMBER	
	C-G	CORE SPRAY A & B 8"									ISI-34 & ISI-35 MULTIPLE STREAM -CS PUMP 1B-
		TW7-8"ED A	RT	4	6	2	-	-	-	EL 978' @PENET. X10A	
		TW11-8"ED B	UT	6	6	1	-	-	-	EL 978' @PENET. X10B	

NORTHERN STATES POWER CO.
MONTICELLO UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.1

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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	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.1	C-G	(CONTINUED)									
		CORE SPRAY A & B 10"									
		TW7-10"CE A	UT	14	14	4	1	1	17	EL 976' REACTOR	ISI-34 & ISI-35 MULTIPLE STREAM -CS PUMP 1A-
		TW11-10"CE B	UT	10	10	2	-	-	-	EL 971' BLDG	CORE SPRAY A & B COMBINED
C2.1	C-C	CONTAINMENT PURGE									
		CP1-18"HE A	UT	3	3	1	-	-	-	EL 925' @ PENET. X-26 TORUS CHAMBER	ISI-38 MULTIPLE STREAM PURGE LINE
		CP1-18"HE B	UT	3	3	1	-	-	-	EL 976' @ PENET. X-25 RWCU ROOM	A & B COMBINED ISI-38B MULTIPLE STREAM
C2.1	C-G	RHR SERVICE WATER SW9-8"GE	UT	47	47	24	6	2	8	REACTOR EL933' BLDG	ISI-39 SINGLE STREAM
C2.1	C-F	CIRCUMFERENTIAL BUTT WELDS									RELIEF REQUEST NO. 21
	C-F	MAIN STEAM A									
		PS1-18"ED	UT	16	16	4	1	1 (4)	6 -	EL 936' STEAM CHASE (1978 BASELINE)	ISI-26 MULTIPLE STREAM
	C-F	MAIN STEAM B									
		PS2-18"ED	UT	15	15	4	1	1 (2)	13 -	EL 940' STEAM CHASE (1978 BASELINE)	ISI-27 MULTIPLE STREAM
	C-F	MAIN STEAM C									
		PS3-18"ED	UT	16	16	4	1	- (3)	- -	EL 942' MOISTURE SEPRTR (1978 BASELINE)	ISI-28 MULTIPLE STREAM
	C-F	MAIN STEAM D									
		PS4-18"ED	UT	16	16	4	1	- (2)	- -	EL 942' MOISTURE SEPRTR (1978 BASELINE)	ISI-29 MULTIPLE STREAM
	C-F	SUPPLY TO STEAM SEAL SYSTEM									
		PS11-6"ED	UT	8	8	2	1	- (3)	- -	EL 940' MOISTURE SEPRTR (1978 BASELINE)	ISI-30 MULTIPLE STREAMS
		PS12-6"ED	UT	5	5	2	1	1	17	EL 940' MOISTURE SEPRTR	MULTIPLE STREAMS
		PS13-6"ED	UT	5	5	1	-	-	-		MULTIPLE STREAMS
		PS14-6"ED	UT	5	5	1	-	-	-		MULTIPLE STREAMS
		(SIX INCH LINES COMBINED)									

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.1

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MAJOR ITEM: PIPING - CIRCUMFERENTIAL BUTT WELDS

SUB ITEM	EXAM CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCESSIBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.1	C-F	(CONTINUED)									
		SUPPLY TO STEAM SEAL SYSTEM									ISI-30
		PS16-5" -	UT	18	18	18	5	2	11	EL 940' MOISTURE SEPRTR	SINGLE STREAM
		PS7-10"ED	UT	16	16	16	4	1	6	EL 940' MOISTURE SEPRTR	SINGLE STREAM
		PS7-8"ED	UT	7	7	7	2	-	-	EL 940' MOISTURE SEPRTR	SINGLE STREAM
	C-F	HIGH PRESSURE COOLANT INJECTION - WATER SIDE									ISI-31 -DISCHARGE-
		FW3-12"ED	UT	6	6	6	2	-	-	EL 933' STEAM CHASE (TO) FW28-14"ED	SINGLE STREAM
	C-F	FEEDWATER B									ISI-37
		FW28-14"ED	UT	3	3	1	-	-	-	EL 940' STEAM CHASE	MULTIPLE STREAM
		FEEDWATER A									ISI-37
		FW2A-14"ED	UT	3	3	2	1	1	33	EL 940' STEAM CHASE	MULTIPLE STREAM FEEDWATER A & B COMBINED
	C-F	REACTOR WATER FROM SKIMMER SYSTEM									ISI-36
		REW11-8"HE	UT	29	29	29	8	2	7	EL 1007' REACTOR BLDG @ SKIMMER TANK	SINGLE STREAM
	C-F	MAIN STEAM EQUALIZING HEADER									ISI-40
	C-F	PS30-18"ED/B	UT	27	21	21	6	2 (21)	10 -	EL 940' MOISTURE SEPRTR (1978 BASELINE)	SINGLE STREAM
		10" DRIP LEG	UT	2	2	2	2	- (2)	- -	(1978 BASELINE)	

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.2

PAGE 1 OF 1

MAJOR ITEM: PIPING - LONGITUDINAL WELD JOINTS IN FITTINGS

SUB ITEM	EXAM CATEGORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCESSIBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.2	C-G C-F	LONGITUDINAL WELD JOINTS IN FITTINGS	-	REMARKS	-	-	-	-	-	-	THERE ARE NO ITEMS WITH SEAMED FITTINGS REQUIRED FOR SCHEDULING.

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.3

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MAJOR ITEM: PIPING - BRANCH PIPE TO PIPE WELD JOINTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.3	C-G C-F	BRANCH PIPE TO PIPE WELD JOINTS	-	REMARKS	-	-	-	-	-	-	THERE ARE NO BRANCH WELD JOINTS REQ'D FOR SCHEDULING

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.4

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MAJOR ITEM: PIPING - PRESSURE RETAINING BOLTING

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-SIBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.4	C-D	PRESSURE RETAINING BOLTING	-	REMARKS	-	-	-	-	-	-	THERE ARE NO PRESSURE-RETAINING BOLTING EXCEEDING 1-INCH IN DIAMETER REQUIRED FOR SCHEDULING.

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.5

MAJOR ITEM: PIPING - INTEGRALLY WELDED SUPPORTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-TBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.5	C-E-1	INTEGRALLY WELDED SUPPORTS									
	C-E-1	MAIN STEAM A								MOISTURE SEPERATOR ROOM	ISI-26
		PS1-18"ED	S	1	1	100% PER INTERVAL	1	1	100	EL 938' @ MS STOP VALVE	
		MAIN STEAM B									ISI-27
		PS2-18"ED	S	1	1	100% PER INTERVAL	-	-	-	EL 938' @ MS STOP VALVE	
		MAIN STEAM C									ISI-28
		PS3-18"ED	S	1	1	100% PER INTERVAL	-	-	-	EL 938' @ MS STOP VALVE	
		MAIN STEAM D									ISI-29
		PS4-18"ED	S	1	1	100% PER INTERVAL	-	-	-	EL 938' @ MS STOP VALVE	MULTIPLE STREAMS 18" LINES COMBINED
	C-E-1	SUPPLY TO STEAM SEAL SYSTEM									ISI-30
		PS14-6"ED	S	1	1	100% PER INTERVAL	1	-	-	EL 940" @ PS 4-18"ED	MULTIPLE STREAM (SINGLE ITEM)
	C-E-1	HIGH PRESSURE COOLANT INJECTION - WATER SIDE									
		TW3-12"ED	S	4	4	100% PER INTERVAL	4	1	25	EL 915' HPCI PUMP ROOM EL 926' TORUS CHAMBER	ISI-31 SINGLE STREAM
	C-E-1	HIGH PRESSURE COOLANT INJECTION - STEAM SIDE									
		PS18-8"ED	S	2	2	100% PER INTERVAL	2	-	-	EL 945' STEAM CHASE EL 906" TORUS CHAMBER	ISI-32 SINGLE STREAM
	C-E-1	HPCI - STEAM DISCHARGE									
		RS2-16"HE	S	2	2	100% PER INTERVAL	2	1	50	EL 920' HPCI PUMP ROOM	ISI-33 SINGLE STEAM
	C-E-1	CORE SPRAY A									
		TW7-8"ED	S	2	2		1	-	-	EL 978 RWCU ROOM	ISI-34
		TW7-10"CE	S	3	3	100% PER INTERVAL	2	1	50	EL 927 TORUS CHAMBER	MULTIPLE STREAM

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TABLE 2.2.3

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TEN YEAR INTERVAL INSPECTION SUMMARY

MAJOR ITEM: PIPING - INTEGRALLY WELDED SUPPORTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.5	C-E-1	(CONTINUED)									
		CORE SPRAY B									
		TW11-8"ED	S	NONE	-		-	-	-		
		TW11-10"GE	S	1	1	100% PER INTERVAL	-	-	-	EL 950 REACTOR BLDG	ISI-35 MULTIPLE STREAM CORE SPRAY A & B COMBINED
	C-E-1	REACTOR WATER FRONT SKIMMER SYSTEM									
		REW 11-8"HE	S	5	5	100% PER INTERVAL	5	2	40	EL 1005' @ SKIMMER TANK EL 998' REACTOR BLDG	ISI-36 SINGLE STREAM
	C-E-1	RHR SERVICE WATER									
		SW9-8"GE	S	2	2	100% PER INTERVAL	2	-	-	EL 928 AUX BLDG EL 920 AUX BLDG	ISI-39 SINGLE STREAM

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TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.6

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MAJOR ITEM: PIPING - SUPPORT COMPONENTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.6	C-E-2	SUPPORT COMPONENTS									RELIEF REQUEST NO.23
	C-E-2	MAIN STEAM A									
		PS1-18"ED	V	6	6	100% PER INTERVAL	2	1	20	EL 936' STEAM CHASE	ISI-26
		MAIN STEAM B									
		PS2-18"ED	V	6	6	100% PER INTERVAL	1	-	-	EL 942' MOISTURE SEPARATOR ROOM	ISI-27
		MAIN STEAM C									
		PS3-18"	V	6	6	100% PER INTERVAL	1	-	-	EL 942' MOISTURE	ISI-2[illegible]
		MAIN STEAM D									
		PS4-18"ED	V	6	6	100% PER INTERVAL	2	1	40	EL 936' STEAM CHASE	ISI-29
	C-E-2	SUPPLY TO STEAM SEAL SYSTEM									MULTIPLE STREAM 18" LINES COMBINED
		PS11-6"ED	V	3	3	100% PER INTERVAL	1	1	50	EL 940' MOISTURE SEPARATOR ROOM	ISI-30 MULTIPLE STREAM 6" LINES COMBINED
		PS12-6"ED	V	1	1	100% PER INTERVAL	-	-			
		PS1[illegible]-6"ED	V	2	2	100% PER INTERVAL	1	-	-		
		PS[illegible]4-6"ED	V	2	2	100% PER INTERVAL	-	-			
		PS7-10"ED	V	9	9	100% PER INTERVAL	9	2	22	EL 940' MOISTURE SEPARATOR ROOM	ISI-30 SINGLE STREAM
		PS7-8" ED	V	2	2	100% PER INTERVAL	2	-	-	EL 940' @ BYPASS CONTROL VALVE	SINGLE STREAM

NORTHERN STATES POWER CO.
MONTICELLO UNIT 1

TEN YEAR INTERVAL INSPECTION SUMMARY

TABLE 2.2.6

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MAJOR ITEM: PIPING - SUPPORT COMPONENTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.6	C-E-2	HIGH PRESSURE COOLANT INJECTION - WATER SIDE									
		TW3-12"ED	V	9	9	100% PER INTERVAL	9	3	33	EL 926'TORUS CHAMBER EL 915'TORUS ROOM	ISI-31 SINGLE STREAM
	C-E-2	HIGH PRESSURE COOLANT INJECTION - STEAM SIDE									
		PS18-8"ED	V	13	13	100% PER INTERVAL	13	4	31	EL 943' STEAM CHASE EL 949' EL 906' HPCI PUMP ROOM EL 905' HPCI PUMP INLET	ISI-32 - INLET- SINGLE STREAM
	C-E-2	HIGH PRESSURE COOLANT INJECTION - STEAM DISCH.									
		RS2-16"HE	V	6	6	100% PER INTERVAL	6	2	33	EL 905' HPCI PUMP ROOM @ DISCHARGE	ISI-33 - DISCHARGE SINGLE STREAM
	C-E-2	CORE SPRAY A & B									
		TW7-10"GE A	V	3	3	100% PER	2	1	25	EL 955' REACTOR BLDG	ISI-34 & ISI-35 MULTIPLE STREAM
		TW11-8"GE B	V	4	4	INTERVAL	2	-	-		
		CORE SPRAY A & B									
		TW7-8"ED A	V	1	1	100% PER	2	-	-		ISI-34 & ISI-35 MULTIPLE STREAM CORE SPRAY
		TW11-8"ED B	V	2	2	INTERVAL	-	1	50	EL 971' REACTOR BLDG	A & B COMBINED
	C-E-2	REACTOR WATER FROM SKIMMER SYSTEM									ISI-36 SINGLE STREAM
		RFW11-8"HE	V	4	4	100% PER INTERVAL	4	1	25	EL 998' REACTOR BLDG @ SKIMMER TANK	
	C-E-2	CONTAINMENT PURGE A									ISI-38A
		CP1-18"HE	V	2	2	100% PER INTERVAL	1	1	100	EL 925' TORUS CHAMBER (ATOP)	MULTIPLE STREAM
		CONTAINMENT PURGE B									ISI-38B
		CP2-18"HE	V	NONE	-	100% PER INTERVAL	-	-	-	EL 976' RWCU @ PENET.25	MULTIPLE STREAM PURGE LINES COMBINED

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TEN YEAR INTERVAL INSPECTION SUMMARY

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MAJOR ITEM: PIPING - SUPPORT COMPONENTS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C2.6	C-E-2	(CONTINUED)									
	C-E-2	RHR SERVICE WATER									
		SW9-8"GE	V	15	15	100% PER INTERVAL	15	4	26	EL 920 REACTOR BLDG EL 931	IS1-39 SINGLE STREAM
	C-E-2	MAIN STEAM EQUALIZING HEADER									
		PS30-18"EDB	V	3	3	100% PER INTERVAL	3	1	33	EL 940' MOISTURE SEPARATOR ROOM	IS1-40 SINGLE STREAM

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MAJOR ITEM: PUMPS

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C3.1	C-G	PUMPS	-	REMARKS	-	-	-	-	-	-	THERE ARE NO ITEMS WITH SEAMED CASINGS.
C3.1	C-F	PUMP CASING WELDS	-	REMARKS	-	-	-	-	-	-	
C3.2	C-D	PRESSURE RETAINING BOLTING									
		HIGH PRESSURE COOLANT INJECTION									ISI-32 AND ISI-33 RELIEF REQUEST NO. 24
	C-D	HPCI PUMP TURBINE CASING	V	REMARKS	-	100% PER INTERVAL	20	20	100	EL 906' HPCI PUMP ROOM	BOLTING/STUDS EXCEEDING 1" DIAMETER
			UT	-	-	10% PER INTERVAL	2 (MIN)	-	-		-TOTALS- AS REQUIRED ON PUMP TURBINE CASING -
C3.3	C-E-1	INTEGRALLY WELDED SUPPORTS	-	REMARKS	-	-	-	-	-	-	THERE ARE NO ITEMS UNDER C3.3 - ALL WELDED SUPPORTS AT C2.5
C3.4	C-E-2	SUPPORT COMPONENTS	-	REMARKS	-	-	-	-	-	-	SUPPORT COMPONENTS UNDER C2.6

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MAJOR ITEM: VALVES

SUB ITEM	EXAM CATE-GORY	COMPONENT OR SYSTEM, AND DESCRIPTION OF ITEM TO BE EXAMINED	NDE METHODS	TOTAL ITEMS	ACCES-IBLE ITEMS	40 YR. AMOUNT	10 YR. AMOUNT	THIRD PERIOD AMOUNT	THIRD PERIOD PERCENT	LOCATION	REMARKS
C4.1	C-G	VALVES	-	REMARKS	-	-	-	-	-	-	THERE ARE NO ITEMS WITH SEAMED
C4.1	C-F	VALVE BODY WELDS	-	REMARKS	-	-	-	-	-	-	
C4.2	C-D	PRESSURE-RETAINING BOLTING									RELIEF REQUEST NO. 24 * VALVE BOLTING SCHEDULED BY VALVE RATHER THAN BOLT AMOUNT.
		MAIN STEAM	-	REMARKS	-	-	-	-	-	-	OUT OF CLASS 2 BOUNDARY
		STOP VALVE A	V	1	1	100% PER INTERVAL	1	1	100	MOISTURE SEPERATOR ROOM	MULTIPLE STREAM
		PS1-18"ED	UT			-	-	-	-	EL 938' SV-1	ISI-26
		STOP VALVE B	V	1	1	-	-	-	-	EL 938' SV-2	ISI-27
		PS2-18"ED	UT			10 % PER INTERVAL	1	1	10		
		STOP VALVE C	V	1	1	-	-	-		EL 938' SV-3	ISI-28
		PS3-18"ED	UT								
		STOP VALVE D	V	1	1	-	-	-	-	EL 938' SV-4	ISI-29
		PS4-18"ED	UT								
		BYPASS									
		CONTROL VALVE - 11	V	1	1	100% PER INTERVAL	1	1	100	EL 940' NO.11	ISI-30
		CONTROL VALVE - 12	UT	1	1	10 % PER INTERVAL	-	-		EL 940' NO.12	
C4.3	C-E-1	INTEGRALLY WELDED SUPPORTS	-	REMARKS	-	-	-	-	-	-	ALL WELDED SUPPORTS AT C2.5
C4.4	C-E-2	SUPPORT COMPONENTS	-	REMARKS	-	-	-	-	-	-	SUPPORTS AT C2.5

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ASME Section XI Nondestructive Examination Program - Class 3

ASME Code Edition and Addenda: 1974 Edition through and including Summer 1975 Addenda

Program Period: February 28, 1978 to June 30, 1981 (Third Inspection Period)

NOTES:

1. The classification diagrams* identify the systems that are required for examination in accordance with IWD-2000. During period one and period two, these examinations were not required, and no effort will be made to retrofit these examinations.

2. The scope of the inspection program for Class 3 components is based on the classification of the plant's inspection boundaries and exemptions as allowed for in IWD-2600 and IWD-5200. The inspection program will conform to IWD-2400 (Inspection Schedule), and will begin with period three of the first inspection interval.

3. Visual examination will be conducted for evidence of component leakage, structural distress, or corrosion when the system is undergoing either a system inservice test, component functional test, or a system pressure test.

4. Supports and hangers for components will be visually examined to detect any loss of support capability or evidence of inadequate restraint.

5. Repairs will be performed in accordance with the applicable requirements of the latest edition and addenda of the ASME Code, Section XI. However, if rules for a particular repair are not specified in Section XI, the original design specification and Construction Code of the component or system, or later editions of the Construction Code or ASME Code Section III, either in their entirety or portions thereof, may be used.

LEGEND

Inspection Period
ONE - June 30, 1971 to October 30, 1974
TWO - October 30, 1974 to February 28, 1978
THREE - February 28, 1978 to June 30, 1981

* Classification diagrams are included in Section 6 of this report.

ASME Section XI Pressure Testing Program

ASME Code Edition and Addenda: 1974 Edition through and including Summer 1975 Addenda.

Program Period: February 28, 1978 to June 30, 1981

The system Quality Group boundaries are shown on the figures in Section 6. These figures do not include small instrument, leak test, vent and drain lines.

APPLICABLE ASME CODE CLASS	TEST TYPE	TEST FREQUENCY	REQUEST FOR RELIEF
1	Leakage	Refueling	30
	Hydrostatic	10 years	30,36,38
2	Pressure	10 years	30,31,36, 37,38
3	Pressure	10 years	30,36,37

SECTION 3 INSERVICE TESTING OF PUMPS AND VALVES

A. Applicable ASME Code Edition and Addenda: 1974 Edition through and including Summer 1975 Addenda

B. Program Period: October 28, 1979 to June 30, 1981

Key for 3.C Pump Testing Table

M = Monthly
NR = Not required (constant speed drive or fixed resistance system)
NA = Not applicable (sealed bearings)
RR = See request for relief

Key for 3.D Valve Testing Table

Q = Quarterly
NR = Not Required
RR = See request for relief
CSIQ = Cold Shutdown, not more often than quarterly.
IWV-3510 = In accordance with the requirements of paragraph IWV-3510.
IWV-3610 = In accordance with the requirements of paragraph IWV-3610.

C. Pump Testing

Pump Description	Applicable ASME Code Class	Test Parameter							Requests for Relief
		N	Pi	ΔP	Q	V	$L/_B$	Tb	
11 Emergency Service Water	3	NR	RR	RR	RR	M	NA	RR	2, 3, 27
12 Emergency Service Water	3	NR	RR	RR	RR	M	NA	RR	2, 3, 27
11 Standby Liquid Control	2	NR	M	M	M	M	M	RR	2, 3
12 Standby Liquid Control	2	NR	M	M	M	M	M	RR	2, 3
11 Core Spray	2	NR	M	M	M	M	NA	RR	2, 3
12 Core Spray	2	NR	M	M	M	M	NA	RR	2, 3
11 Residual Heat Removal	2	NR	M	M	M	M	NA	RR	2, 3
12 Residual Heat Removal	2	NR	M	M	M	M	NA	RR	2, 3
13 Residual Heat Removal	2	NR	M	M	M	M	NA	RR	2, 3
14 Residual Heat Removal	2	NR	M	M	M	M	NA	RR	2, 3
11 RHR Service Water	3	NR	RR	RR	M	M	NA	RR	1, 2, 3
12 RHR Service Water	3	NR	RR	RR	M	M	NA	RR	1, 2, 3
13 RHR Service Water	3	NR	RR	RR	M	M	NA	RR	1, 2, 3
14 RHR Service Water	3	NR	RR	RR	M	M	NA	RR	1, 2, 3
High Pressure Coolant Injection	2	M	M	M	M	M	M	RR	2, 3
Reactor Core Isolation Cooling	2	M	M	M	M	M	M	RR	2, 3

D. Valve Testing

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Main Steam	AO 2-80A	80-A	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-80B	80-B	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-80C	80-C	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-80D	80-D	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-86A	86-A	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-86B	86-B	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-86C	86-C	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	AO 2-86D	86-D	Main Steam Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	MO-2373	74	Steamline Drain Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	MO-2374	77	Steamline Drain Isolation	1	A	Q	Full Stroke-Time	28
Main Steam	RV-2-71A	RV-71-A	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71B	RV-71-B	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71C	RV-71-C	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71D	RV-71-D	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71E	None	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71F	None	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71G	None	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	
Main Steam	RV-2-71H	None	Main Steam Safety Relief	1	C	IWV-3510	Setpoint	

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
FW	FW 91-1	27B	FW Inlet Check Valve	2	C	RR	RR	7
FW	FW 91-2	27A	FW Inlet Check Valve	2	C	RR	RR	7
FW	FW 94-1	96B	Outboard Isolation	1	A, C	RR	RR	8
FW	FW 94-2	96A	Outboard Isolation	1	A, C	RR	RR	8
FW	FW 97-1	28B	Inboard Isolation	1	A, C	RR	RR	8
FW	FW 97-2	28A	Inboard Isolation	1	A, C	RR	RR	8
FW	FW 98-1	29B	Feedwater Block Valve	1	E	NR	Valve Lineup	
FW	FW 98-2	29A	Feedwater Block Valve	1	E	NR	Valve Lineup	
Recirc	CV-2790	39	Rx Water Sample Isolation	2	A	Q	Full Stroke-Time	10, 28
Recirc	CV-2791	40	Rx Water Sample Isolation	2	A	Q	Full Stroke-Time	10, 28
Recirc	MO-2-43A	43A	Recirc Suction	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-43B	43B	Recirc Suction	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-53A	53A	Recirc Discharge	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-53B	53B	Recirc Discharge	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-54A	54A	Recirc Disch. Bypass	1	B	Q	Full Stroke-Time	28
Recirc	MO-2-54B	54B	Recirc Disch. Bypass	1	B	Q	Full Stroke-Time	28
Recirc	MO-2-65A	65B	Recirc Loop Crosstie	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-65B	65A	Recirc Loop Crosstie	1	B	CSIQ	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Recirc	MO-2-66A	66B	Recirc Crosstie Bypass	1	B	CSIQ	Full Stroke-Time	28
Recirc	MO-2-66B	66A	Recirc Crosstie Bypass	1	B	CSIQ	Full Stroke-Time	28
Recirc		None	Block Valve on Upper Seal Leakoff	2	B	RR	Full Stroke-Time	5,28
Recirc		None	Block Valve on Upper Seal Leakoff	2	B	RR	Full Stroke-Time	5,28
RHR	RV-1990	72A	Pump Suction Relief	2	C	IWV-3510	Setpoint	
RHR	RV-1991	72B	Pump Suction Relief	2	C	IWV-3510	Setpoint	
RHR	RV-1992	72C	Pump Suction Relief	2	C	IWV-3510	Setpoint	
RHR	RV-1993	72D	Pump Suction Relief	2	C	IWV-3510	Setpoint	
RHR	RV-2004	35A	Pump Disch Relief	2	C	IWV-3510	Setpoint	
RHR	RV-2005	35B	Pump Disch Relief	2	C	IWV-3510	Setpoint	
RHR		None	Hx Shell Side Relief	2	C	IWV-3510	Setpoint	
RHR		None	Hx Shell Side Relief	2	C	IWV-3510	Setpoint	
RHR	AO-10-46A	AO-46A	LPCI Loop Check	1	A, C	CSIQ	Exercise	
RHR	AO-10-46B	AO-46B	LPCI Loop Check	1	A, C	CSIQ	Exercise	
RHR	RHR-2-1	48A	RHR Pump Discharge Check	2	C	Q	Exercise	
RHR	RHR-2-2	48B	RHR Pump Discharge Check	2	C	Q	Exercise	
RHR	RHR-2-3	48C	RHR Pump Discharge Check	2	C	Q	Exercise	
RHR	RHR-2-4	48D	RHR Pump Discharge Check	2	C	Q	Exercise	

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RHR	RHR-21	29	Rx Head Clg Check	1	C	RR	RR	7
RHR	RHR-8-1	19A	RHR Min Flow Check	2	C	RR	RR	7
RHR	MO-1986	MO-13A	Torus Suction	2	E	NR	Valve Lineup	
RHR	MO-1987	MO-13B	Torus Suction	2	E	NR	Valve Lineup	
RHR	MO-1988	MO-15A	Shutdown Clg Suction	2	B	CSIQ	Full Stroke-Time	28
RHR	MO-1989	MO-15B	Shutdown Clg Suction	2	B	CSIQ	Full Stroke-Time	28
RHR	MO-2002	MO-65A	Hx Bypass	2	E	NR	Valve Lineup	
RHR	MO-2003	MO-65B	Hx Bypass	2	E	NR	Valve Lineup	
RHR	MO-2006	MO-39A	Disch to Torus	2	A	Q	Full Stroke-Time	28
RHR	MO-2007	MO-39B	Disch to Torus	2	A	Q	Full Stroke-Time	28
RHR	MO-2008	MO-34A	Torus Clg Inlet	2	A	Q	Full Stroke-Time	28
RHR	MO-2009	MO-34B	Torus Clg Inlet	2	A	Q	Full Stroke-Time	28
RHR	MO-2010	MO-38A	Torus Spray	2	A	Q	Full Stroke-Time	28
RHR	MO-2011	MO-38B	Torus Spray	2	A	Q	Full Stroke-Time	28
RHR	MO-2012	MO-27A	LPCI Injection	2	B	Q	Full Stroke-Time	28
RHR	MO-2013	MO-27B	LPCI Injection	2	B	Q	Full Stroke-Time	28
RHR	MO-2014	MO-25A	LPCI Injection	1	A	Q	Full Stroke-Time	28
RHR	MO-2015	MO-25B	LPCI Injection	1	A	Q	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RHR	MO-2020	MO-26A	Cont Spray Outboard Isolation	2	A	Q	Full Stroke-Time	28
RHR	MO-2021	MO-26B	Cont Spray Outboard Isolation	2	A	Q	Full Stroke-Time	28
RHR	MO-2022	MO-31A	Cont Spray Inner Isolation	2	A	Q	Full Stroke-Time	28
RHR	MO-2023	MO-31B	Cont Spray Inner Isolation	2	A	Q	Full Stroke-Time	28
RHR	MO-2026	MO-33	Head Spray Isolation	1	A	CSIQ	Full Stroke-Time	28
RHR	MO-2027	MO-32	Head Spray Isolation	1	A	CSIQ	Full Stroke-Time	28
RHR	MO-2029	MO-18	Shutdown Clg Isolation	1	A	CSIQ	Full Stroke-Time	28
RHR	MO-2030	MO-17	Shutdown Clg Isolation	1	A	CSIQ	Full Stroke-Time	28
RHR	MO-2033	MO-20	RHR Loop Crosstie	2	E	NR	Valve Lineup	
RHR	MO-2032	MO-57	Disch to Waste Surge	2	B	Q	Full Stroke-Time	28
RHR	CV-1994	CV-153A	RHR Pump Min Flow	2	B	Q	Full Stroke-Time	28
RHR	CV-1995	CV-153B	RHR Pump Min Flow	2	B	Q	Full Stroke-Time	28
RHR	CV-1996	CV-153C	RHR Pump Min Flow	2	B	Q	Full Stroke-Time	28
RHR	CV-1997	CV-153D	RHR Pump Min Flow	2	B	Q	Full Stroke-Time	28
RHR	RV-2025	44	Head Spray Line Relief	2	C	IWV-3510	Setpoint	
RHR	RHR-8-2	19B	RHR Min Flow Check	2	C	RR	RR	7
RHR	RHR-SW-17	182	SW Emerg Supply to RHR	2	C	RR	RR	11
RHR	RV-2031	40	RHR Shutdown Clg Relief	2	C	IWV-3510	Setpoint	

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System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RHR	RHR-6-1	81A	RHR Loop Block	1	E	NR	Valve Lineup	
RHR	RHR-6-2	81B	RHR Loop Block	1	E	NR	Valve Lineup	
RHR	RHR-1-1	152A	RHR Pump Suction Block	2	E	NR	Valve Lineup	
RHR	RHR-1-2	152B	RHR Pump Suction Block	2	E	NR	Valve Lineup	
RHR	RHR-1-3	152C	RHR Pump Suction Block	2	E	NR	Valve Lineup	
RHR	RHR-1-4	152D	RHR Pump Suction Block	2	E	NR	Valve Lineup	
RHR	RHR-3-1	47A	RHR Pump Disch Block	2	E	NR	Valve Lineup	
RHR	RHR-3-2	47B	RHR Pump Disch Block	2	E	NR	Valve Lineup	
RHR	RHR-3-3	47C	RHR Pump Disch Block	2	E	NR	Valve Lineup	
RHR	RHR-3-4	47D	RHR Pump Disch Block	2	E	NR	Valve Lineup	
RHR	RHR-18-1	30A	CST to RHR Block	2	E	NR	Valve Lineup	
RHR	RHR-18-2	30B	CST to RHR Block	2	E	NR	Valve Lineup	
Core Spray	AO-14-13A	AO-13A	Loop Inj. Check	1	A, C	CSIQ	Exercise	
Core Spray	AO-14-13B	AO-13B	Loop Inj. Check	1	A, C	CSIQ	Exercise	
Core Spray	MO-1753	MO-12A	Core Spray Injection	1	A	Q	Full Stroke-Time	28
Core Spray	MO-1754	MO-12B	Core Spray Injection	1	A	Q	Full Stroke-Time	28
Core Spray	MO-1751	MO-11A	Core Spray Injection	2	B	Q	Full Stroke-Time	28
Core Spray	MO-1752	MO-11B	Core Spray Injection	2	B	Q	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Core Spray	RV-1745	20A	Disch Line Relief	2	C	IWV-3510	Setpoint	
Core Spray	RV-1746	20B	Disch Line Relief	2	C	IWV-3510	Setpoint	
Core Spray	CS-9-1	10A	Pump Disch Check	2	C	Q	Exercise	
Core Spray	CS-9-2	10B	Pump Disch Check	2	C	Q	Exercise	
Core Spray	MO-1741	7A	Core Spray Suction	2	B	Q	Full Stroke-Time	28
Core Spray	MO-1742	7B	Core spray Suction	2	B	Q	Full Stroke-Time	28
Core Spr Spray	CS-10-1	18A	Min Flow Block	2	E	NR	Valve Lineup	
Core Spray	CS-10-2	18B	Min Flow Block	2	E	NR	Valve Lineup	
Core Spray	MO-1749	MO-26A	Test Line to Torus	2	B	Q	Full Stroke-Time	28
Core Spray	MO-1750	MO-26B	Test Line to Torus	2	B	Q	Full Stroke-Time	28
Core Spray	CS-1-1	32A	Torus Suction Block	2	E	NR	Valve Lineup	
Core Spray	CS-1-2	32B	Torus Suction Block	2	E	NR	Valve Lineup	
Core Spray	CS-13-1	14A	Core Spray Block	1	E	NR	Valve Lineup	
Core Spray	CS-13-2	14B	Core Spray Block	1	E	NR	Valve Lineup	
Core Spray	CS-3-1	8A	CST Suction Block	2	E	NR	Valve Lineup	
Core Spray	CS-3-2	8B	CST Suction Block	2	E	NR	Valve Lineup	
HPCI	RV-2056	66	Relief Valve	3	C	IWV-3510	Setpoint	
HPCI	HPCI-18	130	Clg Water Return Check	3	C	Q	Exercise	

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
HPCI	MO-2068	MO-19	Pump Discharge Isol	2	B	Q	Full Stroke-Time	28
HPCI	AO-23-18	AO-18	Clg Wtr Disch Check	2	C	CSIQ	Exercise	
HPCI	MO-2071	MO-21	Test return to CST	2	B	Q	Full Stroke-Time	28
HPCI	MO-2067	MO-20	Coolant Pump Disch.	2	B	Q	Full Stroke-Time	28
HPCI	CV-2065	41	Min Flow Bypass	2	B	Q	Full Stroke-Time	28
HPCI	HPCI-42	62	Min Flow Bypass Check	2	C	RR	RR	7
HPCI	RV-2064	34	Relief Valve	2	C	IWV-3510	Setpoint	
HPCI	HPCI-32	32	CST Suction Check	2	C	Q	Exercise	
HPCI	MO-2063	MO-17	CST Suction	2	B	Q	Full Stroke-Time	28
HPCI	MO-2062	MO-57	Torus Suction	2	B	Q	Full Stroke-Time	28
HPCI	HPCI-31	61	Torus Suction Check	2	C	RR	RR	7
HPCI	MO-2061	MO-58	Torus Suction	2	B	Q	Full Stroke-Time	28
HPCI	HPCI-33	33	Pump Suction Block	2	E	NR	Valve Lineup	
HPCI	MO-2034	MO-15	Steam Supply Isolation	1	A	Q	Full Stroke-Time	28
HPCI	MO-2035	MO-16	Steam Outboard Isolation	1	A	Q	Full Stroke-Time	28
HPCI	MO-2036	MO-14	Turbine Steam Supply	2	B	Q	Full Stroke-Time	28
HPCI	HO-7	HO	Turbine Stop Valve	2	B	Q	Full Stroke	10
HPCI	HO-8	HO	Turbine Control Valve	2	B	Q	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
HPCI	PCV-3492	PCV-50	Cooling Water Supply Cont.	2	B	RR	RR	
HPCI	HPCI-20	131	Cooling Water Return Check	2	C	Q	Exercise	
HPCI	HPCI-14	56	Ex. Line Drain Pot Check	2	A, C	RR	RR	7
HPCI	HPCI-15	45	Ex. Line Drain Pot Check	2	C	RR	RR	7
HPCI	HPCI-9	65	Turbine Ex. Line Check	2	A, C	Q	Exercise	
HPCI	HPCI-10	12	Ex. Line Stop Check	2	C	Q	Exercise	
HPCI	HPCI-65	None	Vac. Bkr Check	2	C	RR	RR	7
HPCI	HPCI-71	None	Vac. Bkr Check	2	C	RR	RR	7
HPCI	PSD-2038	None	Ex. Line Rupture Disc	2	D	NR		
RCIC	MO-2096	MO-2096	Cooling Water to Cond.	2	B	Q	Full Stroke-Time	28
RCIC	RV-2097	RV-2097	Relief Valve	3	C	IWV-3510	Setpoint	
RCIC	RCIC-14	None	Condenser Cond Pump Disch	2	C	Q	Exercise	
RCIC	RCIC-17	None	Vac Pump Disch Check	2	C	RR	RR	7
RCIC	RCIC-9	None	Turbine Exhaust Check	2	A,C	Q	Exercise	
RCIC	RCIC-10	None	Steam Exh Stop Check	2	C	Q	Exercise	
RCIC	RCIC-57	None	Vac Brkr Check	2	C	RR	RR	7
RCIC	RCIC-59	None	Vac Brkr Check	2	C	RR	RR	7
RCIC	PSD-2089	PSD-2089	Rupture Disc	2	D	NR		

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RCIC	MO-2075	MO-2075	Steam Supply Isolation	1	A	Q	Full Stroke-Time	28
RCIC	MO-2076	MO-2076	Steam Supply Isolation	1	A	Q	Full Stroke-Time	28
RCIC	MO-2078	MO-2078	Steam Supply to Turbine	2	B	Q	Full Stroke-Time	28
RCIC	RCIC-7	None	Throttle Trip Valve	2	B	Q	Full Stroke	10
RCIC	HO	None	RCIC Governing	2	B	RR	RR	
RCIC	PCV-2092	PCV-2092	Condenser Press Cont	2	B	RR	RR	
RCIC	RCIC-16	None	Vac Pump Disch Check	2	A, C	RR	RR	7
RCIC	MO-2100	MO-2100	Inboard Torus Suction	2	B	Q	Full Stroke-Time	28
RCIC	RCIC-31	None	Check Valve to Torus	2	C	RR	RR	7
RCIC	MO-2101	MO-2101	Outboard Torus Suction	2	B	Q	Full Stroke-Time	28
RCIC	RCIC-41	None	Check Valve to CST	2	C	Q	Exercise	
RCIC	MO-2102	MO-2102	CST Suction	2	B	Q	Full Stroke-Time	28
RCIC	RV-2103	RV-2103	RCIC Suction Line Relief Valve	2	C	IWV-3510	Setpoint	
RCIC	CV-2104	CV-2104	Min Flow Bypass	2	B	Q	Full Stroke-Time	28
RCIC	RCIC-37	None	Min Flow Bypass Check	2	C	RR	RR	7
RCIC	MO-2106	MO-2106	Pump Discharge	2	B	Q	Full Stroke-Time	28
RCIC	MO-2107	MO-2107	Pump Discharge	2	B	Q	Full Stroke-Time	28
RCIC	AO-13-22	AO-13-22	Pump Disch Check	2	C	CSIQ	Exercise	

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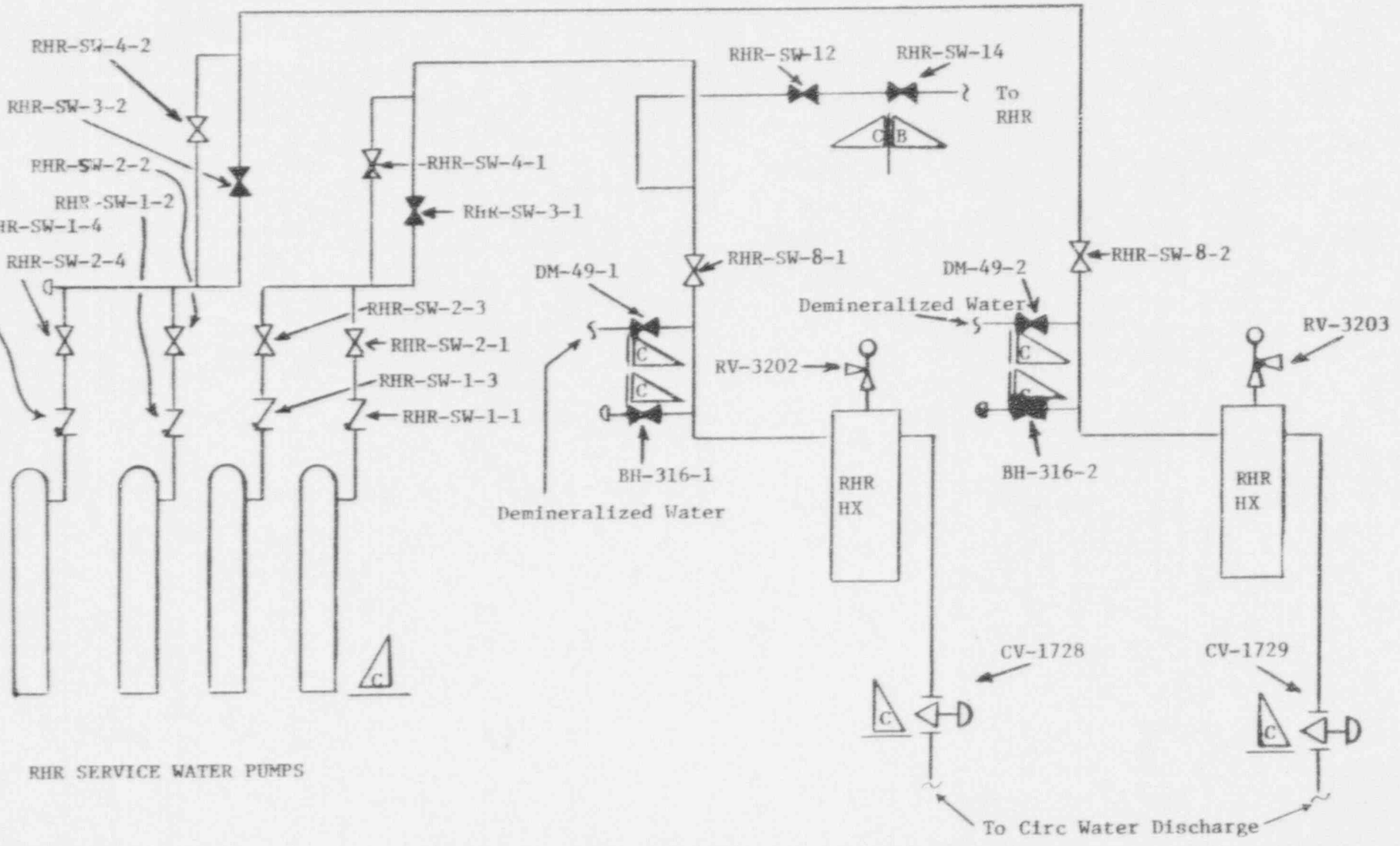
System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RCIC	MO-2110	MO-2110	Test Return to Cond Stor	2	B	Q	Full Stroke-Time	28
RCIC	RCIC-32	None	Pump Suction Block	2	E	NR	Valve Lineup	
SBLC	XP-3-1	43A	Pump Disch Check	2	C	Q	Exercise	
SBLC	XP-3-2	43B	Pump Disch Check	2	C	Q	Exercise	
SBLC	XP-6	16	Outboard Isolation Check	1	A, C	RR	RR	13
SBLC	XP-7	17	Inboard Isolation Check	1	A, C	RR	RR	13
SBLC	RV-11-39A	39A	Relief Valve	2	C	IWV-3510	Setpoint	
SBLC	RV-11-39B	39B	Relief Valve	2	C	IWV-3510	Setpoint	
SBLC	11-14A	14A	Explosive Actuated Valve	2	D	IWV-3610	Actuation	
SBLC	11-14B	14B	Explosive Actuated Valve	2	D	IWV-3610	Actuation	
SBLC	XP-17	41	Suction from Test Tank	2	E	NR	Valve Lineup	
SBLC	XP-20	None	Suction Header Drain	2	E	NR	Valve Lineup	
SBLC	DM-56	None	Demin Water to Suction	2	E	NR	Valve Lineup	
SBLC	XP-13	26	Test Line Return	2	E	NR	Valve Lineup	
SBLC	XP-11-1	34	Pump Discharge Drain	2	E	NR	Valve Lineup	
SBLC	XP-18	None	Poison Tank Drain	2	E	NR	Valve Lineup	
SBLC	XP-1	11	Poison Tank Outlet	2	E	NR	Valve Lineup	
SBLC	XP-2-1	12A	Pump Suction Block	2	E	NR	Valve Lineup	

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
SBLC	XP-2-2	12B	Pump Suction Block	2	E	NR	Valve Lineup	
SBLC	XP-4-1	13A	Pump Disch Block	2	E	NR	Valve Lineup	
SBLC	XP-4-2	13B	Pump Disch Block	2	E	NR	Valve Lineup	
SRLC	XP-5	15	Injection Header Block	2	E	NR	Valve Lineup	
SBLC	XP-8	18	Injection Header Block	1	E	NR	Valve Lineup	
CRD	CV-3-32A	CV-32A	Scram Disch Volume Vent	1	B	Q	Full Stroke-Time	28
CRD	CV-3-32B	CV-32B	Scram Disch Volume Vent	1	B	Q	Full Stroke-Time	28
CRD	CV-3-33	CV-33	Scram Disch Volume Drain	1	B	Q	Full Stroke-Time	28
CRD	RV-3-34	34	Scram Disch Volume Relief Valve	2	C	IWV-3510	Setpoint	
CRD	CRD-114	114	Scram Riser Check	2	C	RR	RR	9
CRD	CRD-115	115	Accumulator Charging Water Check	2	C	RR	RR	9
CRD	CRD-138	138	Cooling Water Check	2	C	RR	RR	9
CRD	CV-126	CV-126	Inlet Scram Valve	1	B	RR	RR	9
CRD	CV-127	CV-127	Outlet Scram Valve	2	B	RR	RR	9
RHR SW	CV-1728	CV-1728	RHR SW Control Valve3	3	B	Q	Full Stroke-Time	28
RHR SW	CV-1729	CV-1729	RHR SW Control Valve	3	B	Q	Full Stroke-Time	28
RHR SW	RHR-SW 1-1	RHR-SW 1-1	RHR SW Pump Disch Check	3	C	Q	Exercise	
RHR SW	RHR-SW 1-2	RHR-SW 1-2	RHR SW Pump Disch Check	3	C	Q	Exercise	



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System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Emerg Serv Wtr	SW-103	None	E.S.W. Check Valve	3	C	RR	RR	7
Emerg Serv Wtr	SW-104	None	E.S.W. Check Valve	3	C	RR	RR	7
Emerg Serv Wtr	ESW-1-1	ESW-1-1	Pump Check Valve	3	C	Q	Exercise	
Emerg Serv Wtr	ESW-1-2	ESW-1-2	Pump Check Valve	3	C	Q	Exercise	
Emerg Serv Wtr	SW-16	SW-16	E.S.W. Check Valve	3	C	RR	RR	7
Emerg Serv Wtr	SW-18	SW-18	E.S.W. Check Valve	3	C	RR	RR	7
Emerg Serv Wtr	AV-3155	AV-3155	Pump Disch Air Vent	3	C	Q	Exercise	
Emerg Serv Wtr	AV-3156	AV-3156	Pump Disch Air Vent	3	C	Q	Exercise	
Emerg Serv Wtr	ESW-3-1	ESW-3-1	Basket Strainer Bypass	3	E	NR	Valve Lineup	
Emerg Serv Wtr	ESW-3-2	ESW-3-2	Basket Strainer Bypass	3	E	NR	Valve Lineup	
Primary Containm.	AO-2377	None	Cont. Purge Isolation	2	A	Q	Full Stroke-Time	
Primary Containm.	AO-2378	None	Torus Purge Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2379	None	Torus Vac Bkr Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2380	None	Torus Vac Bkr Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2381	None	Drywell Purge Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2383	None	Torus Vent Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2386	None	Drywell Vent Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	AO-2387	None	Drywell Vent Isolation	2	A	Q	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Primary Containm.	AO-2896	None	Torus Vent Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	DWV-8-1	None	Sec Cont to Torus Vac Bkr	2	A, C	Q	Exercise	33
Primary Containm.	DWV-8-2	None	Sec Cont to Torus Vac Bkr	2	A, C	Q	Exercise	33
Primary Containm.	CV-7436	None	N_2 Pumpback Isolation	2	A	RR	RR	12, 28
Primary Containm.	CV-7437	None	N_2 Pumpback Isolation	2	A	RR	RR	12, 28
Primary Containm.	CV-2384	None	Torus Vent Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-2385	None	Drywell Vent Isolation	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3267	None	Torus N_2 Makeup Iso.	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3268	None	Drywell N_2 Makeup Iso.	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3269	None	Cont N_2 Makeup Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3305	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3306	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3307	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3308	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3309	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3310	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3311	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3312	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
Primary Containm.	CV-3313	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-3314	None	Drywell O_2 Analy Iso	2	A	Q	Full Stroke-Time	28
Primary Containm.	CV-7440	None	Torus to Drywell N_2 Iso	2	A	Q	Full Stroke-Time	28
Cond Serv System	DM-58	None	Drywell Demin Wtr Iso	2	A	RR	RR	12
RBCCW	MO-1426	MO-1426	Drywell RBCCW Isolation	2	A	CSIQ	Full Stroke-Time	28
RBCCW	RBCC-15	None	Drywell RBCCW Isolation	2	A, C	RR	RR	6
RWCU	MO-2397	MO-2397	Pump Suction Isolation	1	A	Q	Full Stroke-Time	28
RWCU	MO-2398	MO-2398	Pump Suction Isolation	1	A	Q	Full Stroke-Time	28
Liquid Radwaste	AO-2541A	None	Drywell Floor Drn Smp Iso	2	A	Q	Full Stroke-Time	28
Liquid Radwaste	AO-2541B	None	Drywell Floor Drn Smp Iso	2	A	Q	Full Stroke-Time	28
Liquid Radwaste	AO-2561A	None	Drywell Equip Sump Iso	2	A	Q	Full Stroke-Time	28
Liquid Radwaste	AO-2561B	None	Drywell Equip Sump Iso	2	A	Q	Full Stroke-Time	28
Fuel Pool Clg & Clp	PC-20-1	None	Fuel Storage Pool Check	3	C	RR	RR	7
Fuel Pool Clg & Clp	PC-20-2	None	Fuel Storage Pool Check	3	C	RR	RR	7
Comp Air	CV-1478	CV-1478	Drywell Comp Air Iso	2	A	CSIQ	Full Stroke-Time	28
Comp Air	CV-7956	None	Torus Inst Air Iso	2	A	Q	Full Stroke-Time	28
Comp Air	AS-39	None	Service Air Iso	2	A	RR	RR	12

System	Valve Number	FSAR Valve Number	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
TIP	TIP 1-1	None	#1 TIP Isolation Ball Valve	2	A	Q	Full Stroke Time	28, 10
TIP	TIP 1-2	None	#2 TIP Isolation Ball Valve	2	A	Q	Full Stroke Time	28, 10
TIP	TIP 1-3	None	#3 TIP Isolation Ball Valve	2	A	Q	Full Stroke Time	28, 10
TIP	TIP 2-1	None	#1 TIP Isolation Shear Valve	2	D	IWV 3610	Actuation	
TIP	TIP 2-2	None	#2 TIP Isolation Shear Valve	2	D	IWV 3610	Actuation	
TIP	TIP 2-3	None	#3 TIP Isolation Shear Valve	2	D	IWV 3610	Actuation	
TIP	TIP 3	None	TIP System Purge Check	2	A, C	RR	RR	26
Main Steam	FCV-7682	FCV 27	Recombiner Steam Supply	2	B	CSIQ	Full Stroke Time	28
Main Steam	CV-2369	17	Reactor Head Seal Leak-Off Valve	2	B	Q	Full Stroke Time	28
Main Steam	CV-2370	18	Reactor Head Seal Leak-Off Valve	2	B	Q	Full Stroke Time	28
Main Steam	CV-2371	20	Reactor Head Vent Valve	2	B	Q	Full Stroke Time	28
Main Steam	CV-2372	21	Reactor Head Vent Valve	2	B	Q	Full Stroke Time	28
RHR	RHR-7	16	Crosstie Block	2	E	NR	Valve Lineup	
HPCI	HPCI-7	None	Pump Cooling Water Block	2	E	NR	Valve Lineup	
HPCI	HPCI-60	None	Turbine Exhaust Vacuum Breaker	2	C	RR	RR	7

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RX INST.	X-27A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-27B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-27C	None	Excess Flow Check Valve	1	A,C	RR	RR	39
RX INST.	X-28A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-28B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX. INST.	X-28C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-28D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-28E	None	Excess Flow Check Valve	1	A,C	RR	RR	39
RX. INST.	X-29A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-29B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-29C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX. INST.	X-29D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-31A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-31B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-31D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-31E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-31F	None	Excess Flow Check Valve	1	A, C	RR	RR	39

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RX INST.	X-32A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-32B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-32D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-32E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-32F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-33F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40A-F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40B-A	None	Excess Flow Check Valve	1	A, C	RR	RR	39

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RX INST.	X-40B-B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40B-C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40B-D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40B-E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40B-F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40C-F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-40D-F	None	Excess Flow Check Valve	1	A, C	RR	RR	39

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RX INST.	X-49A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-49B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-49C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-49D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-49E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-49F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-50A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-50B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-50C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-50D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51A	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-51F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-52A	None	Excess Flow Check Valve	1	A, C	RR	RR	39

System	Valve Number	FSAR Valve No.	Description	Applicable ASME Code Class	Valve Category	Test Frequency	Test	Request For Relief
RX INST.	X-52B	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-52C	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-52D	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-52E	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-52F	None	Excess Flow Check Valve	1	A, C	RR	RR	39
RX INST.	X-28F	None	Excess Flow Check Valve	2	A, C	RR	RR	40

1. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
11, 12, 13, 14 RHR Service Water Pumps	Provide cooling water to the RHR heat exchangers.	3

Code Requirement

Inlet pressure and differential pressure will not be measured directly as required by IWP-3100 and IWP-4213.

Basis

There is no installed instrumentation for directly measuring the inlet pressure and differential pressure of these pumps. These pumps are submerged and take suction several feet below the river level.

Alternate Testing

The river level elevation will be measured to determine the inlet pressure for these pumps. Differential pressure will be determined by taking the difference between the discharge pressure and calculated inlet pressure.

Scheduled for Implementation

February 28, 1978

2. Request for Relief

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
11, 12 Emergency Service Water	Provide cooling water to the emergency diesel generators and critical reactor building equipment.	3
11, 12 Standby Liquid Control	Provide a redundant means of reactor shutdown as a backup to the Control Rod Drive System.	2
11, 12 Core Spray	Provide cooling water to the reactor under emergency conditions.	2
11, 12, 13, 14 Residual Heat Removal	Provide cooling water to the reactor and to containment under accident conditions.	2
11, 12, 13, 14 RHR Service Water	Provide cooling water to the RHR heat exchangers.	3
High Pressure Coolant Injection	Provide cooling water to the reactor under emergency conditions.	2
Reactor Core Isolation Cooling	Provide cooling water to the reactor under emergency conditions.	2

Code Requirement

Pump bearing temperature will not be measured as required by IWP-3100 and IWP-4310.

Basis

There is no instrumentation installed to measure lube oil or bearing temperature. The use of external temperature measuring devices is not considered meaningful because of the environmental influence on these parameters.

2. REQUEST FOR RELIEF (Cont'd.)

Alternate Testing

The mechanical condition of the pump will be assessed by using vibration data.

Schedule for Implementation

February 28, 1978

3. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE CODE CLASS
11, 12 Emergency Service Water Pumps	Provide cooling water to the emergency diesel generators and critical reactor building equipment.	3
11, 12 Standby Liquid Control Pumps	Provide a redundant means of reactor shutdown as a backup to the Control Rod Drive System.	2
11, 12 Core Spray Pumps	Provide cooling water to the reactor under emergency conditions.	2
11, 12, 13, 14 Residual Heat Removal Pumps	Provide cooling water to the reactor and to containment under accident conditions.	2
11, 12, 13, 14 RHR Service Water Pumps	Provide cooling water to the RHR heat exchangers.	3
High Pressure Cooling Injection	Provide cooling water to the reactor under emergency conditions.	2
Reactor Core Isolation Cooling	Provide cooling water to the reactor under emergency conditions.	2

Code Requirement

Displacement vibration amplitude will not be used to evaluate the condition of the pump as required by IWP-3110, 3210, 4500, 4510.

Basis

We prefer to measure vibration velocity due to its superiority in detecting wear and interior machine failure. Existing instrumentation reads out in velocity units.

Alternate Testing

Vibration velocity measurements will be used to evaluate the condition of the pump.

Schedule for Implementation

February 28, 1978

Deletal

4. REQUEST FOR HELP

5. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
	Shutoff Recirc Pump #11 Upper Seal Flow When Pump is Shutdown	2	B
	Shutoff Recirc Pump #12 Upper Seal Flow When Pump is Shutdown	2	B

Code Requirement

These valves cannot be tested at the frequency required by IWV-3410.

Basis

These valves are located inside primary containment which has an inerted atmosphere. The only way to verify valve stroke and measure stroke time is by direct observation of the valve stem.

Alternate Testing

These valves will be full stroked and timed during each refueling outage when the Containment is de-inerted and open for general access.

Schedule for Implementation

February 28, 1978

6. Request for Relief

Component	Function	Applicable ASME Code Class	Valve Category
RBCC-15	To provide containment isolation for the Reactor Building Closed Cooling water drywell inlet line.	2	A, C

Code Requirement

This valve will not be exercised as required by IWV-3520.

Basis

There are no means provided for determining that the disc travels to the seat promptly on cessation or reversal of flow.

Alternate Testing

This line will be modified upon concurrence of the NRC to allow leak testing of this valve (see letter from L. O. Mayer to Victor Stello, subject, "Planned Modifications to Permit Testing to be Conducted in Accordance with 10CFR50, Appendix J", dated May 5, 1976). Proper seating of the valve disc will be verified during the leak rate test.

Schedule for Implementation

See Alternate Testing.

7. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
SW-101	Prevent flow of emergency service water into the normal service water system when the emergency service water system is operating.	3	C
SW-102		3	C
SW-103		3	C
SW-104		3	C
ESW-4-1	Prevent reversal of flow into redundant emergency service water line.	3	C
ESW-4-2		3	C
FW-91-1	Prevent reversal of flow into the feedwater system.	2	C
FW-91-2		2	C
RHR 8-1	Prevent reversal of flow into RHR Pump Discharge Line.	2	C
RHR 8-2		2	C
RHR-21	Prevent reversal of flow into Head Cooling line	1	C
HPCI-14	Prevent reversal of flow from Torus into HPCI System.	2	C
HPCI-15		2	C
HPCI-42		2	C
HPCI-31	Prevent reversal of flow from HPCI System into Torus.	2	C
HPCI-65	Prevent HPCI Exhaust Steam flow to Torus Air Space.	2	C
HPCI-71		2	C
RCIC-57	Prevent RCIC exhaust steam flow to Torus Air Space.	2	C
RCIC-59		2	C
RCIC-37	Prevent Reversal of Flow from the Torus Into the RCIC System.	2	C
RCIC-16		2	C
RCIC-17		2	C
RCIC-31	Prevent Reversal Flow of RCIC Flow to Torus.	2	C

7. REQUEST FOR RELIEF (Cont'd.)

Component	Function	Applicable ASME Code Class	Valve Category
SW-21-1	Prevent Reversal of Normal Cooling Flow Into the Service Water System.	3	C
SW-21-2		3	C
SW-16	Prevent Reversal of Flow From Emergency Service Water System Into Service Water System.	3	C
SW-18		3	C
PC-20-1	Prevent siphoning of Water From Fuel Storage Pool Into Fuel Pool Cleanup System.	3	C
PC-20-2		3	C
HPCI-60	Turbine Steam Exhaust Vac Brkr	2	C

Code Requirement

These valves will not be tested as required by IWV-3520.

Basis

There is no means available to verify that the disc travels promptly to the seat on cessation or reversal of flow for normally open valves or that the disc moves promptly away from the seat when the closing differential is removed and flow through the valve is initiated for normally closed valves.

Alternate Testing

The systems in which these valves are located will be functionally tested on a periodic basis to demonstrate proper operation.

Schedule For Implementation

N A

8. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
FW 94-1	To provide containment isolation for the feedwater injection lines.	1	A, C
FW 94-2		1	A, C
FW 97-1		1	A, C
FW 97-2		1	A, C

Code Requirement

These valves will not be exercised as required by IWV-3520.

Basis

There are three check valves in series in each of the feedwater injection lines. Verification that each valve disc travels to the seat promptly on cessation of flow cannot be completed by observing pressure indications. The valves cannot be directly observed and there is no instrumentation installed to monitor disc position.

Alternate Testing

Proper seating of the valve disc will be verified during the valve leak rate testing.

Schedule for Implementation

February 28, 1978

9. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
CRD-114	Prevent scram discharge flow from flowing back into the CRD during a scram.	2	C
CRD-115	Prevent scram accumulator pressure from discharging into CRD accumulator charging water circuit during a scram.	2	C
CRD-138	Prevent scram accumulator pressure from discharging into CRD cooling water circuit during a scram.	2	C
CV-126	Provide scram accumulator pressure to the bottom of the control rod drive piston during a scram.	1	B
CV-127	Exhaust scram discharge water from the top of the control rod drive piston during a scram.	2	B

Code Requirement

These valves will not be tested as required by IWV-3410 and IWV-3520.

Basis

The above listed valves are located on each of the 121 hydraulic control units. There is no practical method of testing these valves in accordance with Section XI requirements. There is no instrumentation installed to verify proper seating of the check valves and the control valves operate too rapidly to measure stroke time. Technical Specifications require all control rods to be scram tested once per operating cycle. These valves are all exercised one full cycle during a scram. Proper operation of these valves and the safety function of the control rod drive system are verified by the scram testing.

Alternate Testing

See Basis

Schedule For Implementation

February 28, 1978

10. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
HO-7	Immediately stop the steam flow to the HPCI Turbine.	2	B
RCIC-7	Immediately stop the steam flow to the RCIC Turbine.	2	B
CV-2790	Drywell Isolation for reactor water sample line from recirculation Loop B.	2	A
CV-2791		2	A
TIP 1-1	Drywell isolation for TIP System.	2	A
TIP 1-2		2	A
TIP 1-3		2	A

Code Requirement

These valves will not be stroke timed as required by IWV-3410.

Basis

These valves operate too fast to obtain meaningful stroke time.

Alternate Testing

These valves will be full stroked as required by IWV-3410 and proper operation will be verified.

Schedule for Implementation

February 28, 1978

11. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
RHR SW-17	Prevent reversal of flow of RHR water into RHR Service Water System.	2	C

Code Requirement

This valve cannot be exercised as required by IWV-3520.

Basis

Exercising of this valve would require pumping river water into the RHR System.

Alternate Testing

None

Schedule for Implementation

N A

12. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
DM-58	Shutoff demineralized water to drywell.	2	A
AS-39	Shutoff service air to drywell.	2	A
CV-7436	Drywell Isolation for N_2 pumpback system.	2	A
CV-7437		2	A

Code Requirement

These valves will not be tested as required by IWV-3410.

Basis

These valves are located in systems or portions of systems that are presently out of service. They will be tested as required by IWV-3410(f).

Alternate Testing

See Basis

Schedule For Implementation

May 31, 1978

13. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
XP-6	Prevent reversal of flow of reactor water into SBLC System.	1	A, C
XP-7		1	A, C

Code Requirement

These valves will not be exercised at the frequency required by IWV-3520.

Basis

Exercising of these valves can only be accomplished by initiation of the SBLC System, including actuation of an explosive valve, and pumping to the reactor vessel.

Alternate Testing

These valves will be exercised by initiation of the SBLC System, actuating an explosive valve and pumping demineralized water to the reactor vessel during each refueling outage.

Schedule For Implementation

February 28, 1978

14. REQUEST FOR RELIEF

Deleted

15. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
REACTOR VESSEL				
1) Longitudinal and Circumferential Welds in Core Region	1	1.1	B1.1	B-A
2) Longitudinal and Circumferential Welds in Shell (other than B-A and B-C) and Meridinal Welds in Bottom Head: VIAA-1 &-2, VCBB-1 &-3, and HMAB-1 through -10	1	1.1	B1.2	B-B
3) Nozzle-to-Vessel Welds and Inside Radius: Standby Liquid Control CPAD-1	1	1.1	B1.4	B-D

CODE REQUIREMENTS

1) and 2) Volumetric examination of 10% of each longitudinal weld and 5% of each circumferential weld will not be performed as required by Exam Category B-A and B-B.

3) Volumetric examination of nozzle-to-vessel weld and inside radius will not be performed as required by Exam Category B-D, however, an attempt will be made to volumetrically examine this weld and the inside radius to the extent possible.

BASIS

The design of the reactor internals and the external biological shield and vessel insulation prevents both internal and external access to these welds. It should be noted that the Monticello reactor vessel was fabricated and subjected to as-built inspection under very demanding specifications. Because the site was inaccessible to a river barge of the capacity necessary to transport a fully assembled vessel, the vessel was assembled at the site from shop-fabricated subassemblies. All requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1965 Edition, including Addenda through Summer 1966, were satisfied just as if the vessel were shop fabricated. In addition, additional requirements more stringent than those required by the Code were applied by General Electric due to the unique circumstances surrounding the vessel fabrication. Refer to Volume VII of the Monticello Final Safety Analysis Report, "Reactor Pressure Vessel Design Report," for details concerning vessel fabrication and inspection. In addition, it should be noted that based on analysis of the dosimeter removed from the reactor vessel, the maximum neutron fluence level at T/4 of the reactor vessel wall will be only 1.23×10^{18} nvt at the end of designed life (40 years). Based on the high quality level established for vessel fabrication and the relative low neutron fluence level at the vessel wall, the inability to examine these welds is not considered to have any significant decrease in safety.

15. REQUEST FOR RELIEF (continued)

ALTERNATE

As the result of their inaccessibility, no examinations will be performed on these welds, other than the vessel pressure tests, and in the case of CPAD-1, examination will be to the extent possible.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

16. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
REACTOR VESSEL				
1) Longitudinal and Circumferential Welds in Shell: VLCB-1, VLCB-2, VLBA-1, VLBA-2, and VCBB-4	1	1.1	B1.2	B-B
2) Integrally Welded Vessel Stabilizer Lugs	1	1.1	B1.12	B-H

CODE REQUIREMENT

1) Volumetric examination of 10% of each longitudinal weld and 5% of each circumferential weld will not be performed as required by Exam Category B-B.

2) Volumetric examination of the vessel stabilizer lugs will not be performed as required by Exam Category B-H.

BASIS

The design of the biological shield and vessel insulation prevents external access to these welds. Internal access is available but surface preparation of the vessel cladding would be required to provide dependable ultrasonic results. Approximately 20 ft^2 of cladding would need to be ground to permit the above examinations. Our experience indicates that even after hydro lancing the vessel wall, and the use of a concrete plug over the core and lead blankets on the wall for shielding, we could still expect personnel exposure to be in the 600-700 mr/hr range.

Based on the high quality level of the Monticello vessel and the relatively low neutron fluence level that the vessel wall will see during its service life (refer to Request for Relief No. 15), we do not believe that exposure to personnel is warranted for the preparation and the performance of these examinations. Especially, since there are vessel welds at much higher stress levels (such as the vessel and head flange welds, nozzle welds, and head welds) that are being examined at greater frequency and, thus, their examination results should provide a sufficient means to measure the maintenance of vessel integrity.

It should also be noted that for the integrally welded stabilizer lugs (Item 2), they are part of a mechanical snubber system for seismic loading and have no support function. Therefore, the examination of these lug welds is probably not within the scope of Section XI inservice inspection requirements.

16. REQUEST FOR RELIEF (continued)

ALTERNATE

As the result of their inaccessibility, no examinations will be performed on these welds, other than the vessel pressure tests. However, an attempt will be made to examine the lug welds to the extent possible with a surface method.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

17. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
VESSEL PENETRATIONS				
Control Rod Drive and Bottom Head Drain	1	1.1	B1.5	B-E

CODE REQUIREMENT

The area surrounding each penetration cannot be visually examined for evidence of leakage during the vessel pressure test as required by Exam Category B-E.

BASIS

The design of the vessel, the biological shield, and vessel insulation prevents access to these areas that are directly adjacent to the vessel penetrations.

ALTERNATE

The areas below these penetrations will be visually examined for evidence of leakage during the vessel pressure test which will have a hold time of 4 hours.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

18. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
REACTOR VESSEL Closure Head Flange Leakage Sensors (Nozzle N-13 and N-14)	1	1.1	B1.5	B-E

CODE REQUIREMENT

The area surrounding these two penetrations will not be visually examined for evidence of leakage during the vessel pressure test as required by Exam Category B-E.

BASIS

These penetrations never see pressure during either operation or vessel pressure test, unless the vessel flange o-rings leak. Inspection during pressure testing therefore serves no purpose. In addition, the nozzle area is not accessible without damaging insulation.

ALTERNATE

The nozzles will be hydrostatically tested to insure seal integrity at or near the end of the inspection interval.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

19. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
REACTOR VESSEL				
Standby Liquid Control Nozzle-to-Safe End Welds	1	1.1	B1.6	B-F

CODE REQUIREMENT

The ultrasonic examination, and possibly the liquid penetrant examination, cannot be performed for the total weld as required by Exam Category B-E.

BASIS

The design of the biological shield prevents access to the bottom portion of this weld for ultrasonic examination.

ALTERNATE

Effort will be made to ultrasonically examine as much of the weld as physically possible and to liquid penetrant examine the total weld, provided undue radiation exposure will not result to personnel.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

20. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
REACTOR VESSEL Closure Head Cladding	1	1.1	B1.13	B-I-1

CODE REQUIREMENT

The liquid penetrant examination of the closure head cladding will not be scheduled as required by Exam Category B-I-1.

BASIS

From our past experience in liquid penetrant examining the Monticello vessel cladding, we have discovered that the roughness of the closure head cladding results in considerable number of nonrelevant indications that required grinding to eliminate any possible masking effects. In addition, to assure success in the detection of tight cracks, the cladding has a need to be ground to eliminate the oxides and crud that develop during service.

The design stress analysis for the Monticello vessel did not take any credit for cladding thickness. The purpose of the cladding was to maintain water quality. It should be noted that many of the new BWR vessel designs have eliminated this cladding, and later editions of ASME Section XI Code has eliminated all requirements for the inspection of the closure head cladding.

ALTERNATE

Visual examination will be performed on the clcsure head cladding.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

21. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
Reactor Vessel Safe-end Welds	1	1.1	B1.6	B-F
Pipe Weld Inspection	1	1.4	B4.5	B-J
	1	1.4	B4.6	B-J
	1	1.4	B4.9	B-K
	1	1.4	B4.1	B-F
	2	2.2.1	C2.1	C-F
	2	2.2.1	C2.1	C-G

CODE REQUIREMENT

The ultrasonic examination method requirements (Appendix I of Section XI and Article 5 of Section V) of the Code Addenda in effect will not be used to govern the ultrasonic examination procedures for the inspection of pipe welds and welds of components fabricated from pipe components.

BASIS

The use of side drill holes (instead of slots) to establish a distance amplitude correction curve (DAC) for pipe weld inspections, as required by Appendix I of Section XI and Article 5 of Section V, results in an excessive instrument gain setting which greatly impairs the inspector's ability to detect and to interprete indications by producing a lower signal-to-noise ratio and reducing the range of useable DAC.

ALTERNATE

The rules of Appendix III, including Supplement 7, of the 1975 Winter and 1976 Summer Addenda to ASME Section XI Code will govern the ultrasonic examination method for the inspection of pipe welds and welds of components fabricated from pipe components.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

22. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
Piping Socket Welds - Drain lines (REW28-2"-EF and REW29-2"-EF) of recirculation system A & B	1	1.4	B4.8	B-J
Valve Bonnet Bolting - Valves XR-6-1, XR-7-1, XR-6-2, and XR-7-2	1	1.6	B6.9	B-G-2

CODE REQUIREMENT

The surface examination of the 2" socket welds and the visual examination of the valve bonnet bolting of these two drain lines were not scheduled for examination as required by Exam Category B-J and B-G-2, respectively.

BASIS

These two, 2-inch drain lines are reading in excess of 2R/hr. The location of these lines prevents the use of shielding or distance to provide any significant reduction in radiation exposure to personnel. We have estimated that exposure to inspection and insulating personnel would be in access of 1 man-rem for the examination of approximately four socket welds and the bolting of four valves.

ALTERNATE

These lines would be examined in accordance with the requirements of Exam Category B-P, upstream from and including their first isolation valve.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

23. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
Non-Welded Piping and Valve Supports	1	1.4	B4.10	B-K-2
	2	2.2	C2.6	C-E-2
	2	2.3	C3.4	C-E-2
	2	2.4	C4.4	C-E-2
	3	-	-	IWD-2600(c)

CODE REQUIREMENT

Examination Category B-K-2 and C-E-2 requires all areas of the support component from the piping, valve, and pump attachment to and including the attachment to the supporting structure. Insulation will not be removed for visual examination of these support components.

BASIS

The general radiation background field for the inspection of Class 1 systems located within containment ranges from 30 to 400 mR and the Class 2 systems have permanent type of insulation (insulation not designed for removal and replacement).

It has been our experience that any loss of support capability or inadequate restraint can usually be detected through the inspection of the uninsulated portion of the support and the surrounding insulation. It is our contention that the removal and replacement of insulation for the sole purpose of inspecting Class 1 supports would result in undue radiation exposure to personnel without providing significant increase in safety. The governing Codes and Regulations used in the design and construction of those systems that are now classified as Class 2 and 3 did not require provisions for inspection access for these systems. Thus, it would be an undue burden without compensating increase in safety to require insulation removal for support inspection.

ALTERNATIVE

The insulation will be removed from a supported component for further inspections whenever an abnormality is detected that may have been a result of a loss of support capability or inadequate restraint.

SCHEDULE FOR IMPLEMENTATION

February 28, 1977

24. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
Pressure Boundary Bolts and Studs	1	1.5	B5.1	B-G-1
	1	1.5	B5.2	B-G-1
	2	2.3	C3.2	C-D
	2	2.4	C4.2	C-D

CODE REQUIREMENT

Volumetric examination of bolts/studs will not have a DAC constructed (distance amplitude curve) as described in Article 5, Section V.

BASIS

The technique described in Section V is not as sensitive to detect surface defects as the presently applied technique using the basic back reflection method correlated with "as built/as installed" bolting sketch of the particular item being examined.

ALTERNATE

The items will be ultrasonically examined by longitudinal straight beam, utilizing the response from the back reflection of the bolt or stud being examined, evaluation criteria shall be per section XI, IWB-3000.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

25. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME	
		Code Class	Vlv Cat
All Class 2 Components	pressure retaining	2	–

CODE REQUIREMENT

The system pressure tests will not be distributed as required by IWC-2412.

BASIS

Scheduling system pressure tests in this manner is not practical as mechanisms are not available for isolation of the piping systems at the various boundaries created by the NDE exemption criteria. Consequently numerous redundant pressure tests will be performed whichare not warranted considering the operational problems (system valve lineups, leak off or over-pressure protection, radiation exposure, generation of waste, etc.) involved. Additionally the majority of these systems are either normally pressurized or pressurized during the performance of a pump or valve functional test such that any system degradation would be immediately known.

ALTERNATE INSPECTION (TESTING)

All components will be pressure tested at or near the end of each inspection interval. This is consistant with proposed revisions (Winter 1976 Addenda) to ASME-XI, Subsection IWC and Section XI Subcommittee interpretation of Class 2 Pressure Test Requirements (attached).

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

The American Society of Mechanical Engineers
United Engineering Center / 345 E. 47th St., New York, N.Y. 10017 / 212 644-7815

The Hartford Steam Boiler Inspection and
Insurance Company
56 Prospect Street
Hartford, Connecticut 06102

Att: F. T. Duba

Subject: ASME File #BC-76-418
Section XI, Division 1, System Pressure Tests

Dear Mr. Duba:

Your inquiry of February 24, 1976 has been considered by the cognizant committee. We are responding to the following question.

QUESTION:

1. Are system leakage tests required for Class 2 and Class 3 systems?
2. Are system hydrostatic tests required for Class 2 and 3 systems?

REPLY:

1. System leakage tests are not required for Class 2 and 3 components.

2. System hydrostatic tests are required for Class 2 and 3 components at or near the end of each inspection interval. In addition, a system hydrostatic test is required on components which have been repaired by welding prior to returning the plant to service.

Very truly yours,

June Ling

June Ling
Nuclear Engineering Administrator

JL:lc

26. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS	VALVE CATEGORY
TIP 3	Prevent reversal of flow in TIP purge line.	2	A, C

Code Requirement

This valve cannot be exercised as required by IWV-3520.

Basis

This is a normally open check valve that is in service during all modes of operation. In addition, there is no means available to verify that the disc travels promptly to the seat on cessation or reversal of flow.

Alternate Testing

Proper seating of the valve disc will be verified during the valve leak rate testing.

Schedule for Implementation

February 28, 1978

27. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
11,12 Emergency Service Water Pumps	Provide cooling water to the emergency diesel generators and critical reactor building equipment.	3

Code Requirement

Pump flowrate will not be measured to determine pump performance as required by IWP-3100.

Basis

There is no installed instrumentation for measuring the flowrate of these pumps. Flowrate varies due to the seasonal variations in cooling requirements making it impractical to establish a reference value and acceptance criteria for this parameter.

Alternate Testing

The Emergency Service Water pumps will be tested to shutoff pressure. Pump differential pressure will be measured under these conditions.

Schedule for Implementation

January 1, 1979

28. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS	VALVE CATEGORY
All power operated valves.		1, 2, 3	A, B

Code Requirement

The acceptance criteria for valve-stroke time as stated in IWV-3410c)(3) will not be used.

Basis

Stroke time acceptance criteria outlined in IWV-3410 is general and is not based on system functional requirements and normal valve variability.

Alternate

Acceptance criteria for valve stroke times will be based on normal valve variability and on system functional requirements.

Schedule for Implementation

February 28, 1978

29. REQUEST FOR RELIEF

Deleted

30. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
All Class 1, 2 and 3 Components	Pressure Retaining	1, 2, 3

Code Requirements

The test pressure requirements of IWA-5000, IWB-5000, IWC-5000 and IWD-5000 will not be met on certain components.

Basis

The code does not recognize that non-isolable junctions of components with different design pressures or different ASME Classes exist (i.e., pump suction and discharge lines, piping upstream and downstream of restricting orifices, etc.). Pressurizing components to the requirements of the code may result in overpressurizing the non-isolable components.

Alternate Testing

Where these junctions exist, test pressure will be based on the component with the lowest test pressure requirement.

Schedule for Implementation

February 28, 1978

31. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
Head vent and leak test connections on Class 1 piping.	Provide connection for leak testing and for venting the reactor head.	2

Code Requirement

These lines will not be pressure tested in accordance with IWC-5210.

Basis

These lines are connected to Class 1 piping and are classified as Quality Group B lines (applicable ASME Code Class 2) due to line size only. These lines will be tested in accordance with Class 1 requirements (IWB-5000).

Alternate Testing

See Basis

Schedule for Implementation

February 28, 1978

32. REQUEST FOR RELIEF

Deleted

32. REQUEST FOR RELIEF

Deleted

33. REQUEST FOR RELIEF

Component	Function	Applicable ASME Code Class	Valve Category
DWV-8-1	Secondary containment to torus vacuum breaker.	2	A, C
DWV-8-2		2	A, C

Code Requirement

These valves will not be exercised as required by IWV-3520(b)(2).

Basis

Paragraph IWV-3520 of Section XI, 1974 Edition with Addenda through and including Summer, 1975, does not recognize that the mechanical exerciser torque requirements do not apply to vacuum breakers, whereas the 1977 Edition Summer 1977 Addenda does recognize this fact.

Alternate Testing

These valves will be tested in accordance with Paragraph IWV-3520 of Section XI, 1977 Edition Summer 1977 Addenda.

Schedule For Implementation

May 31, 1978

34. REQUEST FOR RELIEF

Deleted

35. REQUEST FOR RELIEF

COMPONENT	CODE CLASS	TABLE	ITEM	EXAM CATEGORY
Reporting Requirements for Class 1 and Class 2 Components	1&2	----	----	----

CODE REQUIREMENT

The filing of the inservice inspection reports for Class 1 and 2 components within ninety (90) days after completion of the inservice inspection with the regulatory authority (USNRC) will not be done as required by IWA-6220.

BASIS

Submital of the inservice inspection reports would be an addition to the already heavy reporting burden and would require positive reporting of successful completion of the hundreds of tests and examinations that are required every year on a nuclear plant.

ALTERNATE

All inspection and test records are available at the facility for inspection by the I & E regional inspectors. In addition, the inservice inspection examination summary report will be submitted following each outage in which inspections are conducted. Four copies will be sent to the Director, NRR, and two copies will be sent to the Region III office of Inspection and Enforcement.

SCHEDULE FOR IMPLEMENTATION

February 28, 1978

36. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
All Class 1, 2 and 3 Components	Pressure Retaining	1, 2, 3

Code Requirement

The hydrostatic test pressure and temperature will not be held for four (4) hours for exposed components, as required by IWA-5210.

Basis

It is unnecessary to maintain the pressure and temperature for four hours for areas of exposed pipe and components. Ten minutes is a sufficient period of time to determine if leaks are present in exposed areas.

Alternate Testing

The test pressure and temperature will be held for ten minutes for exposed areas and four hours for unexposed areas.

Schedule For Implementation

January 1, 1979

37. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
All Class 2 and 3 Air and Nitrogen Systems	Pressure Retaining	2, 3

Code Requirement

The hydrostatic tests required by IWA-5000, IWC-5000 and IWD-5000 will not be performed using water as the test medium for certain systems.

Basis

The air and nitrogen systems were not designed for water service. Therefore, a hydrostatic test would be inappropriate.

Alternate Testing

These systems will undergo pneumatic tests.

Schedule For Implementation

January 1, 1979

38. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS
All Class 1 and 2 Components	Pressure Retaining	1, 2

Code Requirement

The hydrostatic test temperature will not be greater than or equal to 100°F for austenitic stainless steel components as required by IWB-5222 and IWC-5220.

Basis

Austenitic stainless steels do not exhibit or undergo ductile-to-brittle transitions and the toughness remains essentially constant regardless of the temperature of the material. Therefore, heating the test medium to above 100°F for these components is unnecessary.

Alternate Testing

Austenitic stainless steel portions of lines will be tested at ambient temperature.

Schedule for Implementation

January 1, 1979

39. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS	VALVE CATEGORY
Excess Flow Check Valves, Typical of X-27A through X-52F Except X-28F.	Minimize the blowdown to the Secondary Containment in the event of an instrument sensing line break.	1	A, C

CODE REQUIREMENT

These valves will not be tested as required by IWV-3410 or IWV-3520.

BASIS

The Excess Flow Check Valves are located in sensing lines for the Plant Protection System and ECCS Instruments. Testing the check valves during operation is not practical since it would make the vital instrumentation inoperable. Cold shutdown testing is also impractical since it would require pressurizing the reactor vessel to operating pressure.

ALTERNATE TESTING

The Excess Flow Check Valves are tested each refueling outage when the vessel is pressurized to 1000 psig during the Reactor Vessel Hydro Test.

SCHEDULE FOR IMPLEMENTATION

This testing was implemented since initial plant startup as required by the original Technical Specifications.

40. REQUEST FOR RELIEF

COMPONENT	FUNCTION	APPLICABLE ASME CODE CLASS	VALVE CATEGORY
Excess Flow Check Valve X-28F	Minimize the Blowdown to the secondary containment in the event of an instrument line break and vessel head seal failure.	2	A, C

CODE REQUIREMENT

This valve will not be tested as required by IWV-3410 or IWV-3520.

BASIS

There is no way to test this valve except to remove it from the line since there is normally no pressure between the vessel head seals. Removal of the valve is extremely difficult because the piping is rigid and thread damage has resulted from previous attempts to remove the valve. A sensing line break would result in blowdown to the secondary containment only if the vessel head seal was leaking. The blowdown would be limited by the seal leak which would, in all probability, be less than the leakage allowed by the check valve. The probability of a line break and seal leak occuring to cause a significant blowdown is extremely small, therefore it is felt this valve should not be tested to avoid further thread damage to the piping.

ALTERNATE TESTING

None

SCHEDULE FOR IMPLEMENTATION

N/A

41. REQUEST FOR RELIEF

Component	Code Class	Table	Item	Exam Category
PUMP CASINGS RECIRCULATION PUMPS "A" AND "B"	1	1.5	B5.7	B-L-2

Code Requirement

The visual examination of the Recirculation Pumps internal pressure surfaces will not be scheduled as required by Exam Category B-L-2.

Basis

Disassembly of the recirculation pumps for the sole purpose of visual examination of the casing internal pressure surfaces requires many manhours from skilled maintenance personnel. Increased radiation exposures result from this activity. The probability of pump failure is increased by unnecessarily disassembling the units. Deferring the examination has no affect on integrity of the pumps.

Alternate

Recirculation Pump internal pressure surfaces will be visually examined when the pumps are disassembled for maintenance.

Schedule for Implementation

March 5, 1980

42. REQUEST FOR RELIEF

Component	Code Class	Table	Item	Exam Category
VALVE BODIES CRANE CHAPMAN GATE VALVES RECIRCULATION VALVES MO 2-65A, MO 2-65B MO 2-53A, MO 2-43A MO 2-53B, MO 2-43B	1	1.6	B6.7	B-M-2

Code Requirement

The visual examination of the Recirculation Valves internal pressure surfaces will not be scheduled as required by Exam Category B-M-2.

Basis

Disassembly of the recirculation valves for the sole purpose of visual examination of the internal pressure surfaces requires many manhours from skilled maintenance personnel. Increased radiation exposures result from this activity. The probability of valve failure is increased by unnecessarily disassembling the units. Deferring the examination has no affect on the integrity of the valves.

Alternate

Recirculation Valve internal pressure surface will be visually examined when the pumps are disassembled for maintenance.

Schedule for Implementation

March 5, 1980

SECTION 5 PROPOSED TECHNICAL SPECIFICATION CHANGES

Reproduced in this section are the proposed Technical Specification changes included in Northern States Power Company's License Amendment Request dated August 30, 1977. These changes revise the surveillance requirements in the Technical Specifications to conform to 10 CFR 50, Section 50.55a(g).

Changes proposed in Northern States Power Company's License Amendment Request dated January 18, 1978 also appear here. These changes were submitted to incorporate a program of augmented inservice inspection for piping susceptible to stress corrosion cracking.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

3.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the operating status of the standby liquid control system.

Objective:

To assure the availability of an independent reactivity control mechanism.

SPECIFICATION:

A. Normal Operation

1. The standby liquid control system shall be operable at all times when fuel is in the reactor and the reactor is not shutdown by control rods, except as specified in 3.4.B.

2. Each standby liquid control system pump shall be capable of delivering 24 gpm against a reactor pressure of 1275 psig.

3. The system pressure relief valves shall be operable with a setpoint between 1350 and 1450 psig.

4.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the periodic testing requirements for the standby liquid control system.

Objective:

To verify the operability of the standby liquid control system.

SPECIFICATION:

A. The operability of the standby liquid control system shall be verified by performance of the following tests:

1. At least once each operating cycle manually initiate one of the two standby liquid control systems and pump demineralized water into the reactor vessel. Both systems shall be tested and inspected in the course of two operating cycles.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
	2. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.3.
B. Operation with Inoperable Components From and after the date that a redundant component is made or found to be inoperable, Specification 3.4.A shall be considered fulfilled, provided that the component is returned to an operable condition within seven days.	B. Surveillance with Inoperable Components When a component becomes inoperable, its redundant component shall be demonstrated to be operable immediately and daily thereafter.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
C. Volume-Concentration Requirements The liquid poison tank shall contain a boron bearing solution that satisfies the volume-concentration requirements of Figure 3.4.1 and at all times when the standby liquid poison system is required to be operable the temperature shall not be less than the solution temperature presented in Figure 3.4.2. In addition, the heat tracing on the pump suction lines shall be operable whenever the room temperature is less than the solution temperature presented in Figure 3.4.2.	C. The availability of the proper boron bearing solution shall be verified by performance of the following tests: 1. <u>At least once per month</u> - Boron concentration shall be determined. In addition, the boron concentration shall be determined any time water or boron are added or if the solution temperature drops below the limits specified by Figure 3.4.2.

Bases 3.4 and 4.4:

A. The design objective of the standby liquid control system is to provide the capability of bringing the reactor from full power to a cold, xenon-free shutdown assuming that none of the withdrawn control rods can be inserted. To meet this objective, the liquid control system is designed to inject a quantity of boron which produces a concentration of 900 ppm of boron in the reactor core in less than 125 minutes. 900 ppm boron concentration in the reactor core is required to bring the reactor from full power to a 3% Δk subcritical condition considering the hot to cold reactivity swing, xenon poisoning and an additional 25% boron concentration margin for possible imperfect mixing of the chemical solution in the reactor water and dilution from the water in the cooldown circuit. A minimum net quantity of 1400 gallons of solution having a 21.4% sodium pentaborate concentration is required to meet this shutdown requirement.

The time requirement (125 minutes) for insertion of the boron solution was selected to override the rate of reactivity insertion due to cooldown of the reactor following the xenon poison peak. The maximum net storage volume of the boron solution is 2895 gallons. (256 gallons are contained below the pump suction and, therefore, have not been used in the net quantities above.)

Boron concentration, solution temperature, and volume (including check of tank heater and pipe heat tracing system) are checked on a frequency to assure a high reliability of operation of the system should it ever be required. Experience with pump operability demonstrates that testing at a three-month interval is adequate to detect if failures have occurred.

Standby liquid control system components are inspected and tested in accordance with the requirements of 10 CFR 50, Section 50.55a(g). These requirements are delineated in Specification 4.13. This inspection and testing program, combined with the additional surveillance requirements contained in this section, provide a high degree of assurance that the standby liquid control system will perform as required when needed.

The relief valves in the standby liquid control system protect the system piping and positive displacement pumps which are nominally designed for 1500 psi from overpressure. The pressure relief valves discharge back to the standby liquid control solution tank.

3.0 LIMITING CONDITIONS FOR OPERATION

3.5 CORE AND CONTAINMENT COOLING SYSTEMS

Applicability:

Applies to the operational status of the emergency cooling systems.

Objective:

To insure adequate cooling capability for heat removal in the event of a loss of coolant accident or isolation from the normal reactor heat sink.

Specification:

Low Pressure Core Cooling Capability

A. Core Spray System

1. Except as specified in 3.5.A.2., 3.5.A.3., and 3.5.A.5. below, both core spray subsystems shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant water temperature is greater than 212°F.

4.0 SURVEILLANCE REQUIREMENTS

4.5 CORE AND CONTAINMENT COOLING SYSTEMS

Applicability:

Applies to periodic testing of the emergency cooling systems.

Objective:

To verify the operability of the emergency cooling systems.

Specification:

Low Pressure Core Cooling Capability

A. Surveillance of the core spray system shall be performed as follows:

1. Routine Testing

a. A simulated automatic actuation test shall be conducted each refueling outage.

b. Core spray header Δp instrumentation shall be checked once each day, tested once each month, and calibrated once each 3-month period.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
	c. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.
2. From and after the date that one of the core spray systems is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding fifteen days unless such system is sooner made operable, provided that during such fifteen days all active components of the other core spray system and the LPCI mode of the RHR system and the diesel generators required for operation of such components (if no external source of power were available) shall be operable.	2. When it is determined that one core spray system is inoperable, the operable core spray system and the LPCI mode of the RHR system and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable immediately. The operable core spray system shall be demonstrated to be operable daily thereafter.
3. From and after the date that both core spray systems are made or found to be inoperable for any reason, reactor	3. When it is determined that both core spray systems are inoperable, the LPCI mode of the RHR system and the

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
operation is permissible only during the succeeding seven days unless at least one of such systems is sooner made operable, provided that during such seven days all active components of the LPCI mode of RHR system and the diesel generators required for operation of such components (if no external source of power were available) shall be operable.	diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable immediately and daily thereafter.
4. Each core spray system shall be capable of delivering 3,020 gpm against a reactor pressure of 130 psig. If this rate of delivery requirement cannot be met, the system shall be considered inoperable.	
5. If the requirements of 3.5.A.1 - 3 cannot be met, an orderly shutdown of the reactor will be initiated and the reactor water temperature shall be reduced to less than 212 °F within 24 hours.	

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
B. Low Pressure Coolant Injection (LPCI) Subsystem (LPCI mode of RHR system)	B. Surveillance of the Low Pressure Coolant Injection (LPCI) Subsystem (LPCI mode of RHR system) shall be performed as follows:
1. Except as specified in 3.5.B.2 and 3.5.B.3 below, the LPCI shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F.	1. Routine Testing a. A simulated automatic actuation test shall be conducted each refueling outage. b. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13. c. During each five year period, an air test shall be performed on the drywell spray headers and nozzles.
2. From and after the date that one of the LPCI pumps or admission valves is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding thirty days unless such pump or admission valve is sooner made operable, provided that during such thirty days the remaining active components of the LPCI and containment cooling subsystem and all active components of both core spray systems and the diesel generators required for operation of such components (if no external source of power were available) shall be operable.	2. When it is determined that one of the LPCI pumps is inoperable, the remaining active components of the LPCI and containment cooling subsystem, both core spray systems and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable immediately and the operable LPCI pumps daily thereafter.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
3. From and after the date that two of the LPCI pumps or admission valves are made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such pumps or admission valves are made operable sooner, provided that during such seven days all active components of both core spray systems, the containment cooling subsystem (including 2 LPCI pumps) and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable at least once each day.	3. When it is determined that the LPCI subsystem is inoperable, both core spray systems, the containment cooling subsystem, and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable immediately and daily thereafter.
4. A maximum of one drywell spray loop (containment cooling mode of RHR) may be inoperable for 30 days when the reactor water temperature is greater than 212°F. If the loop is not returned to service within 30 days, the orderly shutdown of the reactor will be initiated and the reactor water temperature shall be reduced to less than 212°F.	
5. Each LPCI subsystem (RHR) pump shall be capable of delivering 4,000 gpm against a reactor pressure of 20 psig. If this	

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
rate of delivery requirement cannot be met, the pump shall be considered inoperable.	
6. If the requirements of 3.5.B.1-4 cannot be met, an orderly shutdown of the reactor will be initiated and the reactor water temperature shall be reduced to less than 212°F within 24 hours.	
Containment Cooling Capability	Containment Cooling Capability
C. Residual Heat Removal (RHR) Service Water System	C. Surveillance of the RHR service water system shall be performed as follows:
1. Except as specified in 3.5.C.2 and 3.5.C.3 below, both RHR service water system loops shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F.	1. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.
2. From and after the date that one of the RHR service water system pumps is made or found to be inoperable for any reason,	2. When it is determined that one RHR service water pump is inoperable, the redundant components of the

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
reactor operation is permissible only during the succeeding thirty days unless such pump is sooner made operable, provided that during such thirty days all other active components of the RHR service water system are operable.	remaining subsystem shall be demonstrated to be operable immediately and daily thereafter.
3. From and after the date that one of the RHR service water systems is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such system is sooner made operable, provided that during such seven days all active components of the operable RHR service water system shall be demonstrated to be operable at least once each day.	3. When one RHR service water system becomes inoperable, the operable system shall be demonstrated to be operable immediately and daily thereafter.
4. To be considered operable, a RHR service water pump shall be capable of delivering 3500 gpm against a head of 500 feet.	
5. If the requirements of 3.5.C.1-3 cannot be met, an orderly shutdown of the reactor will be initiated and the reactor water temperature shall be reduced to less than 212°F within 24 hours.	

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
High Pressure Core Cooling Capability	High Pressure Core Cooling Capability
D. High Pressure Coolant Injection (HPCI) System	D. Surveillance of HPCI System shall be performed as follows:
1. Except as specified in 3.5.D.2 below, the HPCI system shall be operable whenever the reactor pressure is greater than 150 psig and irradiated fuel is in the reactor vessel.	1. Routine Testing a. A simulated automatic actuation test shall be conducted each refueling outage. b. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.
2. From and after the date that the HPCI system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such system is sooner made operable, provided that during such seven days all of the Automatic Pressure Relief system, the RCIC system, both of the core spray systems, and the LPCI subsystem and containment cooling mode of the RHR system are operable.	2. When it is determined that HPCI system is inoperable, the RCIC system, the LPCI subsystem, and both of the core spray systems shall be demonstrated to be operable immediately.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
3. To be considered operable, the HPCI system shall meet the following conditions: a. The HPCI shall be capable of delivering 3,000 gpm into the reactor vessel for the reactor pressure range of 1120 psig to 150 psig. b. The condensate storage tanks shall contain at least 75,000 gallons of condensate water. c. The controls for automatic transfer of the HPCI pump suction from the condensate storage tank to the suppression chamber shall be operable. 4. If the requirements of 3.5.D.1-2 cannot be met, an orderly reactor shutdown shall be initiated immediately and the reactor pressure shall be reduced to 150 psig within 24 hours thereafter.	

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3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
E. Automatic Pressure Relief System	**E. Surveillance of the Automatic Pressure Relief System shall be performed as follows:**
1. Except as specified in 3.5.E.2 and 3.5.E.3 below, the entire automatic pressure relief system shall be operable at any time the reactor pressure is above 150 psig and irradiated fuel is in the reactor vessel.	1. Routine Testing a. A simulated automatic actuation test shall be conducted each operating cycle. b. Once each operating cycle, valve operability shall be verified by cycling the valves and observing a compensating change in turbine bypass valve position. c. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.
2. From and after the date that one of the automatic pressure relief system valves is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding **seven** days unless such valve is sooner made operable, provided that during such **seven** days both remaining automatic relief system valves and the HPCI system are operable.	
3. From and after the date that more than one of the automatic pressure relief valves are made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 24 hours unless repairs are made and provided that during such time the HPCI system is operable.	2. **When it is determined that one or more automatic pressure relief valves** of the Automatic Pressure Relief system is inoperable, the HPCI system shall be demonstrated to be operable immediately and weekly thereafter.
4. If the requirements of 3.5.E.1-3 cannot be met, an orderly reactor shutdown shall be initiated immediately and the reactor shall be reduced to 150 psig within 24 hours thereafter.	

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
F. Reactor Core Isolation Cooling System (RCIC)	F. Surveillance of Reactor Core Isolation Cooling System (RCIC) Surveillance of the RCIC System shall be performed as follows:
1. Except as specified in 3.5.F.2 below, the RCIC system shall be operable whenever the reactor pressure is greater than 150 psig and irradiated fuel is in the reactor vessel. a. To be considered operable, the RCIC system shall be capable of delivering 400 gpm into the reactor vessel.	1. Routine Testing a. A simulated automatic actuation test shall be conducted each refueling outage. b. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.
2. From and after the date that the RCIC system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 15 days unless such system is sooner made operable, provided that during such 15 days all active components of the HPCI system are operable.	2. When it is determined that the RCIC system is inoperable, the HPCI system shall be demonstrated to be operable immediately and daily thereafter.
3. If the requirements of 3.5.F.1 - 2 cannot be met, an orderly shutdown of the reactor shall be initiated immediately and the reactor pressure shall be reduced to 150 psig within 24 hours thereafter.	

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3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
I. Recirculation System	I. Recirculation System
1. Except as specified in 3.5.1.2 below, whenever irradiated fuel is in the reactor, with reactor coolant temperature greater than 212°F and both reactor recirculation pumps operating, the recirculation system cross tie valve interlocks shall be operable.	1. Once per month, when irriated fuel is in the reactor with reactor coolant temperature greater than 212°F and both reactor recirculation pumps operating, the recirculation system cross tie valve interlocks shall be demonstrated to be operable by verifying that the cros tie valves cannot be opened using the normal control switch.
2. The recirculation system cross tie valve interlocks may be inoperable if at least one cross tie valve is maintained fully closed.	2. When a recirculation system cross tie valve interlock is inoperable, the position of at least one fully closed cross tie valve shall be recorded daily.
3. Valves in the equalizer piping between the recirculation loops shall be closed. Reactor operation with one loop shall be limited to 24 hours.	3. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.

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Bases 4.5:

The testing interval for the core and containment cooling systems is based on a quantitative reliability analysis, judgment, and practicality. The core cooling systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 450 psig; thus, during operation even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel, which is not desirable.

The systems can be automatically actuated during a refueling outage and this will be done. To increase the availability of the individual components of the core and containment cooling systems, the components which make up the system, i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation will initially be functionally tested once per month until a trend is established and thereafter according to Figure 4.1 (see Section 3.1/4.1) with an interval not greater than three months. Core and containment cooling system components are inspected and tested in accordance with the requirements of 10 CFR 50, Section 50.55a(g). These requirements are delineated in Specification 4.13. This inspection and testing program, combined with the additional surveillance requirements contained in this section, provide a high degree of assurance that the core and containment cooling systems will perform as required when needed.

With components or subsystems out-of-service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative maintenance, etc., the pump and valve operability checks will be performed to demonstrate operability of the remaining components. However, if a failure, design deficiency, etc., caused the out-of-service period, then the demonstration of operability should be thorough enough to assure that a similar problem does not exist on the remaining components. For example, if an out-of-service period were caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test in addition to the operability checks.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
E. Safety/Relief Valves	E. Safety/Relief Valves
1. During power operating conditions and whenever reactor coolant pressure is greater than 110 psig and temperature is greater than 345°F :	1. The integrity of the safety/relief valve bellows shall be continuously monitored.
a. The safety valve function (self-actuation) of seven safety/relief valves shall be operable.	2. The operability of the bellows monitoring system shall be demonstrated at least once every three months.
b. The solenoid activated relief function (Automatic Pressure Relief) shall be operable as required by Specification 3.5.E.	3. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.

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3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
F. deleted	F. deleted
G. Jet Pumps Whenever the reactor is in the Startup or Run modes, all jet pumps shall be operable. If it is determined that a jet pump is inoperable, the plant shall be placed in a cold shutdown condition within 24 hours.	G. Jet Pumps Whenever there is recirculation flow with the reactor in the Startup or Run modes, jet pump operability shall be checked daily by verifying that all the following conditions do not occur simultaneously: 1. The two recirculation loop flows are unbalanced by 15% or more when the recirculation pumps are operating at the same speed. 2. The indicated value of core flow rate is 10% or more less than the value derived from loop flow measurements.

Bases Continued 3.6 and 4.6:

The safety/relief valves have two functions; i.e. power relief or self-actuated by high pressure. The solenoid actuated function (Automatic Pressure Relief) in which external instrumentation signals of coincident high drywell pressure and low-low water level initiate opening of the valves. This function is discussed in Specification 3.5.E. In addition, the valves can be operated manually.

The safety function is performed by the same safety/relief valve with self-actuated integral bellows and pilot valve causing main valve operation. Article 9 of the ASME Pressure Vessel Code Section III Nuclear Vessels requires that these bellows be monitored for failure since this would defeat the safety function of the safety/relief valve.

It is realized that there is no way to repair or replace the bellows during operation and the plant must be shut down to do this. The thirty-day period to do this allows the operator flexibility to choose his time for shutdown; meanwhile, because of the redundancy present in the design and the continuing monitoring of the integrity of the other valves, the overpressure pressure protection has not been compromised. The auto-relief function would not be impaired by a failure of the bellows. However, the self-actuated overpressure safety function would be impaired by such a failure.

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Provision also has been made to detect failure of the bellows monitoring system. Testing of this system quarterly provides assurance of bellows integrity.

When the setpoint is being bench checked, it is prudent to disassemble one of the safety/relief valves to examine for crud buildup, bending of certain actuator members or other signs of possible deterioration.

The program of safety/relief valve testing conforms to the requirements of 10 CFR 50, Section 50.55a(g). These requirements are delineated in Specification 4.13. This inspection and testing program, combined with the additional surveillance requirements contained in this section, provide a high degree of assurance that the safety/relief valves will perform as required when needed.

Bases Continued 3.6 and 4.6:

F. deleted

Bases Continued 3.6 and 4.6:

G. Jet pumps

Failure of a jet pump nozzle assembly hold down mechanism, nozzle assembly and/or riser, would increase the cross-sectional flow area for blowdown following the design basis double-ended line break. Therefore, if a failure occurred, repairs must be made.

The detection technique is as follows. With the two recirculation pumps balanced in speed to within + 5%, the flow rates in both recirculation loops will be verified by Control Room monitoring instruments. If the two flow rate values do not differ by more than 10%, riser and nozzle assembly integrity has been verified. If they do differ by 10% or more, the core flow rate measured by the jet pump diffuser differential pressure system must be checked against the core flow rate derived from the measured values of loop flow to core flow correlation. If the difference between measured and derived core flow rate is 10% or more (with the derived value higher) diffuser measurements will be taken to define the location within the vessel of failed jet pump nozzle (or riser) and the plant shut down for repairs. If the potential blowdown flow area is increased, the system resistance to the recirculation pump is also reduced; hence, the affected drive pump will "run out" to a substantially higher flow rate (approximately 115% to 120% for a single nozzle failure). If the two loops are balanced in flow at the same pump speed, the resistance characteristics cannot have changed. Any imbalance between drive loop flow rates would be indicated by the plant process instrumentation. In addition, the affected jet pump would provide a leakage path past the core thus reducing the core flow rate. The reverse flow through the inactive jet pump would still be indicated by a positive differential pressure but the net effect would be a slight decrease (3% to 6%) in the total core flow measured. This decrease, together with the loop flow increase, would result in a lack of correlation between measured and derived core flow rate. Finally, the affected jet pump diffuser differential pressure signal would be reduced because the backflow would be less than the normal forward flow.

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A nozzle-riser system failure could also generate the coincident failure of a jet pump body; however, the converse is not true. The lack of any substantial stress in the jet pump body makes failure impossible without an initial nozzle-riser system failure.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
3. Pressure Suppression Chamber - Reactor Building Vacuum Breakers	3. Pressure Suppression Chamber - Reactor Building Vacuum Breakers
a. Except as specified in 3.7.A.3.b below, two pressure suppression chamber-reactor building vacuum breakers shall be operable at all times when the primary containment integrity is required. The set point of the differential pressure instrumentation which actuates the pressure suppression chamber-reactor building vacuum breakers shall be 0.5 psi.	a. The pressure suppression chamber-reactor building vacuum breakers and associated instrumentation including set point shall be checked for proper operation every three months.
b. From and after the date that one of the pressure suppression chamber-reactor building vacuum breakers is made or found to be inoperable for any reason, reactor operation is permissible only during the suceeding seven days unless such vacuum breaker is sooner made operable, provided that the repair procedure does not violate primary containment integrity.	b. Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.

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3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
d. The fuel cask or irradiated fuel is not being moved within the reactor building.	
D. Primary Containment Isolation Valves	D. Primary Containment Isolation Valves
1. During reactor power operating conditions, all isolation valves listed in Table 3.7.1 and all primary system instrument line flow check valves shall be operable except as specified in 3.7.D.2.	1. The primary containment isolation valves surveillance shall be performed as follows:
	a. At least once per operating cycle the operable isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and closure times.
	b. **Inservice inspection and testing of components shall be conducted in accordance with Specification 4.13.**

3.7/4.7

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
2. In the event any isolation valve specified in Table 3.7.1 becomes inoperable, reactor operation in the run mode may continue provided at least one valve in each line having an inoperable valve is closed.	2. Whenever an isolation valve listed in Table 3.7.1 is inoperable, the position of at least one fully closed valve in each line having an inoperable valve shall be recorded daily.
3. If Specification 3.7.D.1 and 3.7.D.2 cannot be met, initiate normal orderly shutdown and have reactor in the cold shutdown condition within 24 hours.	

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
3.13 INSERVICE INSPECTION AND TESTING	4.13 INSERVICE INSPECTION AND TESTING
Applicability:	Applicability:
Applies to components which are part of the reactor coolant pressure boundary and their supports and other safety-related pressure vessels, piping, pumps, and valves.	Applies to the periodic inspection and testing of components which are part of the reactor coolant pressure boundary and their supports and other safety-related pressure vessels, piping, pumps, and valves.
Objective:	Objective:
To assure the integrity of the reactor coolant pressure boundary and the operational readiness of safety-related pressure vessels, piping, pumps, and valves.	To verify the integrity of the reactor coolant pressure boundary and the operational readiness of safety-related pressure vessels, piping, pumps, and valves.
Specification:	Specification:
A. Inservice Inspection	A. Inservice Inspection
1. To be considered operable, Quality Group A, B, and C components shall satisfy the requirements contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for continued service of ASME Code Class 1, 2, and 3 components, respectively, except where relief has been requested from the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).	1. Inservice inspection of Quality Group A, B, and C components shall be performed in accordance with the requirements for ASME Code Class 1, 2, and 3 components, respectively, contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where relief has been requested from the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
	2. For Non-Conforming Lines which are not Service Sensitive, inspections required by 4.13.A.1 during the first 10-year inspection interval shall be completed by the end of the 1978 refueling outage. If these examinations reveal no incidence of stress corrosion cracking, the examination schedule may revert to that specified in 4.13.A.1.
	3. For Non-Conforming Lines which are Service Sensitive: a. The welds and adjoining areas of bypass piping of the discharge valves in the main recirculation loops, and of the austenitic stainless steel reactor core spray piping up to and including the second isolation valve, shall be examined at each reactor refueling outage or at other scheduled or unscheduled plant cold shutdowns. Successive examinations need not be closer than six months apart. In the event three successive examinations find the piping free of unacceptable indications, the examination may be extended to each 36 month interval, plus or minus 12 months, coinciding with a refueling outage, and may be limited to one bypass pipe run and one reactor core spray pipe run.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
	b. If Service Sensitive Lines other than those listed in 4.13.B.3.a above are identified, the welds and adjoining areas of this piping shall be subjected to examination at each reactor refueling outage or at other scheduled or unscheduled plant cold shutdowns on a sampling basis. Successive examinations need not be closer than six months apart. If unacceptable flaw indications are detected in any branch run, the remaining branch runs with similar functions and configurations shall be examined. In the event three successive examinations find the piping free of unacceptable indications, the examination schedule may revert to that specified in 4.13.A.1 with the exception that all examinations normally completed over a ten-year interval shall be completed each 80-month period.
B. Inservice Testing of Pumps and Valves	B. Inservice Testing of Pumps and Valves
1. To be considered operable, Quality Group A, B, and C pumps and valves shall satisfy the requirements contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for operability of ASME Code Class 1, 2, and 3 pumps and valves, respectively, except where relief has been requested from the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).	1. Inservice testing of Quality Group A, B, and C pumps and valves shall be performed in accordance with the requirements for ASME Code Class 1, 2, and 3 pumps and valves, respectively, contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where relief has been requested from the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

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Bases 3.13 and 4.13:

The inservice inspection and testing program conforms to the requirements of 10 CFR 50, Section 50.55a(g). Where practical, the inspection and testing of components classified into NRC Quality Groups A, B, and C will conform to the requirements for ASME Code Class 1, 2, and 3 components contained in Section XI of the ASME Boiler and Pressure Vessel Code.

Using Regulatory Guide 1.26, Revision 3, "Quality Group Classifications and Standards for Water, Steam, and Radioactive-Waste-Containing Components of Nuclear Power Plants," as a guide, all Monticello components have been classified into Quality Groups. This classification serves as the basis for determining which ASME Code Class inspection and testing requirements are applicable to a given component. 10 CFR 50, Section 50.55a(g) requires components which are part of the reactor coolant pressure boundary and their supports to meet the inservice inspection and testing requirements applicable to components classified as ASME Code Class 1. Other safety-related components must meet the inservice inspection and testing requirements applicable to components classified as ASME Code Class 2 or 3.

The inservice inspection program must be updated at 40 month intervals. The program for testing pumps and valves for operational readiness must be updated every 20 months. A description of the updated programs should be submitted to the NRC for review at least 90 days before the start of each period. A suggested format for this description is contained in Appendix A to reference (1).

The inservice inspection and testing program must, to the extent practical, comply with the requirements in editions and addenda to the ASME Code that are "in effect" no more than six months before the start of the period covered by the updated program. The term "in effect" means both having been published by the ASME, and having been referenced in paragraph (b) of 10 CFR 50, Section 50.55a. If a code required inspection or test is impractical, requests for deviations are submitted to the Commission in accordance with 10 CFR 50, Section 50.55a(g)(6)(i). The information specified in Appendix B to reference (1) should be submitted for each deviation requested. Deviation requests should, if possible, be submitted to the NRC for review at least 90 days before the start of each period. Deviations identified during an inspection period may be grouped and requested at the end of each calendar quarter. It is expected that a small number of deviations will be identified during the inspection period, particularly the first period when new inspection and testing techniques will be utilized. A requested deviation request may be considered acceptable to the Commission until a formal disapproval has been received.

Bases 3.13 and 4.13 (continued):

Small, hairline cracks in austenitic stainless steel piping in BWR facilities has been observed on several occasions. Data indicates that Type 304 austenitic stainless steel piping in the reactor coolant pressure boundary of the boiling water reactor is susceptible to stress corrosion cracking. Such cracking is caused by a combination of significant amounts of oxygen in the coolant, high stresses, and some sensitization of metal adjacent to welds. Cracks have occurred in the heat affected zones adjacent to welds, but are not expected to occur outside these areas, provided the pipe material is properly annealed. Pipe runs containing stagnant or low velocity fluids have been observed to be more susceptible to stress corrosion cracking than pipes containing a continuously flowing fluid during plant operation. Historically, these cracks have been identified either by volumetric examination, by leak detection systems, or by visual inspection. Because of the inherent high material toughness of austenitic stainless steel piping, stress corrosion cracking is unlikely to cause a rapidly propagating failure resulting in a loss of coolant accident.

Although the probability that stress corrosion cracks will propagate far enough to create a significant safety hazard is slight, the presence of such cracks is undesirable. The following steps have been taken to minimize this problem:

1. Where practical, pipe runs constructed of material susceptable to stress corrosion cracking and which contained stagnant or low velocity fluid have been replaced with materials not susceptable to cracking or they have been eliminated.

2. The reactor coolant leakage detection technical specifications have been amended to enhance the ability to detect unidentified leakage that may include through-wall cracks.

3. The program of inservice inspection has been augmented to increase the probability of crack detection in lines susceptable to stress corrosion cracking.

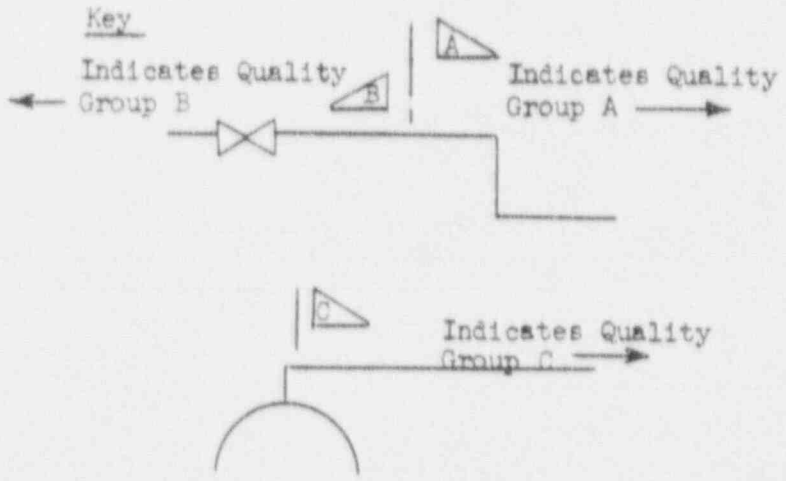
This program conforms to the Commission's guidelines for plants with operating licenses (reference 2).

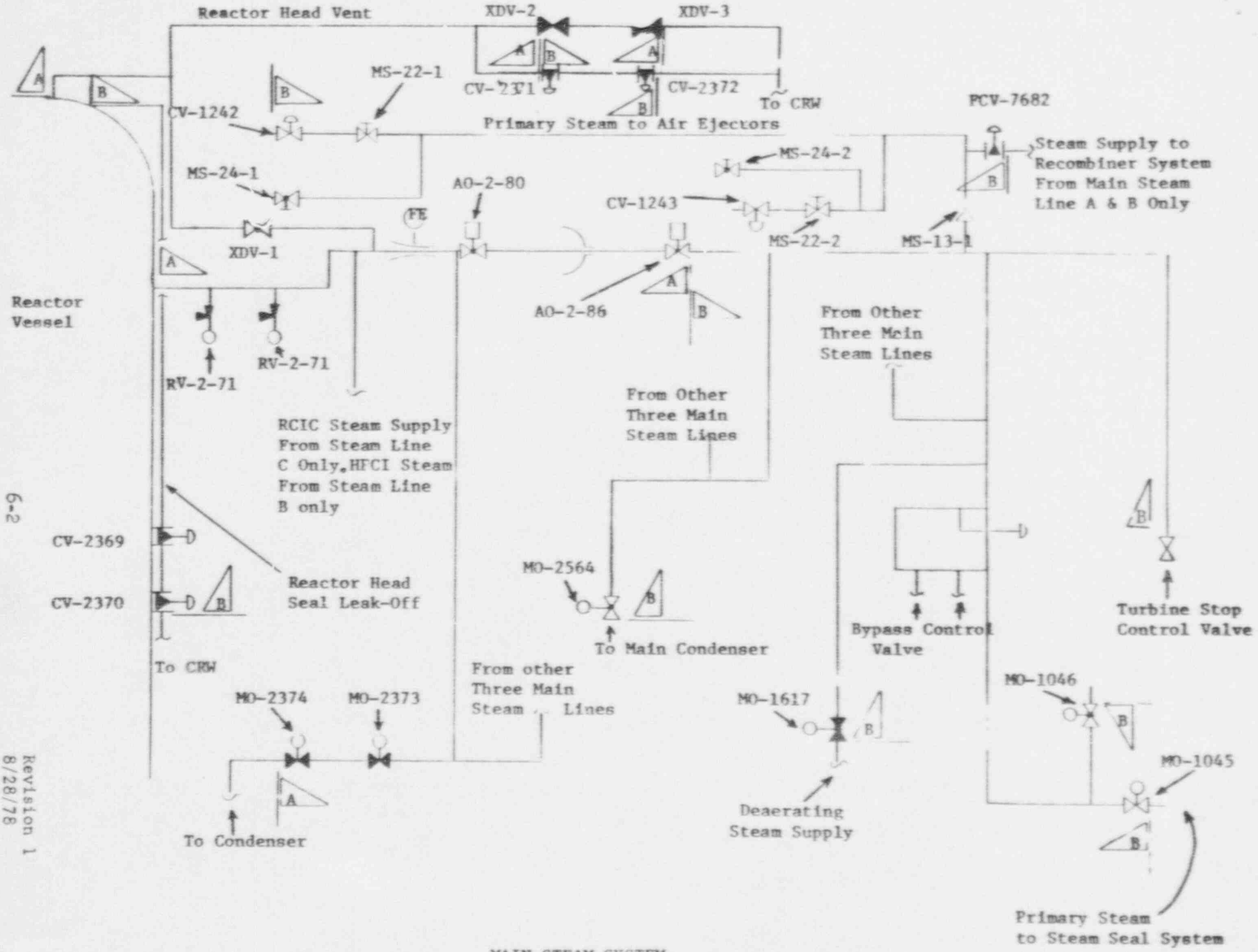
References:

1. Letter from D. L. Ziemann, Chief, Operating Reactors Branch #2, USNRC, to L. O. Mayer, NSP, dated November 24, 1976.

2. NUREG-0313, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," July, 1977.

SECTION 6 QUALITY GROUP CLASSIFICATION DRAWINGS





MAIN STEAM SYSTEM

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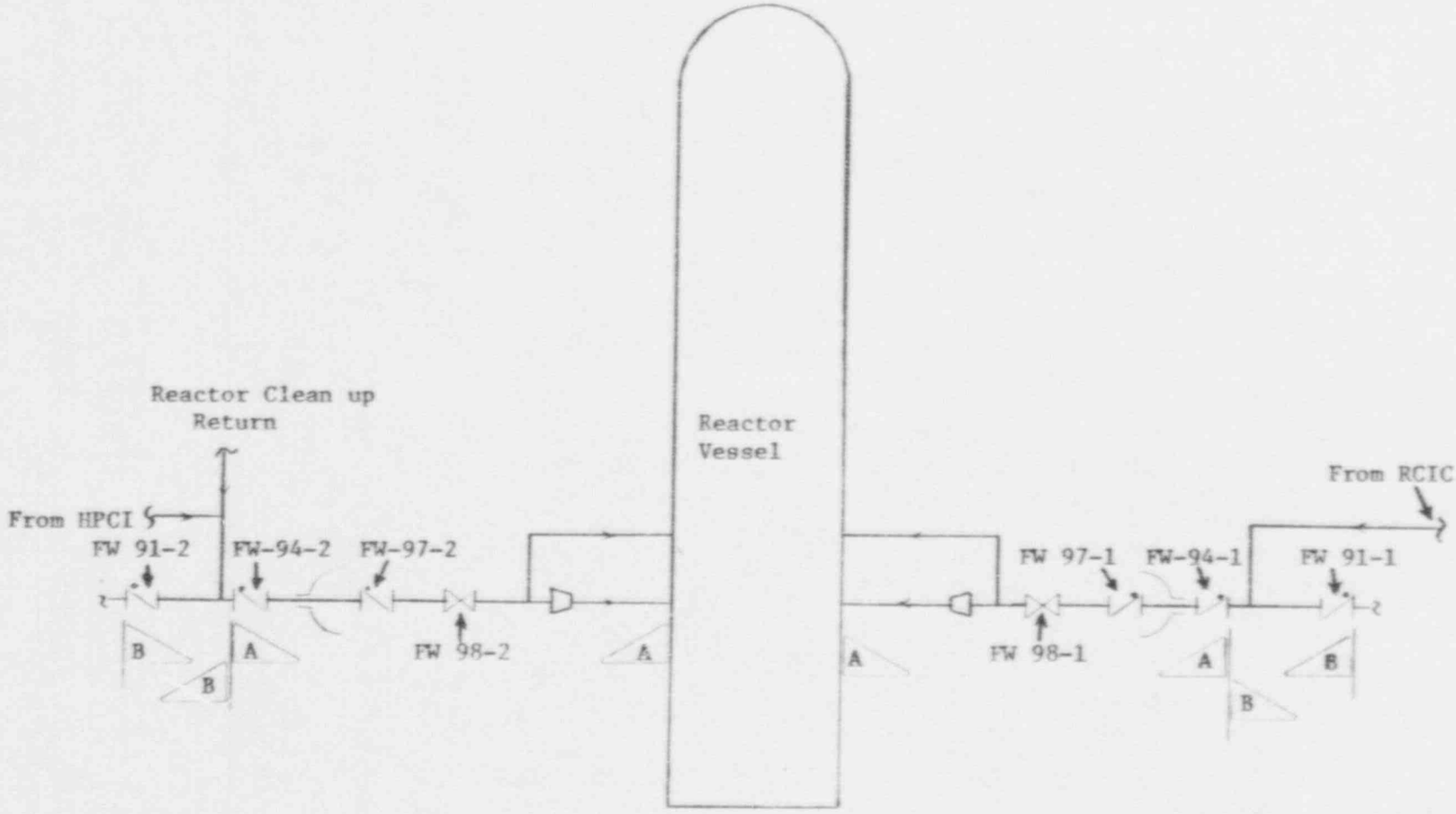
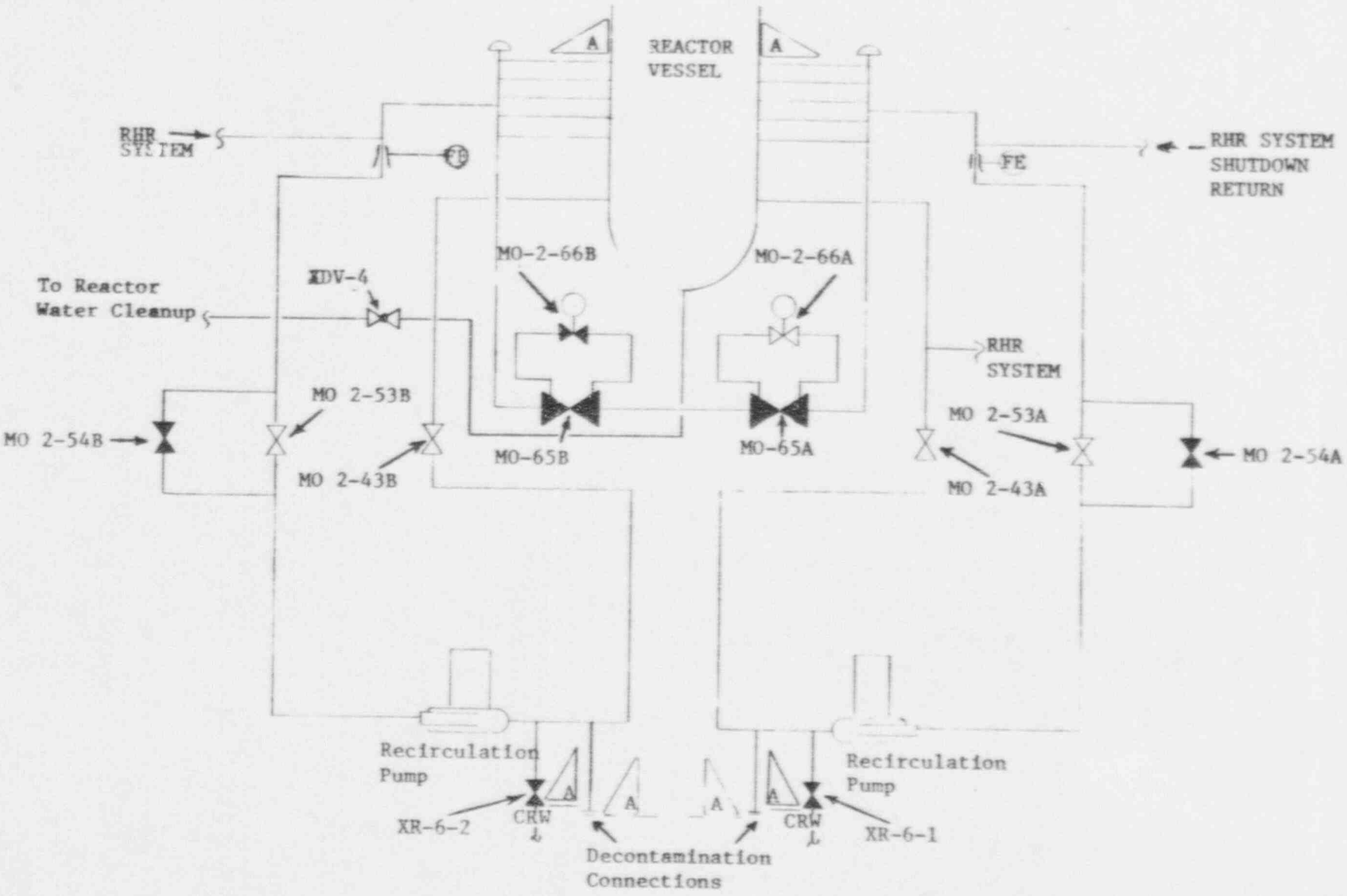
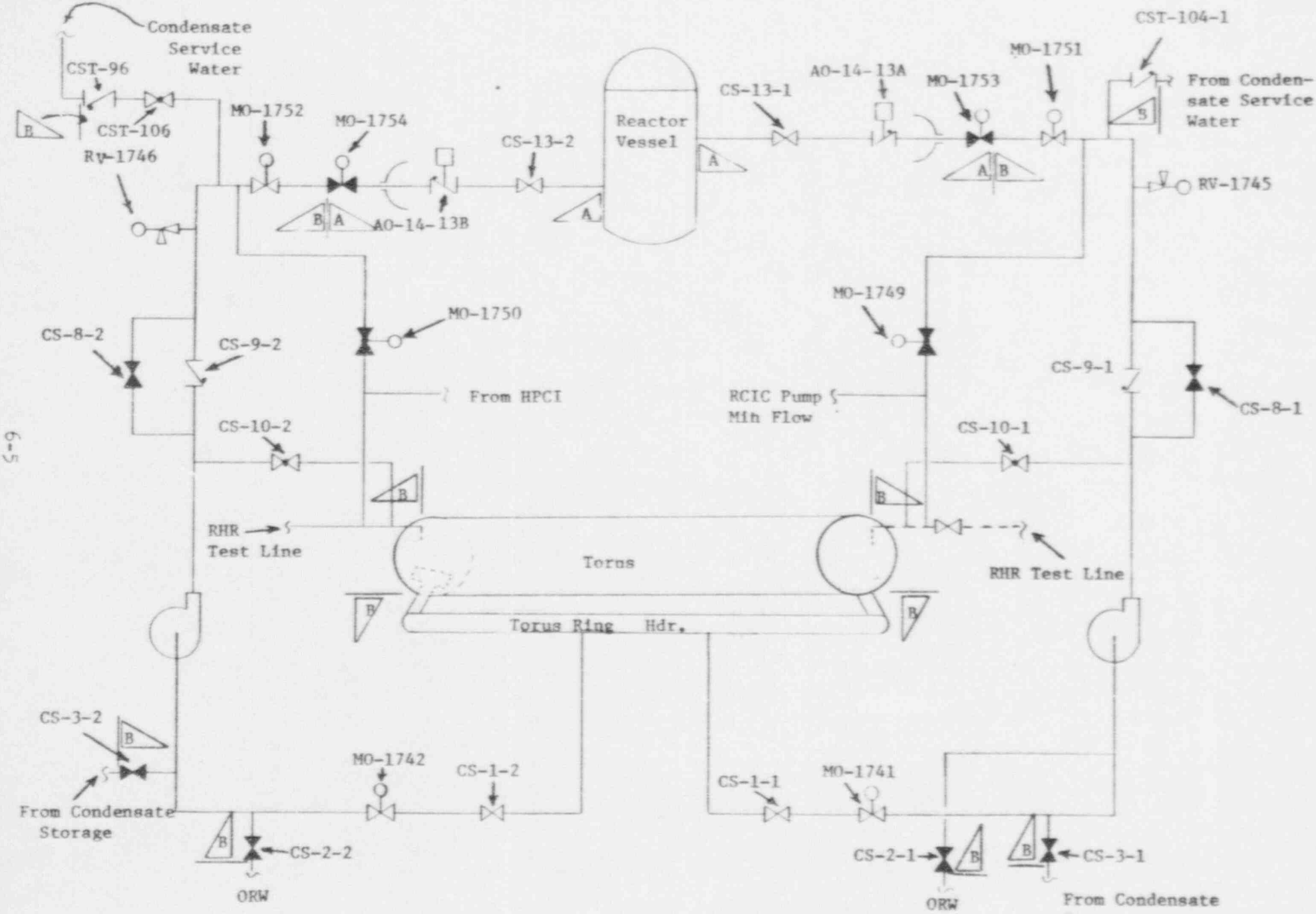
Revision 1
8/28/78



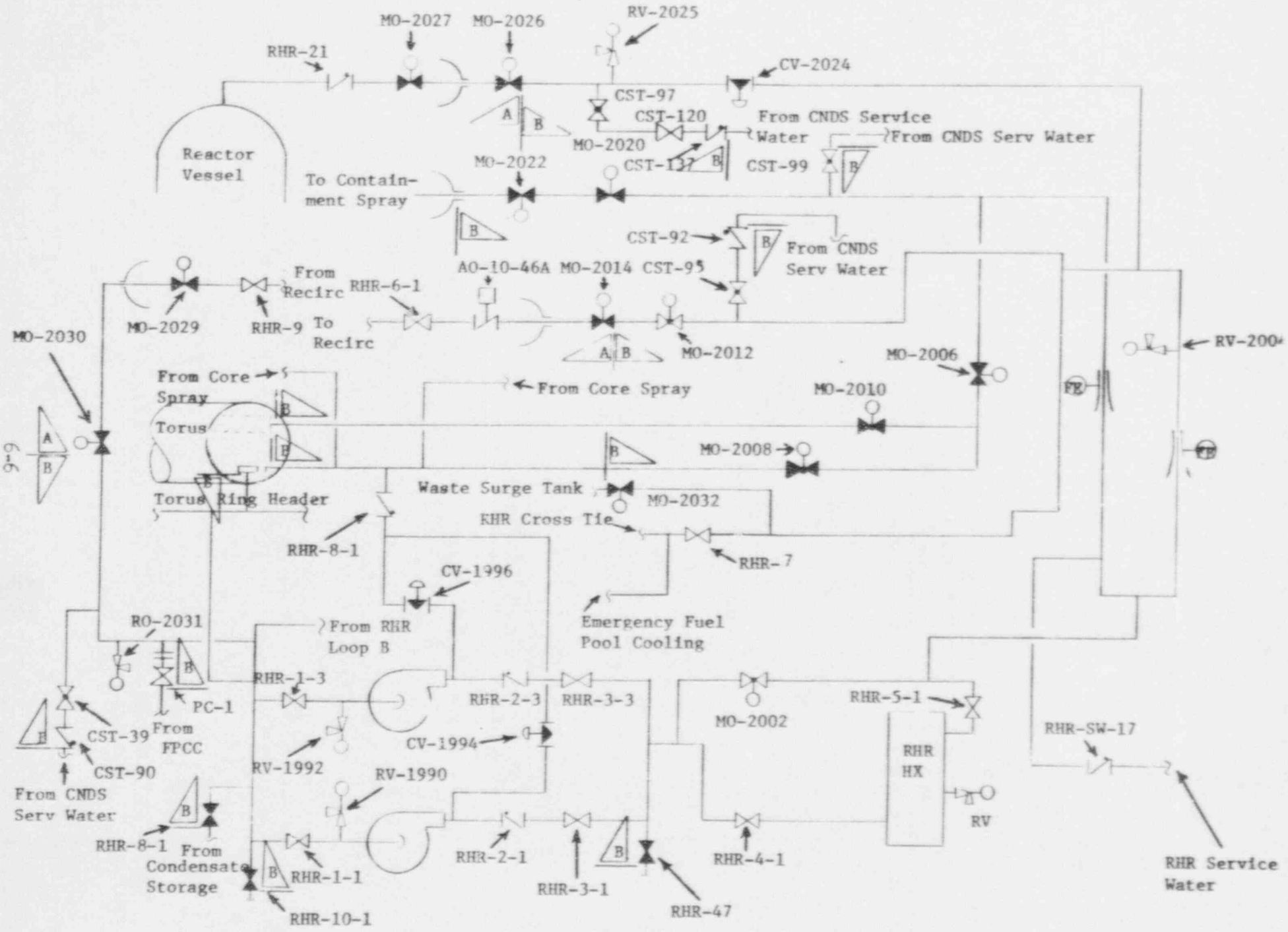
FEED WATER SYSTEM



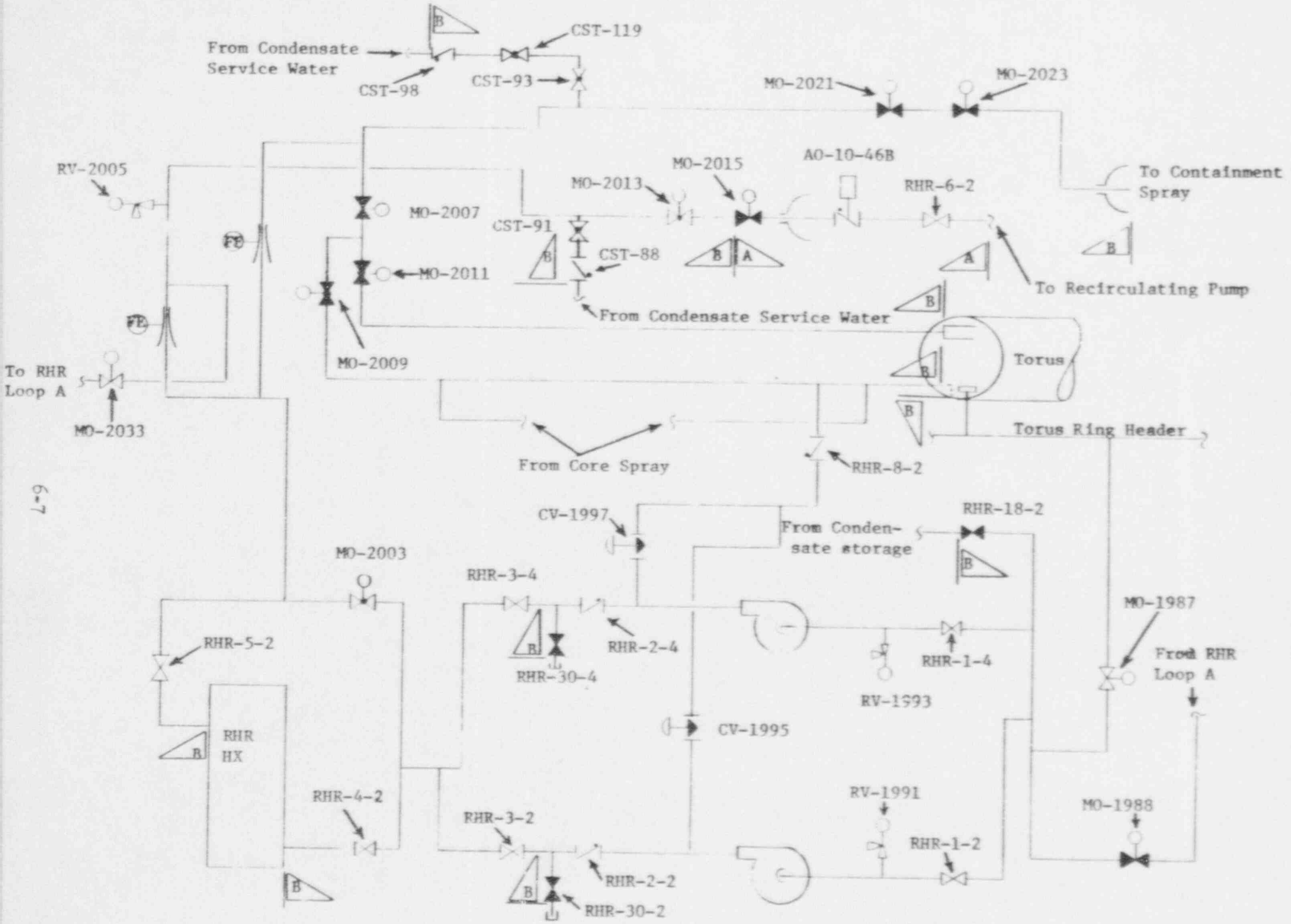
REACTOR RECIRCULATION SYSTEM



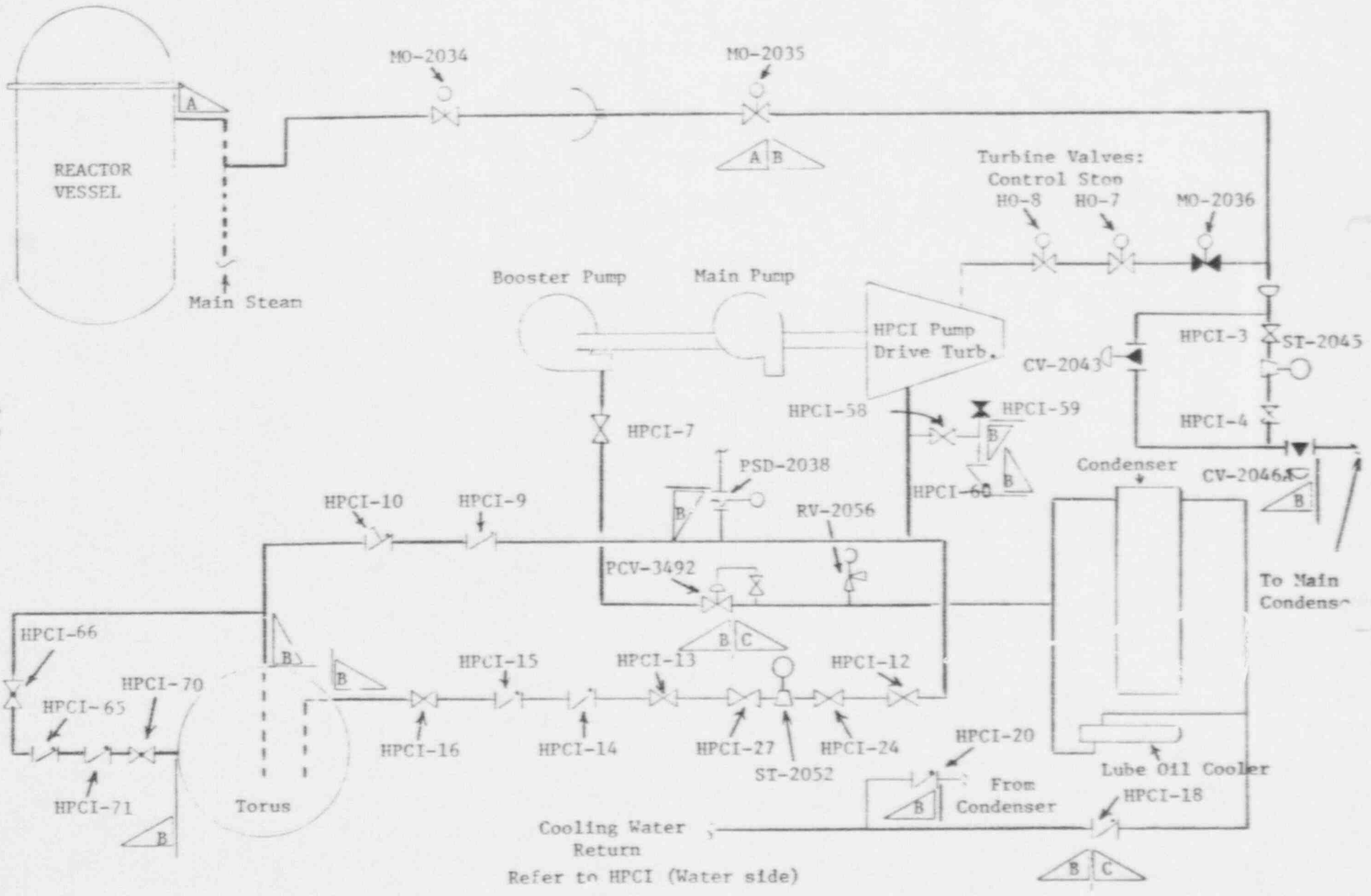
CORE SPRAY SYSTEM



RESIDUAL HEAT REMOVAL SYSTEM LOOP A

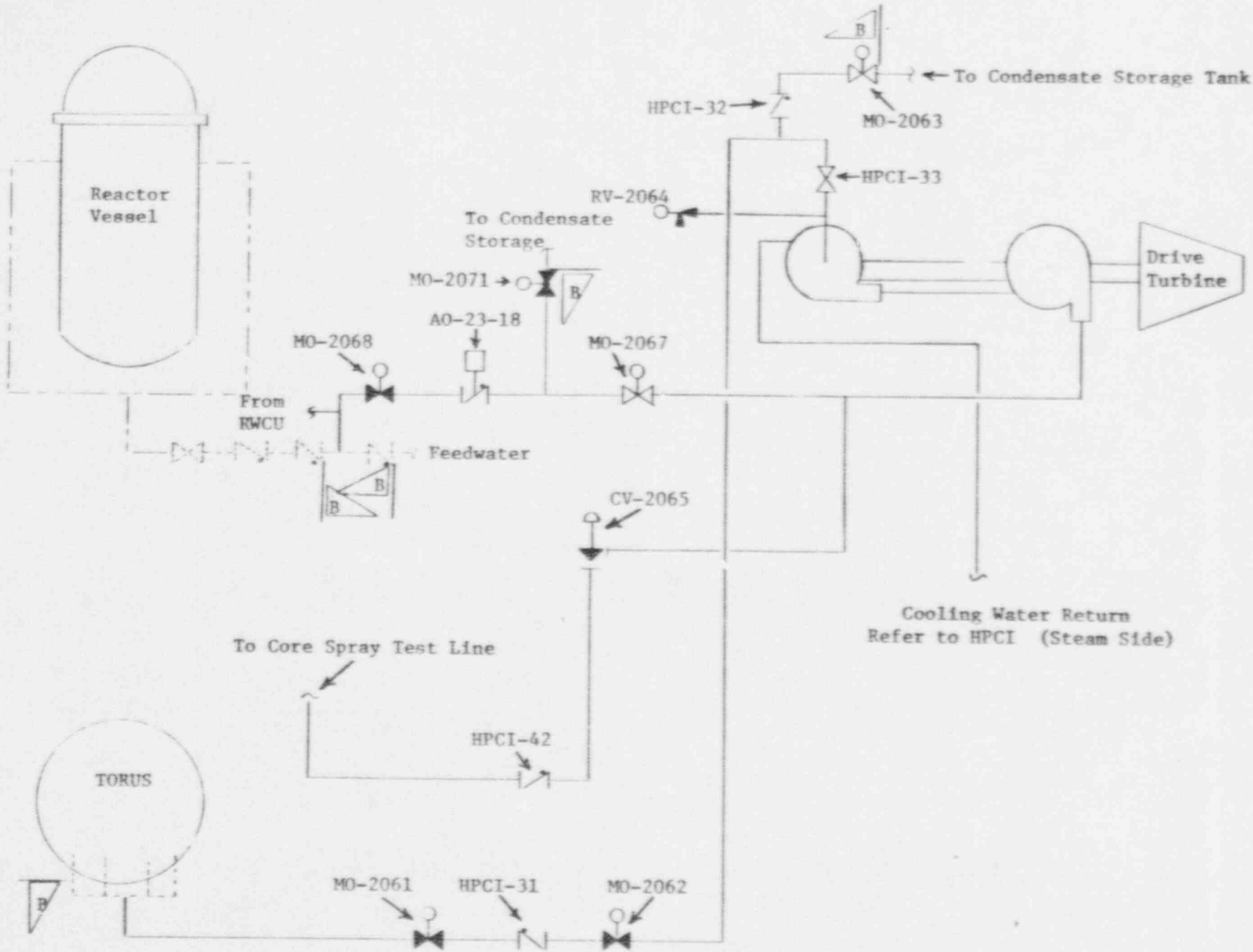


RESIDUAL HEAT REMOVAL SYSTEM LOOP B

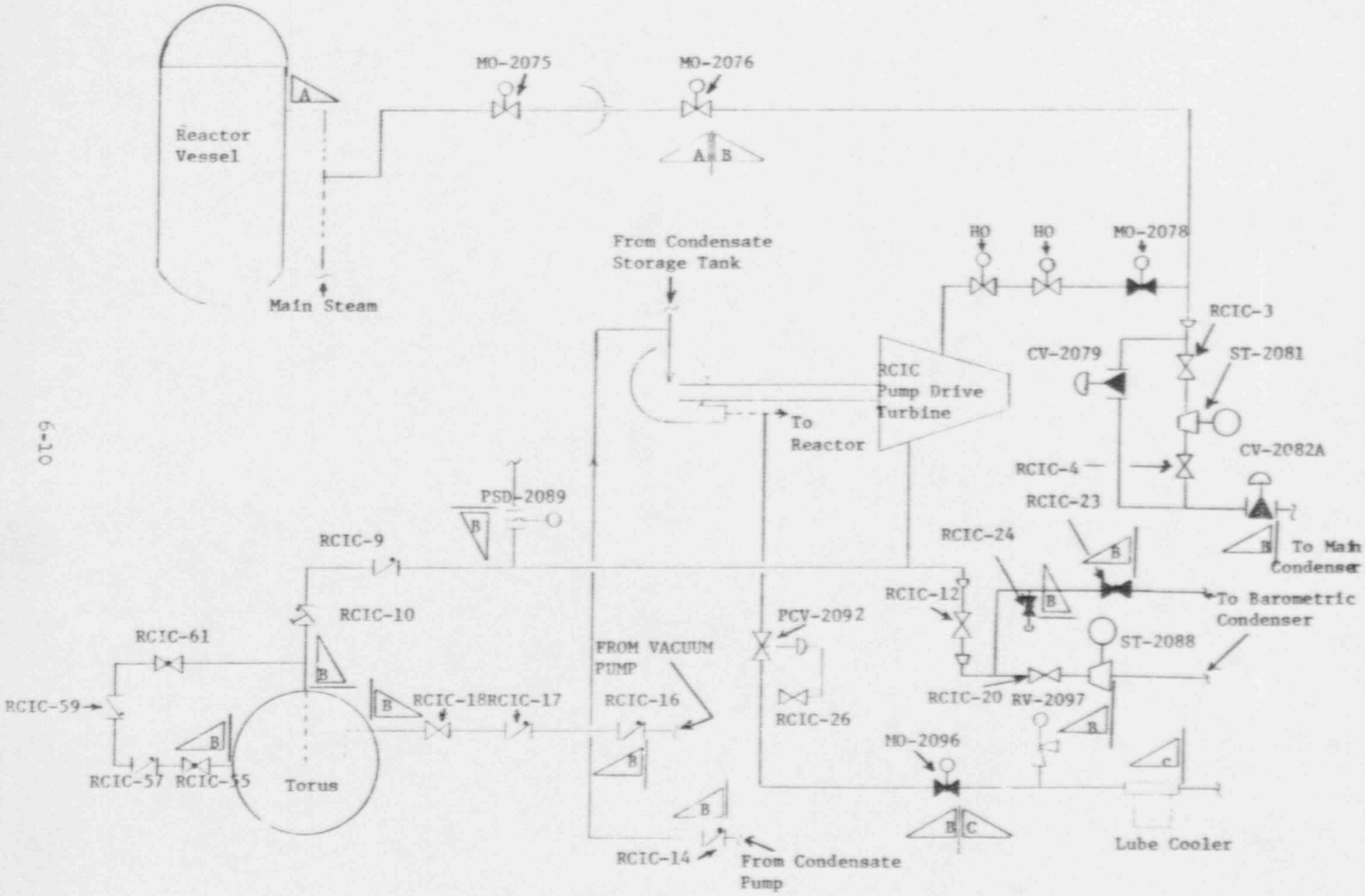


HIGH PRESSURE COOLANT INJECTION SYSTEM (STEAM SIDE)

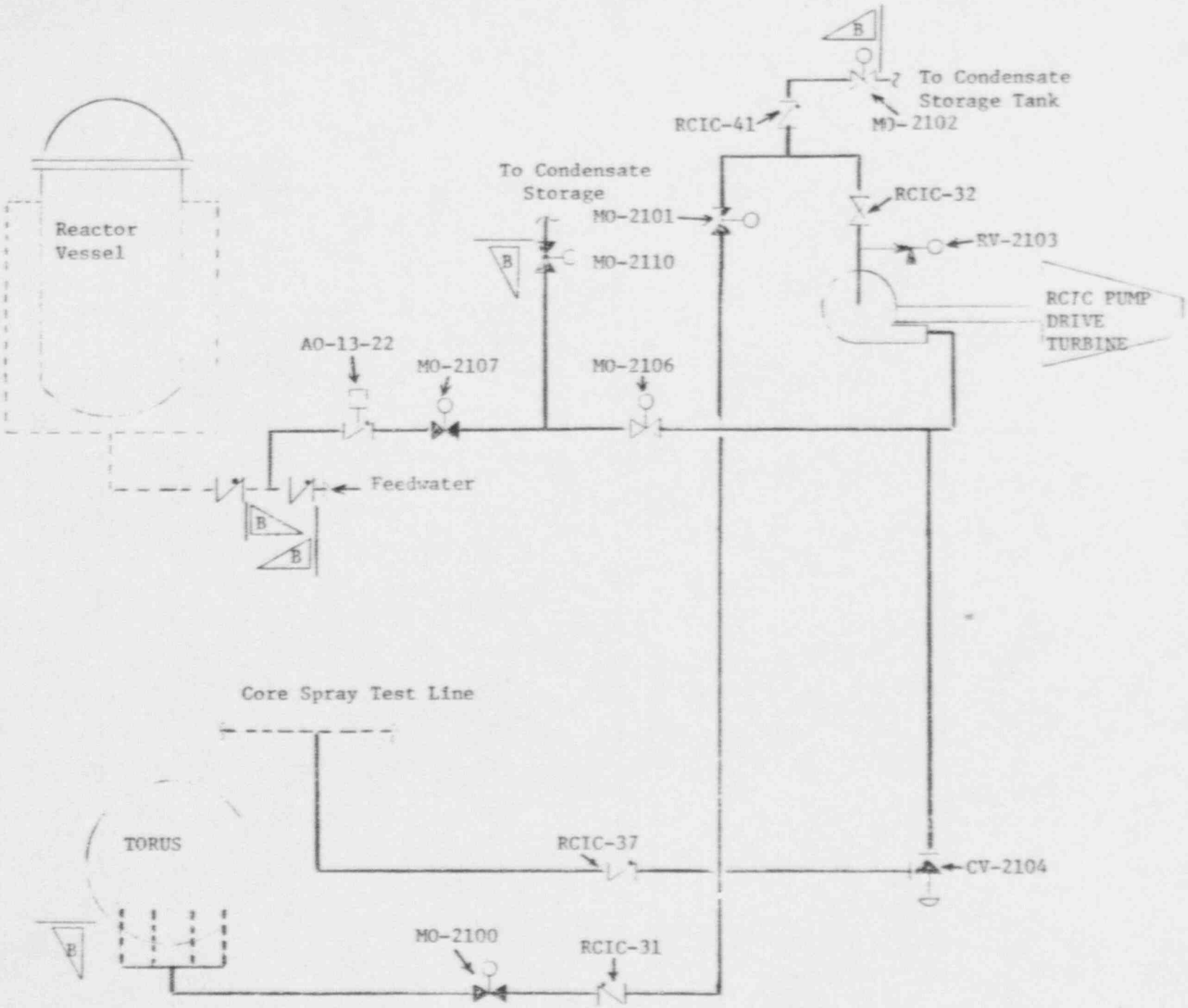
Revision 2
1/5/79



HIGH PRESSURE COOLANT INJECTION SYSTEM (WATER SIDE)

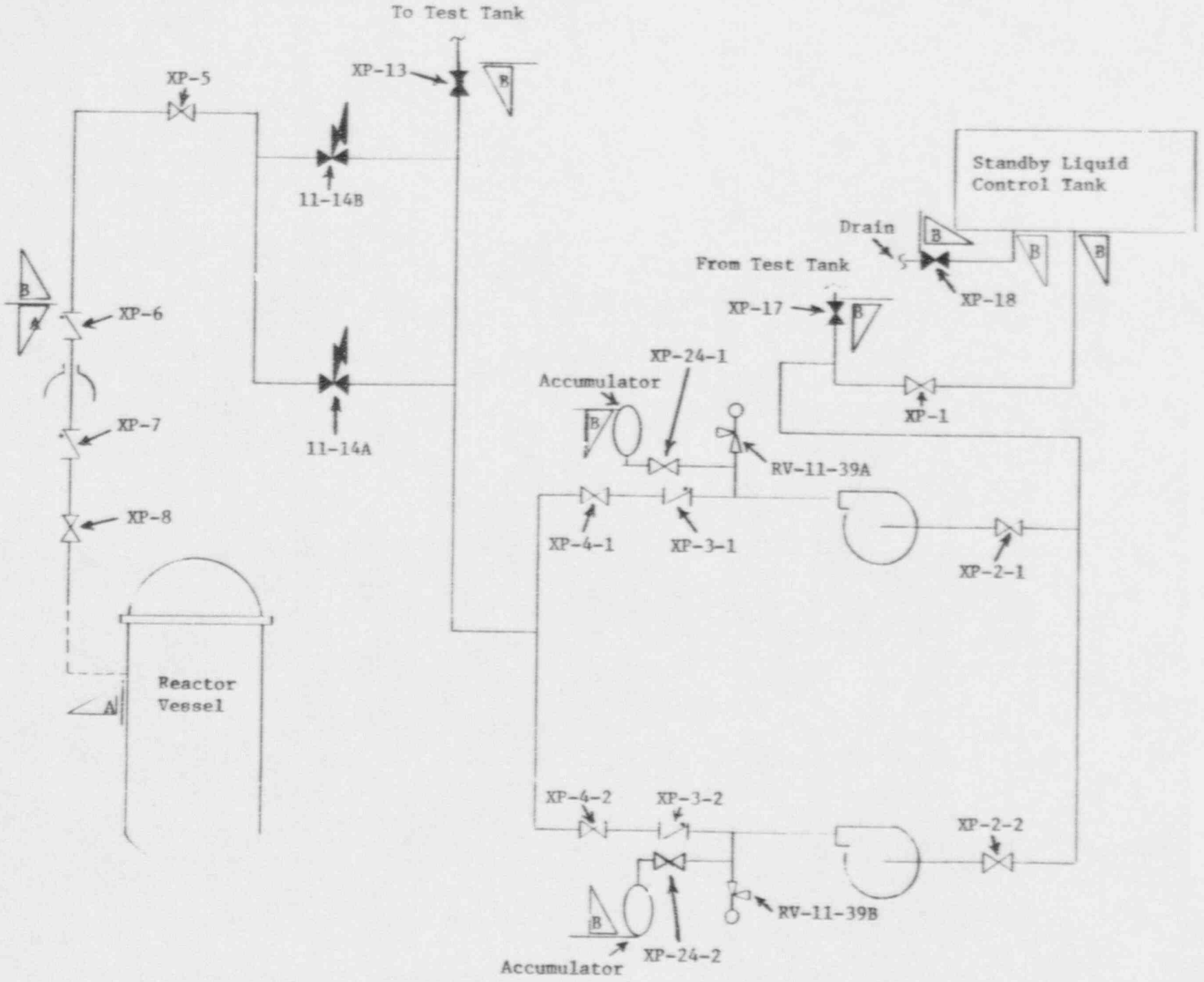


RCIC (Steam Side)

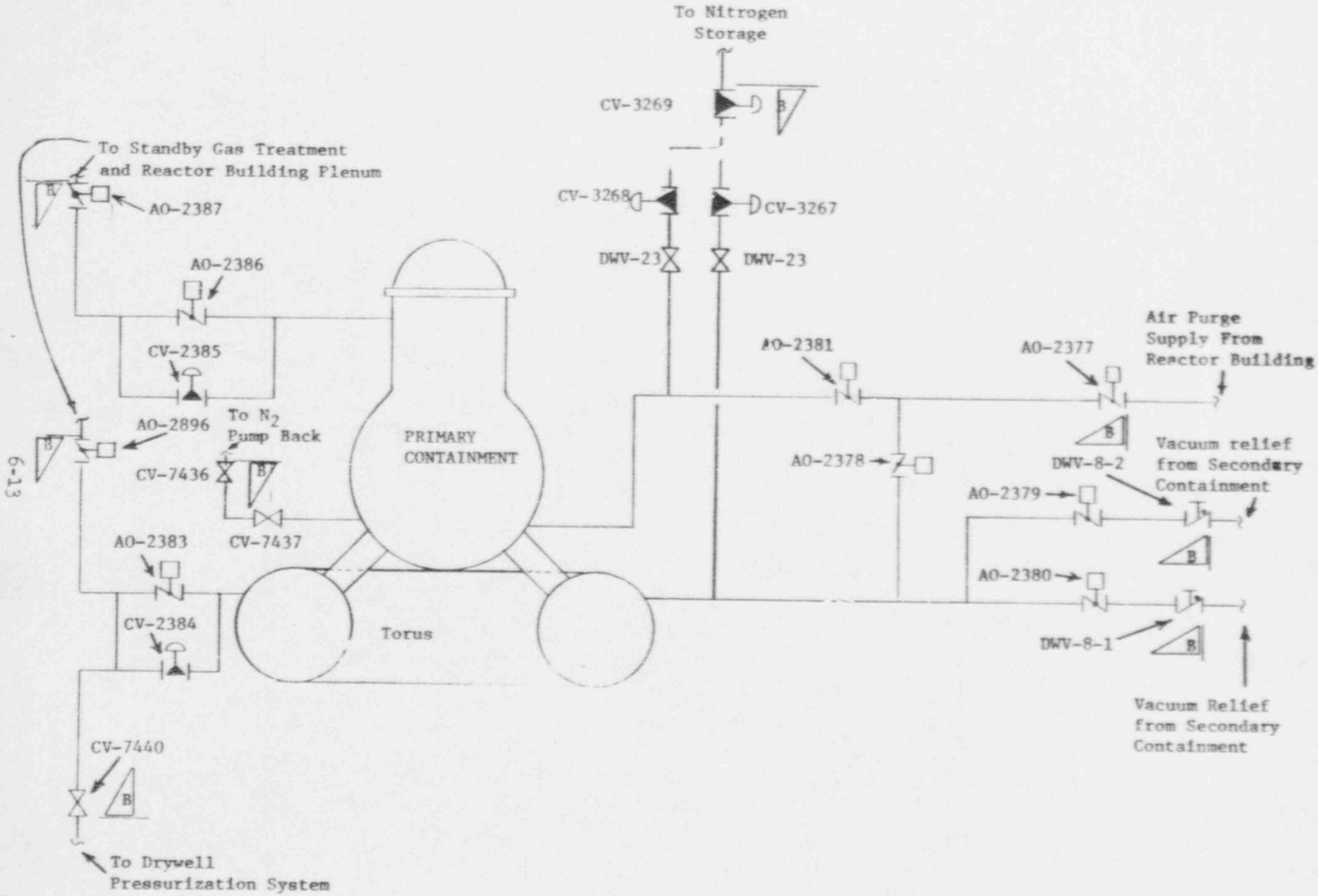


RCIC (WATER SIDE)

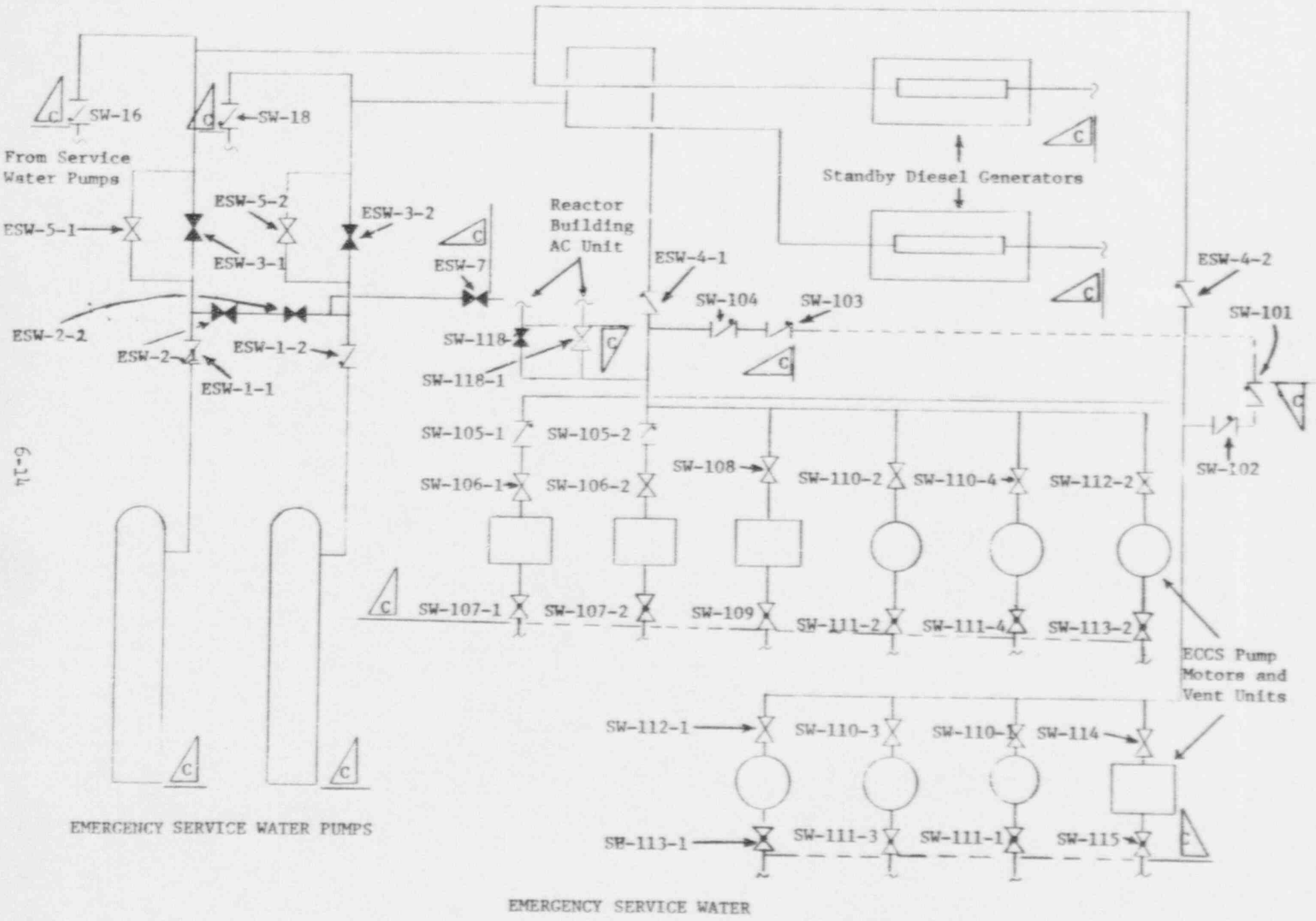
Revision 2
1/5/79

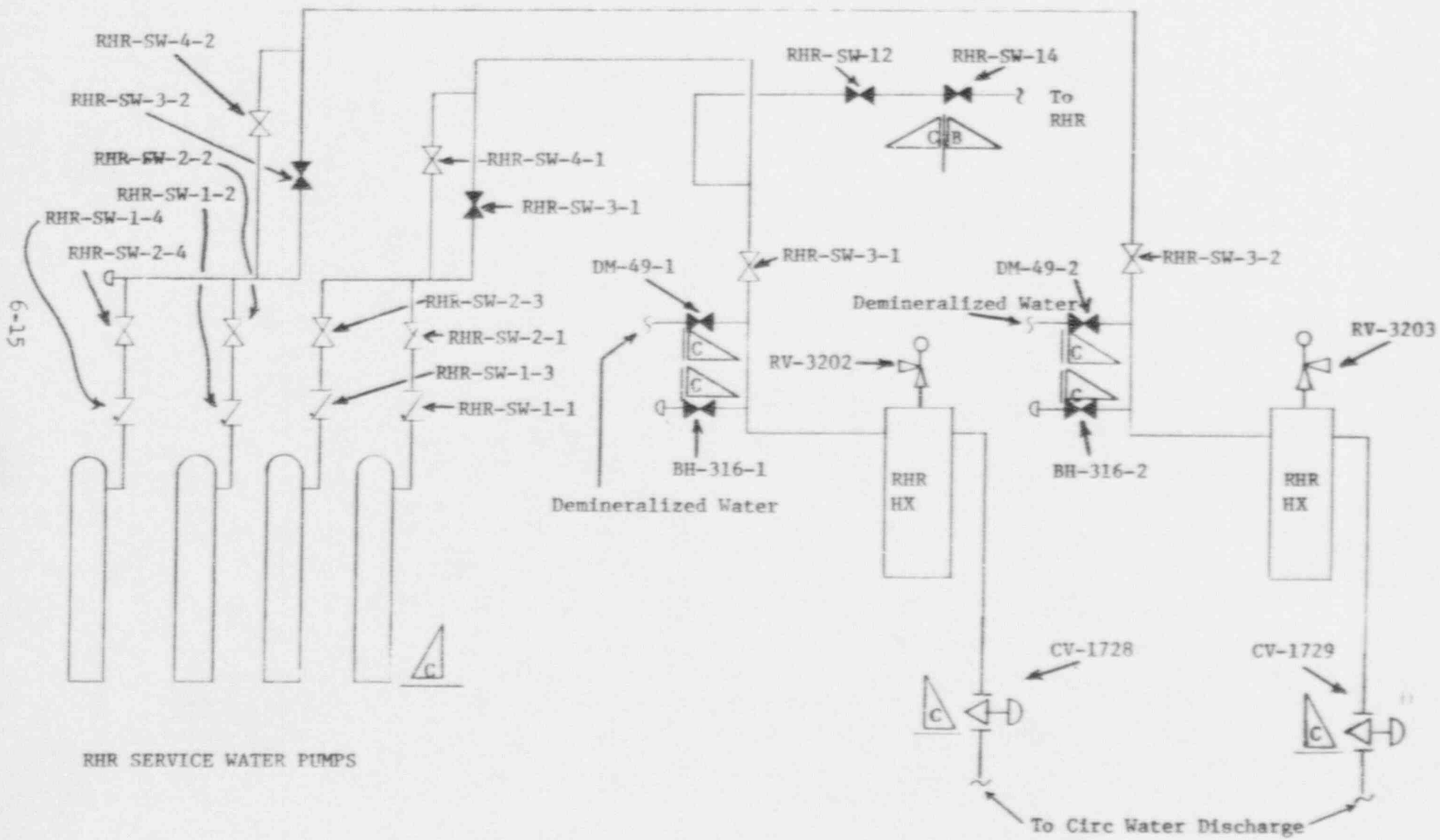


STANDBY LIQUID CONTROL SYSTEM

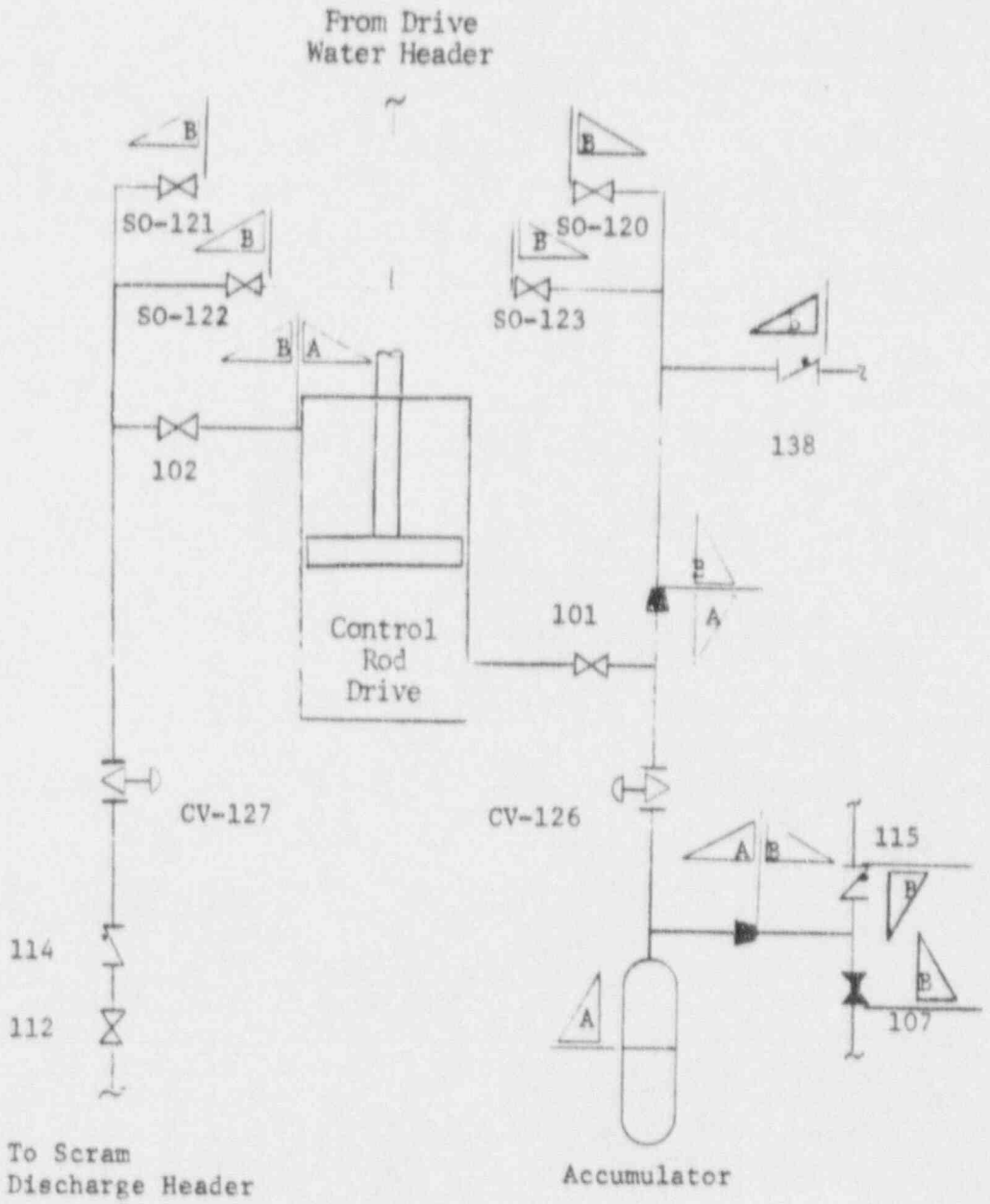


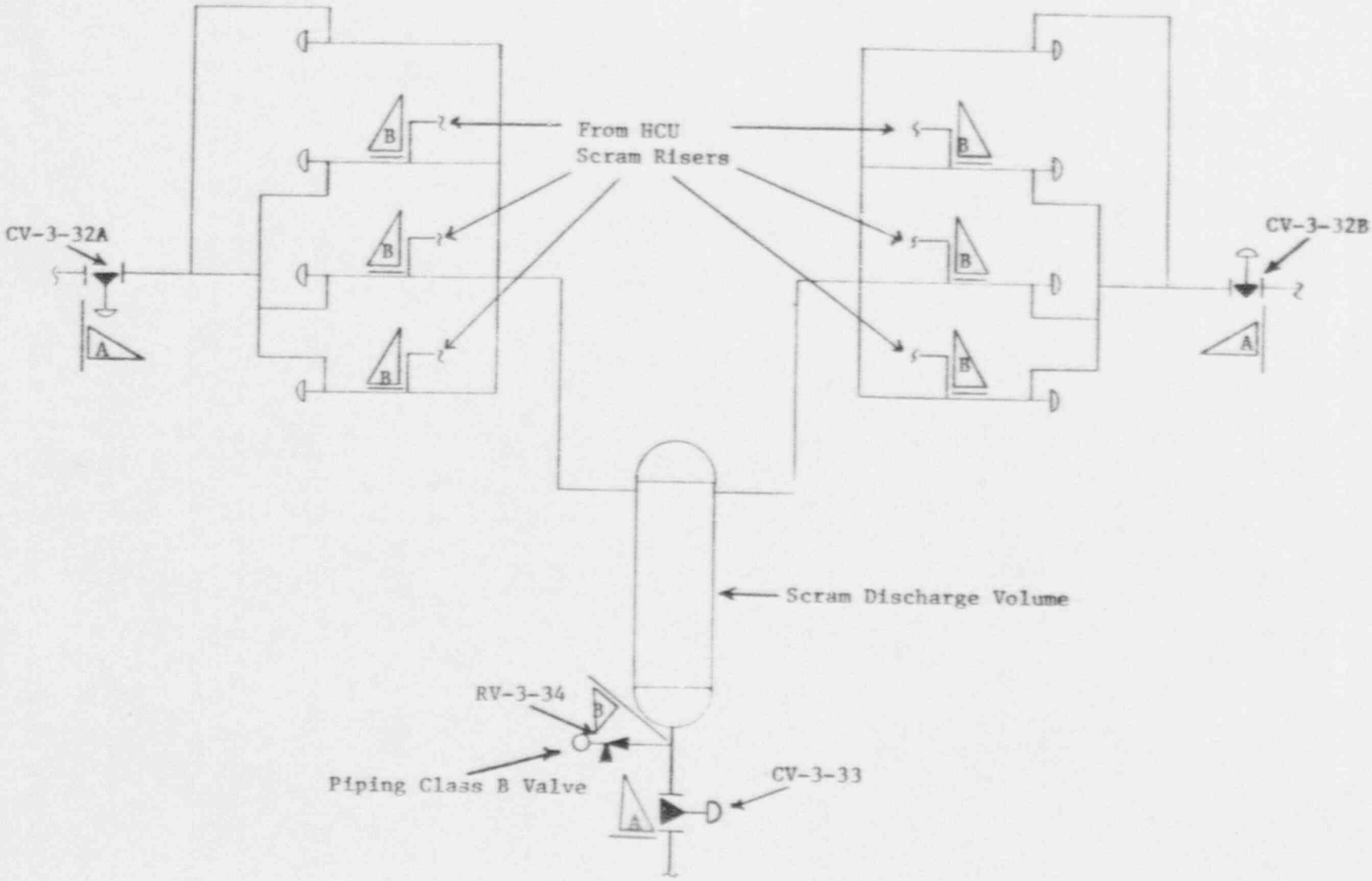
PRIMARY CONTAINMENT SYSTEM


SW-16
SW-18
From Service Water Pumps
ESW-5-1
ESW-5-2
ESW-3-1
ESW-3-2
ESW-2-2
ESW-2-1
ESW-1-2
ESW-1-1
ESW-7
Reactor Building AC Unit
SW-118
SW-118-1
ESW-4-1
SW-104
SW-103
Standby Diesel Generators
ESW-4-2
SW-101
SW-102
SW-105-1
SW-105-2
SW-106-1
SW-106-2
SW-108
SW-110-2
SW-110-4
SW-112-2
SW-107-1
SW-107-2
SW-109
SW-111-2
SW-111-4
SW-113-2
ECCS Pump Motors and Vent Units
SW-112-1
SW-110-3
SW-110-1
SW-114
SW-113-1
SW-111-3
SW-111-1
SW-115
EMERGENCY SERVICE WATER PUMPS
EMERGENCY SERVICE WATER

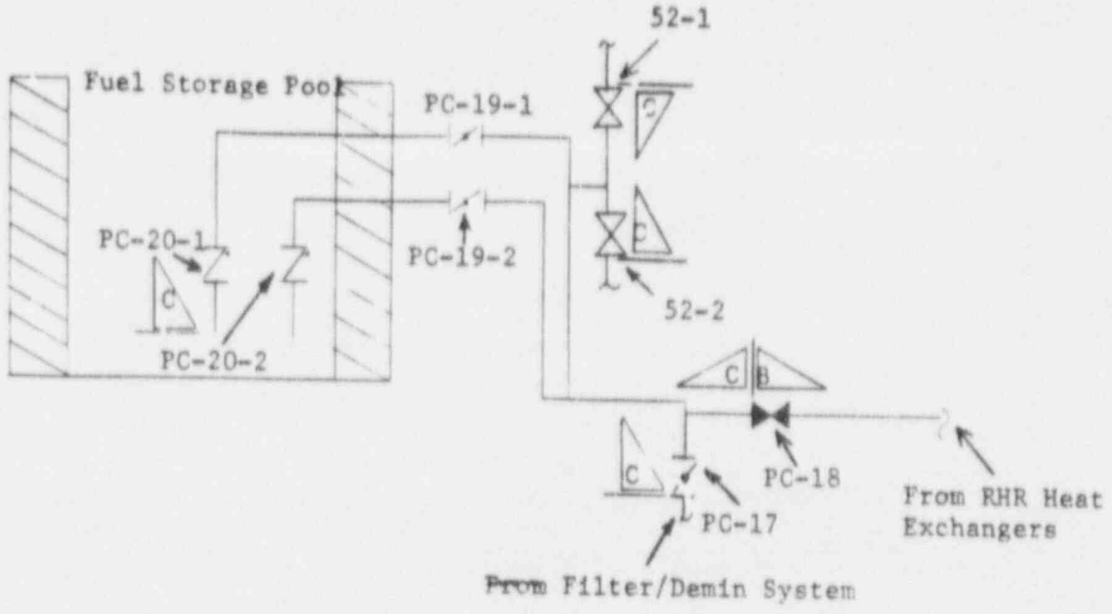

RHR-SW-4-2
RHR-SW-3-2
RHR-SW-2-2
RHR-SW-1-2
RHR-SW-1-4
RHR-SW-2-4
RHR-SW-4-1
RHR-SW-3-1
RHR-SW-2-3
RHR-SW-2-1
RHR-SW-1-3
RHR-SW-1-1
RHR SERVICE WATER PUMPS
RHR-SW-12
RHR-SW-14
To RHR
RHR-SW-3-1
DM-49-1
Demineralized Water
BH-316-1
RV-3202
RHR HX
RHR-SW-3-2
DM-49-2
Demineralized Water
BH-316-2
RV-3203
RHR HX
CV-1728
CV-1729
To Circ Water Discharge
RHR SERVICE WATER

HYDRAULIC CONTROL UNIT (typical of 121)

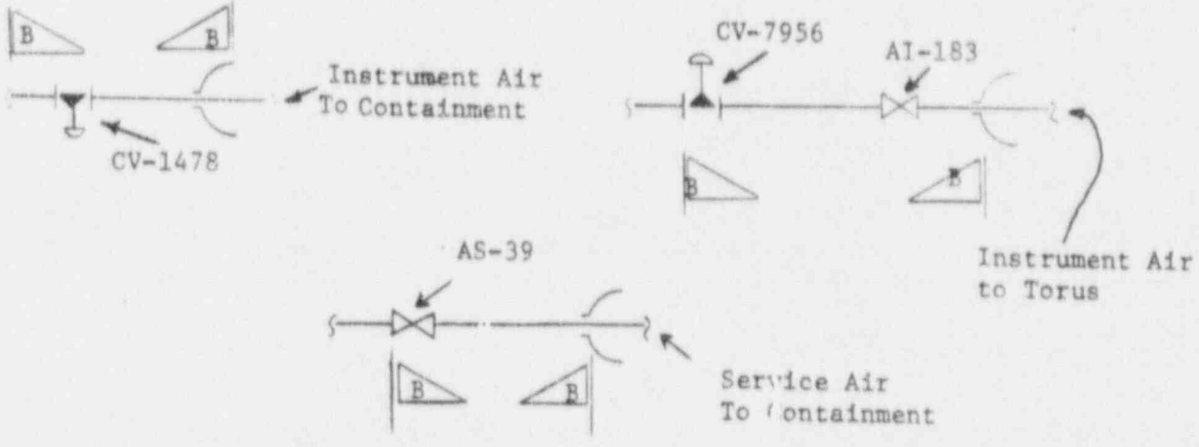




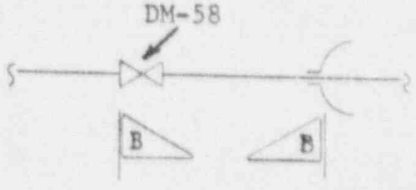
CONTROL ROD DRIVE SYSTEM (SCRAM DISCHARGE PIPING)



FUELPOOL COOLING & CLEAN-UP SYSTEM

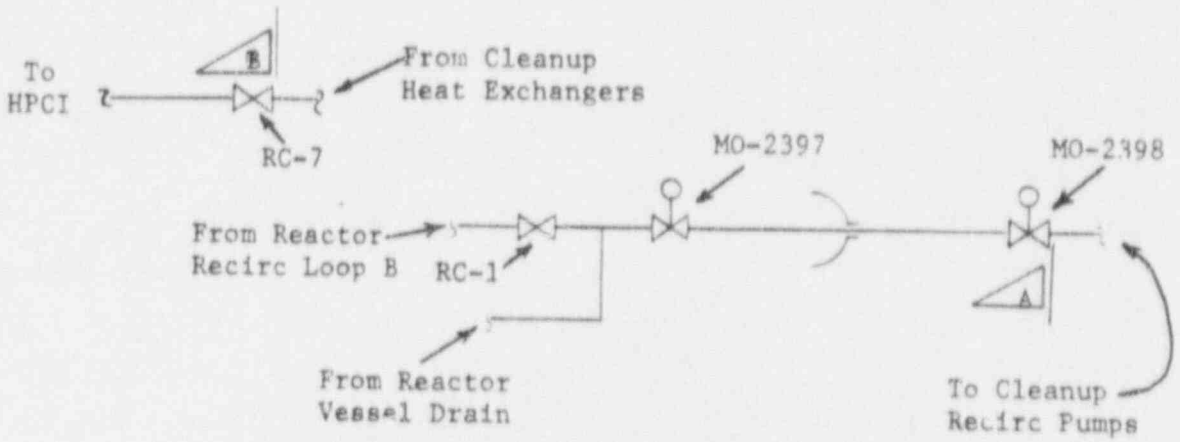


COMPRESSED AIR SYSTEM

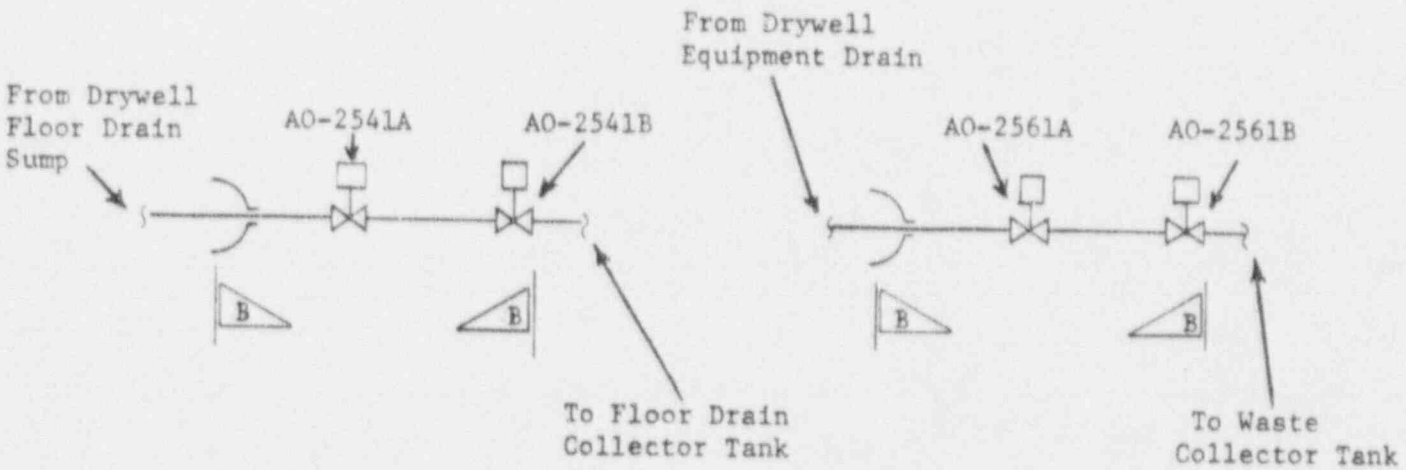


CONDENSATE SERVICE SYSTEM

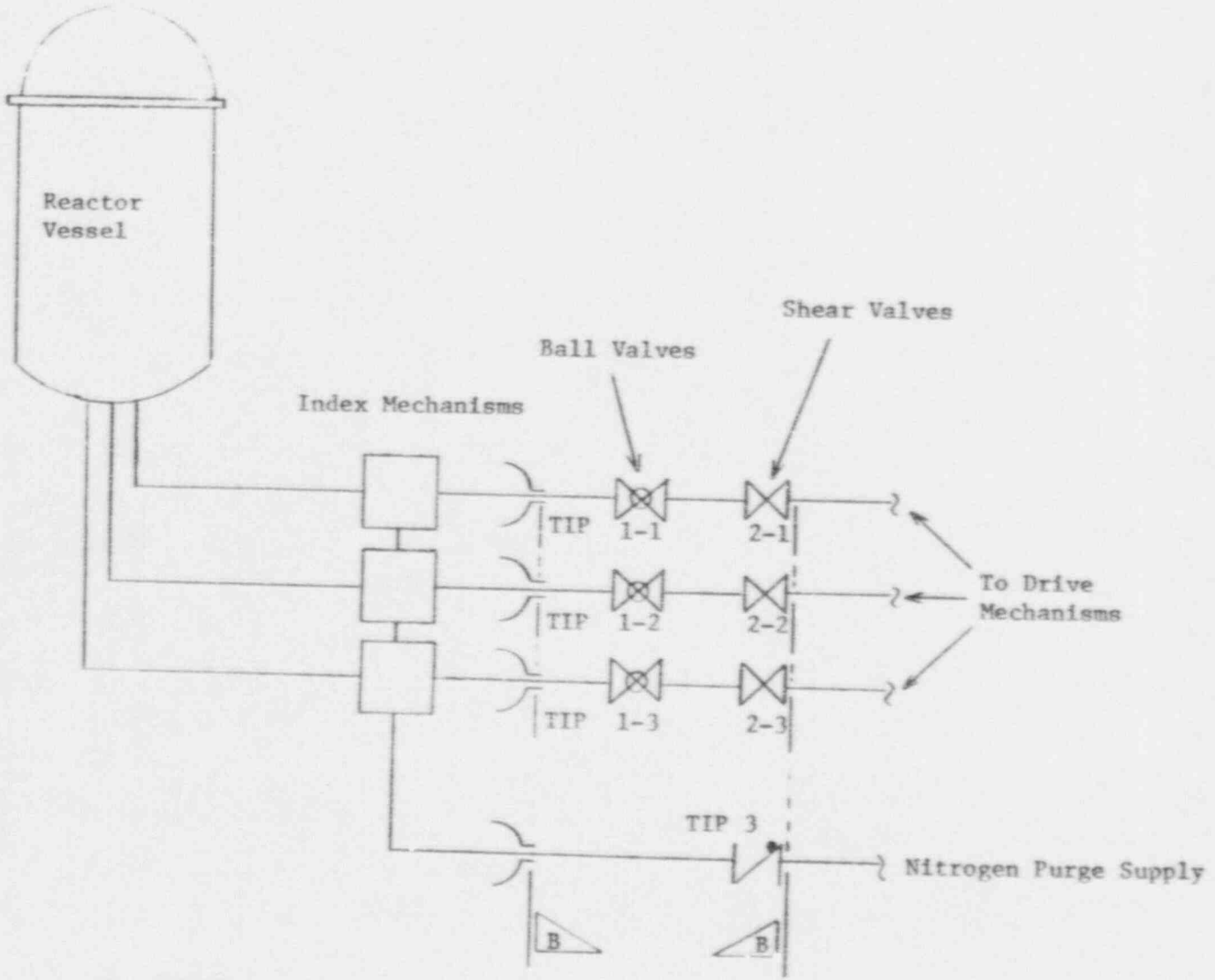
REACTOR BUILDING COOLING WATER SYSTEM



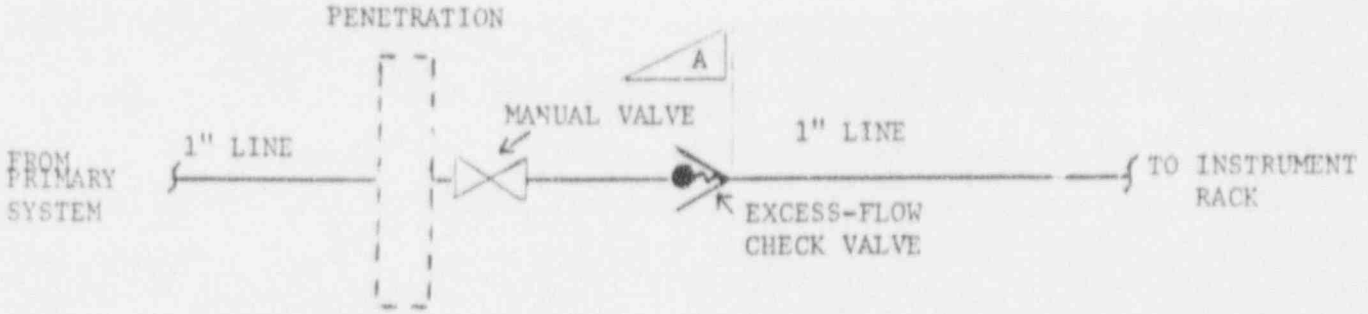
REACTOR WATER CLEAN-UP SYSTEM



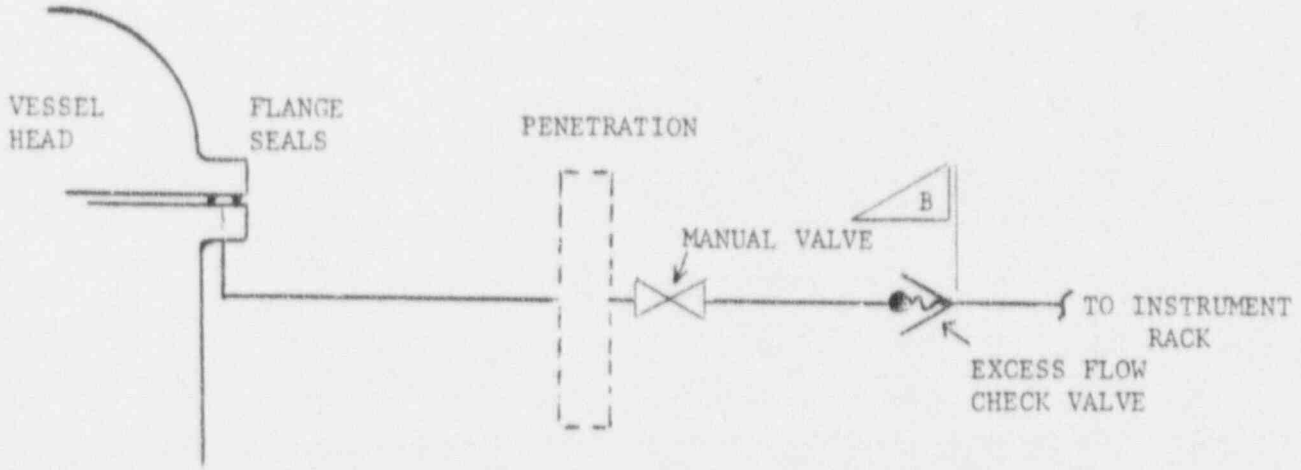
LIQUID RADWASTE



TRAVERSING IN-CORE PROBE SYSTEM



TYPICAL OF X-27A THROUGH
X-52F EXCEPT X-28F



X-28F ONLY

EXCESS-FLOW CHECK VALVES