DAIRYLAND POWER COOPERATIVE

La Crosse, Wisconsin

54601

July 27, 1979

In reply, please
refer to LAC-6429

DOCKET NO. 50-409

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
PROVISIONAL OPERATING LICENSE NO. DPR-45
APPLICATION FOR AMENDMENT TO LICENSE

Reference: (1) NRC Letter, Reid to Madgett, dated April 22, 1976.
(2) DPC Letter, LAC-4271, Madgett to Reid, dated October 13, 1976.
(3) NRC Letter, Reid to Madgett, dated January 10, 1978.
(4) DPC Letter, LAC-6280, Linder to Ziemann, dated May 11, 1979.
(5) License Amendment Fee, Check #21046, dated July 10, 1979.

Gentlemen:

An application to amend Provisional Operating License No. DPR-45 was requested in Reference 4. The requested amendment involved proposed changes to Technical Specifications for the La Crosse Boiling Water Reactor (LACBWR) which deal with the Inservice Inspection Program. Therefore, in accordance with our commitment of Reference 4, we are submitting the plans and requests for relief of the inservice testing and inspection programs for the La Crosse Boiling Water Reactor. LACBWR was issued a construction permit before January 1, 1971, therefore the enclosed inservice inspection and testing programs are submitted in accordance with 10CFR 50.55.a (g)(5), as meeting the requirements of 10CFR 50.55.a(g)(4) to the extent practical. The pressure vessels, piping and other components of LACBWR have been designated into classes utilizing the guidelines of NRC Regulatory Guide 1.26, Revision 3, dated February 1976 for inservice inspection purposes, though the components may or may not have been designed and constructed to the requirements of any part of the ASME Boiler and Pressure Vessel Code.

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The current issue of Technical Specifications contains the inservice inspection requirements for the LACBWR designated Class I piping and components. The inservice inspection interval was established by this Technical Specification as starting November 1, 1969 and ending October 30, 1979. Therefore, this submittal, in conjunction with Reference 4, establishes this as the second inservice inspection interval, and will start November 1, 1979, for all of the LACBWR inservice inspection and testing requirements.

All of the LACBWR Inservice Tests and Inspections will be conducted in accordance with the 1974 Edition of the ASME Boiler and Pressure Vessel Code and Summer of 1975 Addenda, Section XI.

Enclosure 1 includes a table, "Inservice Inspection Program - LACBWR Class I Components", wherein is listed all the Class I parts and components to be examined related to the ASME Code Section XI, and other pertinent information. Appendix A, "Weld Identification Drawings - LACBWR Class I Components", identifies in stylized isometric drawings, all the weld numbers and other relevant information for the Class I systems. Another table, "Relief for Class I Components Requiring ISI to ASME XI", identifies, by number, the specific Class I weld or component to which relief from the examination requirements of ASME Section XI is requested, and other relevant information.

Enclosure 2 contains the LACBWR Class II and III Inservice Inspection Program which includes a summary of the program, identification and classification of the system and/or components, scope of the inspection, listing of the drawings (P&ID's) associated with each system classification, and a table of symbols identification.

There is one request for relief of a Class III component, and no requests for relief of any Class II component.

Enclosure 3 contains the pump inservice testing program which includes a summary of the program, documentation sheets for each of the safety-related pumps, data sheet for use in pump performance analysis, and corrective action report form. There are no requests for relief of a pump test requirement.

Enclosure 4 contains the Valve Inservice Inspection Program which includes a summary of the program, tables listing each of the safety-related valves by number (as identified in P&ID's) and other relevant information. There are requests for relief of ASME Section XI testing requirements included in this enclosure. Also included are the data sheets for valve leak test documentation; leakage analysis data sheet, data sheet for valve stroke time documentation, corrective action report sheet, and list of abbreviations.

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Mr. Dennis L. Ziemann, Chief
Operating Reactors Branch #2

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Enclosure 5 consists of 3 copies of each of the following P&ID's, submitted as requested by Reference 3 (Jan. 10, 1978):

System	Drawing (P&ID)
Purification	41-300-081
Main Feed	C/LR-53
Main Steam	M-12
Reactor Coolant and Level Instruments	C/LR-79
Decay Heat	41-300-083
Shutdown Condenser	41-300-084
High Pressure Core Spray	41-300-080
Boron Injection	41-300-080
Hydraulic Valve Accumulator	41-300-087
Demineralized Water	C/LR-74
Fuel Element Storage Well	41-300-079
Seal Injection	41-300-102 41-300-195
Low Pressure Service Water	M-17
Component Cooling Water	41-400-416
Alternate Core Spray)	M-21
High Pressure Service Water)	41-507-358
Shield Cooling	41-300-082
Feedwater Heaters	(C/LR-57 (b/LR-69
Condensate	M-13
Air Ejector Off-Gas	41-300-169

Enclosure of Reference 4 contained the language for inclusion of the Inservice Inspection Programs into the LACBWR Technical Specifications.

The fee for the review of this license amendment was forwarded by Reference 5.

The information submitted in this application for license amendment has been reviewed by LACBWR Committees as prescribed in Technical Specifications.

If there are any questions concerning this submittal, please contact us.

Very truly yours,

DAIRYLAND POWER COOPERATIVE

Frank Linder, General Manager

FL:HAT:af
Enclosures

cc: J. Keppler, Reg. Dir., NRC-DRO III

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ENCLOSURE 1

INSERVICE INSPECTION PROGRAM

for

CLASS I SYSTEMS

RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
		REACTOR VESSEL LONGITUDINAL WELDS AND CIRCUMFERENTIAL WELDS IN CORE REGION		
B1.1	B-A	LONGITUDINAL JOINT #12	VOLUMETRIC	A CONCRETE SHIELD WALL AROUND THE VESSEL IN THIS AREA PREVENTS ACCESS TO THE WELDS.
		CIRCUMFERENTIAL JOINT #13 LONGITUDINAL JOINT #14 CIRCUMFERENTIAL JOINT #15 LONGITUDINAL JOINT #16 CIRCUMFERENTIAL JOINT #17 LONGITUDINAL JOINT #18		
		REACTOR VESSEL LONGITUDINAL AND CIRCUMFERENTIAL WELDS NOT IN THE CORE REGION		
B1.2	B-B	LONGITUDINAL JOINT #6	VOLUMETRIC	A CONCRETE BLOCK SHIELD WALL AROUND THE VESSEL IN THIS AREA PREVENTS ACCESS TO THE WELDS.
		CIRCUMFERENTIAL JOINT #7 LONGITUDINAL JOINT #8 CIRCUMFERENTIAL JOINT #9 LONGITUDINAL JOINT #10 CIRCUMFERENTIAL JOINT #11 CIRCUMFERENTIAL JOINT #19 LONGITUDINAL JOINT #20 CIRCUMFERENTIAL JOINT #21		RADIATION LEVELS OF 1500 MR/HR ON THE SURFACE MAKE A FULL VOLUMETRIC WELD EXAMINATION IMPRACTICAL.
		REACTOR VESSEL RECIRCULATION NOZZLES		
B1.4	B-D	OUTLET NOZZLE #1 AND INNER RADIUS	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1200 MR ON THE SURFACE WOULD CAUSE EXCESSIVE PERSONNEL EXPOSURES.
		OUTLET NOZZLE #2 AND INNER RADIUS INLET NOZZLE #5 AND INNER RADIUS INLET NOZZLE #6 AND INNER RADIUS		

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RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
-	-	LAMINATED AREA OF REACTOR VESSEL ADJACENT TO NO. 1 RECIRCULATION NOZZLE TO VESSEL WELD	MECH. U.T.	THIS EXAMINATION IS CONSIDERED UNNECESSARY BECAUSE OF THE UNCHANGED RESULTS AFTER 6 EXAMINATIONS AND RADIATION LEVELS OF 1.5 R/HR ON THE SURFACE.
B1.4	B-D	BLOWDOWN NOZZLE IN LOWER HEAD AND INNER RADIUS	VOLUMETRIC	NO ACCESS DUE TO CRD NOZZLES.
B1.5	B-E	CONTROL ROD DRIVE PENETRATION TO REACTOR VESSEL	VISUAL (IWA-5000)	NO ACCESS DUE TO REACTOR VESSEL SUPPORT RING.
B1.18	B-O	CONTROL ROD DRIVE PRESSURE BOUNDARY WELDS	VOLUMETRIC	THE CRD HOUSINGS ARE MANUFACTURED FROM CENTRIFUGAL CAST STAINLESS STEEL FOR WHICH THERE IS NO ACCEPTABLE EXAMINATION PROCEDURE AT THIS TIME.
B1.5	B-E	INTERMEDIATE LIQUID LEVEL PENETRATION TO REACTOR VESSEL	VISUAL (IWA-5000)	NO ACCESS DUE TO CONCRETE BLOCK SHIELD WALL.
B1.5	B-E	LOWER LIQUID LEVEL PENETRATION TO REACTOR VESSEL	VISUAL (IWA-5000)	NO ACCESS DUE TO CONCRETE BLOCK SHIELD WALL.
B1.5	B-E	PRIMARY PURIFICATION PENETRATION IN LOWER HEAD	VISUAL (IWA-5000)	NO ACCESS DUE TO REACTOR VESSEL SUPPORT RING.
B4.5	B-J	INTERMEDIATE LIQUID LEVEL PENETRATION TO EXTENSION PIPE	VOLUMETRIC	NO ACCESS DUE TO CONCRETE BLOCK SHIELD WALL.
B4.5	B-J	LOWER LIQUID LEVEL PENETRATION TO EXTENSION PIPE	VOLUMETRIC	NO ACCESS DUE TO CONCRETE SHIELD WALL.
B1.6	B-F	BLOWDOWN NOZZLE IN LOWER HEAD (CAPPED)	SURFACE & VOLUMETRIC	NO ACCESS DUE TO CRD NOZZLES.
B4.5	B-J	PRIMARY PURIFICATION PENETRATION IN LOWER HEAD TO EXTENSION PIPE	VOLUMETRIC	NO ACCESS DUE TO REACTOR VESSEL SUPPORT RING.

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RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
B1.12	B-H	INTEGRALLY WELDED REACTOR VESSEL SUPPORTS	VOLUMETRIC	HI RAD - 1200 MR/HR
B1.14	B-I-1	REACTOR VESSEL CLADDING	VISUAL	NO ACCESS JUSTIFIED DUE TO HIGH RADIATION LEVELS.
		FORCED CIRCULATION SUCTION HEADER		
B4.5	B-J	OUTLET NOZZLE #3 TO EXTENSION, WELD #3-1	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
		EXTENSION TO PIPE, WELD #3-2		
		PIPE TO ELBOW, WELD #3-3		
B4.7		4" BRANCH CONNECTION TO FEEDWATER, WELD #3-3-BC	SURFACE	
B4.5		ELBOW TO PIPE, WELD #2	VOLUMETRIC	
		PIPE TO ELBOW, WELD #3		
		ELBOW TO REDUCER, WELD #4		
		REDUCER TO TEE, WELD #5		
		REDUCER TO TEE, WELD #6		
		ELBOW TO REDUCER, WELD #7		
		PIPE TO ELBOW, WELD #8		
		TEE TO PIPE, WELD #9		
		EXTENSION TO TEE, WELD #10		
B4.7		4" BRANCH CONNECTION TO FEEDWATER, WELD #10-BC	SURFACE	
B4.5		OUTLET NOZZLE #2 TO EXTENSION, WELD #25	VOLUMETRIC	
		PIPE TO TEE, WELD #24		
		PIPE TO TEE, WELD #23		
		OUTLET NOZZLE #1 TO EXTENSION, WELD #22		
		EXTENSION TO TEE, WELD #11		
B4.7		4" BRANCH CONNECTION TO FEEDWATER, WELD #11-BC	SURFACE	

RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
B4.5	B-J	TEE TO PIPE, WELD #12	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
		PIPE TO ELBOW, WELD #13		
		ELBOW TO REDUCER, WELD #14		
		REDUCER TO TEE, WELD #15		
		REDUCER TO TEE, WELD #16		
		ELBOW TO REDUCER, WELD #17		
		PIPE TO ELBOW, WELD #18		
		ELBOW TO PIPE, WELD #19		
B4.7		4" BRANCH CONNECTION TO FEEDWATER, WELD #19-BC	SURFACE	
B4.5		PIPE TO ELBOW, WELD #4-3	VOLUMETRIC	
		EXTENSION TO PIPE, WELD #4-2		
		OUTLET NOZZLE #4 TO EXTENSION, WELD #4-1		
		FORCED CIRCULATION DISCHARGE HEADER		
B4.5	B-J	EXTENSION TO INLET NOZZLE #7, WELD #7-1	VOLUMETRIC	
B4.7		2½" BRANCH CONNECTION TO BORON INJECTION SYSTEM, WELD #7-1-BC	SURFACE	
B4.5		PIPE TO ELBOW, WELD #2	VOLUMETRIC	
		ELBOW TO PIPE, WELD #3		
		REDUCER TO ELBOW, WELD #4		
		TEE TO REDUCER, WELD #5		
		TEE TO REDUCER, WELD #6		
		REDUCER TO ELBOW, WELD #7		
		ELBOW TO PIPE, WELD #8		
		PIPE TO TEE, WELD #9		
		TEE TO EXTENSION, WELD #10		

RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
B4.5	B-J	EXTENSION TO INLET NOZZLE #6, WELD #25	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
		TEE TO PIPE, WELD #24		
		TEE TO PIPE, WELD #23		
		EXTENSION TO INLET NOZZLE #5, WELD #22		
		TEE TO EXTENSION, WELD #11		
		PIPE TO TEE, WELD #12		
		ELBOW TO PIPE, WELD #13		
		REDUCER TO ELBOW, WELD #14		
		TEE TO REDUCER, WELD #15		
		TEE TO REDUCER, WELD #16		
		REDUCER TO ELBOW, WELD #17		
		ELBOW TO PIPE, WELD #18		
		PIPE TO ELBOW, WELD #19		
		ELBOW TO EXTENSION, WELD #8-2		
		EXTENSION TO INLET NOZZLE #8, WELD #8-1		
		20" FORCED CIRCULATION SUCTION LOOP 1A		
B4.5	B-J	TEE TO ELBOW, WELD #2		
		ELBOW TO PIPE, WELD #4		
		LONGITUDINAL WELD ON ELBOW, WELD #2LD		
		LONGITUDINAL WELD ON ELBOW, WELD #4LU		
		20" FORCED CIRCULATION SUCTION LOOP 1B		
B4.5	B-J	TEE TO ELBOW, WELD #1		
		ELBOW TO PIPE, WELD #3		
		LONGITUDINAL WELD ON ELBOW, WELD #1LD		
		LONGITUDINAL WELD ON ELBOW, WELD #3LU		

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RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
		20" FORCED CIRCULATION DISCHARGE LOOP 1A		
B4.5	B-J	ELBOW TO TEE, WELD #12	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
		PIPE TO ELBOW, WELD #14		
		20" FORCED CIRCULATION DISCHARGE LOOP 1B		
B4.5	B-J	ELBOW TO TEE, WELD #11 PIPE TO ELBOW, WELD #13		
		10" MAIN STEAM PIPING		
B4.5	B-J	PIPE TO PIPE, WELD #19	VOLUMETRIC	NO PERSONNEL ACCESS IN THIS AREA DUE TO THE SMALL INTERIOR OF THE PIPE CHASE CAVITY.
		PIPE TO PIPE, WELD #20 PIPE TO PIPE, WELD #21		
		4" AND 6" FEEDWATER PIPING		
B4.5	B-J	PIPE TO ELBOW, WELD #1	VOLUMETRIC	LIMITED ACCESS AND RADIATION LEVELS OF 1100 TO 1500 MR/HR.
		ELBOW TO PIPE, WELD #2 PIPE TO ELBOW, WELD #3 ELBOW TO TEE, WELD #4 TEE TO REDUCER, WELD #5 REDUCER TO PIPE, WELD #6 PIPE TO ELBOW, WELD #7 ELBOW TO PIPE, WELD #8 PIPE TO PIPE, WELD #45 PIPE TO ELBOW, WELD #9 ELBOW TO PIPE, WELD #10 PIPE TO PIPE, WELD #39		

RELIEF FOR CLASS I COMPONENTS
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ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
		4" AND 6" FEEDWATER PIPING - (Cont'd)		
B4.1	B-F	PIPE TO PIPE, WELD #38	VOLUMETRIC AND SURFACE	LIMITED ACCESS AND RADIATION LEVELS OF 1100 TO 1500 MR/HR.
B4.5	B-J	TEE TO ELBOW, WELD #11 ELBOW TO PIPE, WELD #12 PIPE TO ELBOW, WELD #13 ELBOW TO ELBOW, WELD #14 ELBOW TO ELBOW, WELD #15 ELBOW TO PIPE, WELD #16 PIPE TO TEE, WELD #46 TEE TO ELBOW, WELD #17 ELBOW TO REDUCER, WELD #18 REDUCER TO ELBOW, WELD #19 ELBOW TO PIPE, WELD #47 PIPE TO ELBOW, WELD #20 ELBOW TO PIPE, WELD #21 PIPE TO PIPE, WELD #43	VOLUMETRIC	
B4.1	B-F	PIPE TO PIPE, WELD #42	VOLUMETRIC AND SURFACE	
B4.5	B-J	TEE TO PIPE, WELD #22	VOLUMETRIC	
B4.5	B-J	PIPE TO PIPE, WELD #41	VOLUMETRIC	
B4.1	B-F	PIPE TO PIPE, WELD #40	VOLUMETRIC AND SURFACE	

RELIEF FOR CLASS I COMPONENTS
REQUIRING ISI TO ASME XI

ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
		4" AND 6" FEEDWATER PIPING - (Cont'd)		
B4.5	B-J	PIPE TO ELBOW, WELD #23	VOLUMETRIC	LIMITED ACCESS AND RADIATION LEVELS OF 1100 TO 1500 MR/HR
		ELBOW TO PIPE, WELD #24		
		PIPE TO PIPE, WELD #44		
		PIPE TO ELBOW, WELD #25		
		ELBOW TO PIPE, WELD #26		
		PIPE TO PIPE, WELD #37		
B4.1	B-F	PIPE TO PIPE, WELD #36	VOLUMETRIC AND SURFACE	
		2½" IRON INJECTION SYSTEM		
B4.5	B-J	PIPE TO PIPE, WELD #21	VOLUMETRIC	
		PIPE TO PIPE, WELD #21-A		
		PIPE TO ELBOW, WELD #22		
		ELBOW TO SAFE END, WELD #23		
B4.1	B-F	SAFE END TO BRANCH CONNECTION, WELD #24	VOLUMETRIC AND SURFACE	
		MISCELLANEOUS PIPING COMPONENTS, MAIN STEAM SYSTEM PIPING HANGERS		
B4.9	B-K-1	INTEGRALLY WELDED ATTACHMENTS #MS-102	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
B4.10	B-K-2	HANGER STRUCTURE #MS-102 FEEDWATER SYSTEM PIPING HANGERS	VISUAL	

RELIEF FOR CLASS I COMPONENTS
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ITEM NO.	EXAMINATION CATEGORY TABLE IWB-2500	IDENTIFICATION OF WELD OR COMPONENT	INSPECTION REQUIRED BY IWB-2600	BASIS FOR REQUESTING RELIEF
		MISCELLANEOUS PIPING COMPONENTS, MAIN STEAM SYSTEM PIPING HANGERS - (Cont'd)		
B4.9	B-K-1	INTEGRALLY WELDED ATTACHMENTS #RF-113	VOLUMETRIC	RADIATION LEVELS OF 1100 TO 1500 MR/HR GENERAL AREA AND 2-3 R/HR SURFACE WOULD CAUSE EXCESSIVE EXPOSURE PER WELD EXAMINATION.
B4.10	B-K-2	HANGER STRUCTURE #RF-113	VISUAL	
B4.9	B-K-1	INTEGRALLY WELDED ATTACHMENT #RF-114	VOLUMETRIC	
B4.10 ↓	B-K-2 ↓	HANGER STRUCTURE #RF-114 HANGER STRUCTURE #RF-115 HANGER STRUCTURE #RF-116	VISUAL ↓	
		FORCED CIRCULATION SUCTION HEADER PIPING HANGERS		
B4.9	B-K-1	INTEGRALLY WELDED ATTACHMENTS FC-101	VOLUMETRIC	
B4.10	B-K-2	HANGER STRUCTURE FC-101	VISUAL	
B4.10	B-K-1	INTEGRALLY WELDED ATTACHMENT FC-102	VOLUMETRIC	
B4.10 ↓	B-K-2 ↓	HANGER STRUCTURE #FC-102 HANGER STRUCTURE #FC-104	VISUAL ↓	
		FORCED CIRCULATION DISCHARGE HEADER PIPING HANGERS		
B4.10 ↓	B-K-2 ↓	HANGER STRUCTURE #FC-106 HANGER STRUCTURE #FC-108 HANGER STRUCTURE #FC-109	VISUAL ↓	

INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
REACTOR VESSEL AND CLOSURE HEAD					
B1.1	B-A	Longitudinal and circumferential shell welds.	Volumetric	100%/10 yrs.	(1)
		Meridional and circumferential head welds.		100%/10 yrs.	None Exist
		Vessel-to-flange and head-to-flange circumferential welds.		100%/10 yrs.	
B1.4	B-D	Primary nozzle-to-vessel welds and nozzle inside radiused section.	Volumetric	100%/10 yrs.	
		a. Recirculation Outlet Nozzle No. 1			(2)
		b. Recirculation Outlet Nozzle No. 2			(2)
		c. Recirculation Outlet Nozzle No. 3			
		d. Recirculation Outlet Nozzle No. 4			
		e. Recirculation Inlet Nozzle No. 5			(2)
		f. Recirculation Inlet Nozzle No. 6			(2)
		g. Recirculation Inlet Nozzle No. 7			
		h. Recirculation Inlet Nozzle No. 8			

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Notes: (1) Due to inaccessibility and high radiation, only the upper course will be examined.
(2) Excluded from examination due to high radiation considerations.

INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
REACTOR VESSEL AND CLOSURE HEAD - (Cont'd)					
		i. Steam Nozzle N at 14°			
		j. Steam Nozzle S at 194°			
		k. Emergency Cooling Nozzle in Upper Shell at 315°			
		l. Emergency Cooling Nozzle in Upper Head Access Nozzle Flange			
		m. Upper Head Access Nozzle			
		n. Blow-Down Nozzle in Lower Head			(3)
B1.5	B-E	Vessel penetrations, including control rod drive and instrumentation penetrations	Visual	25%/10 yrs.	
		a. Control Rod Drive Penetrations			(3)
		b. Experimental Access Penetration 45°			
		c. Experimental Access Penetration at 165°			
		d. Experimental Access Penetration at 285°			
		e. Upper Liquid Level Penetration			
		f. Intermediate Liquid Level Penetration			(2)
		g. Lower Liquid Level Penetration			(2)

NOTES: (3) Excluded from examination due to inaccessibility and high radiation.

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INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
		h. Primary Purification Penetration in Lower Head			(3)
B1.6	B-F	Nozzle-to-safe end welds	Volumetric and Surface	100%/10 Yrs.	
		a. Emergency Cooling Nozzle in Upper Shell-to-Safe End			
		b. Blow-Down Nozzle in Lower Head-to-Safe End			(3)
B1.7	B-G-1	Nuts	Surface or Volumetric and Visual	100%/10 Yrs.	
B1.8	B-G-1	Studs	Volumetric and Surface	100%/10 Yrs.	
B1.9	B-G-1	Ligaments between threaded stud holes	Volumetric	100%/10 Yrs.	
B1.10	B-G-1	Closure washers, bushings	Visual	100%/10 Yrs.	None Exist
B1.11	B-G-2	Pressure-retaining bolting	Visual	100%/10 Yrs.	
		a. Upper Head Access Nozzle Flange Studs			
		b. Upper Head Access Nozzle Flange Nuts			
B1.12	B-H	Integrally welded vesse supports	Volumetric	100%/10 Yrs.	(2)
B1.13	B-1-1	Closure head cladding	Visual and Surface	6 patches/10 Yrs.	
B.1.14	B-1-1	Vessel cladding	Visual	Each Refueling	(4)
B1.15	B-N-1	Vessel interior	Visual	Each Refueling	(4)

Notes:
(4) Excluded from examination due to inaccessibility.

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INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
B1.16	B-N-2	Interior attachments and core support structures	Visual	Each Refueling	
B1.17	B-N-3	Core-support structures	Visual	Each Refueling	
B1.18	B-O	Control rod drive housings	Volumetric	100%/10 Yrs.	(5)
B1.19	B-P	Exempted components	Visual (IWA-5000)	100%/10 Yrs.	
HEAT EXCHANGERS					
B3.1	B-B	Longitudinal and circumferential welds, including tube sheet-to-head or shell welds on the primary side. a. Decay Heat Channel Head-to-Tube Sheet Weld	Volumetric	100%/10 Yrs.	
B3.2	B-D	Nozzle-to-head welds and nozzle inside radiused section on the primary side a. Inlet Decay Heat Nozzle-to-Channel Head b. Outlet Decay Heat Nozzle-to-Channel Head	Volumetric	100%/10 Yrs.	
B3.3	B-F	Nozzle-to-safe end welds	Volumetric & Surface	100%/10 Yrs.	
B3.5	B-G-1	Pressure-retaining bolts and studs	Volumetric & Surface	100%/10 Yrs.	None Exist
B3.6	B-G-1	Pressure-retaining bolting	Visual	100%/10 Yrs.	None Exist

NOTES: (5) Only one housing is of welded construction.

INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
B3.7	B-H	Integrally welded vessel supports	Volumetric	100%/10 Yrs.	None Exist
B3.8	B-1-2	Vessel Cladding	Visual	1 patch/10 Yrs.	
		a. Decay Heat Cooler			
B3.9	B-P	Exempted components	Visual	100%/10 Yrs.	
B3.10	B-G-2	Pressure-retaining bolting	Visual	100%/10 Yrs.	
		a. Decay Heat Cooler Head Studs, 56-03-001			
		b. Decay Heat Cooler Head Nuts, 56-03-001			
		c. Primary Purification Regenerative Cooler Head Studs			
		d. Primary Purification Regenerative Cooler Head Bolts			
B3.11	B-Q	Steam generator tubing	Volumetric	3%/10 Yrs.	None Exist
PIPING PRESSURE BOUNDARY					
B4.1	B-F	Safe-end to piping welds and safe-end in branch piping welds	Volumetric & Surface	100%/10 Yrs.	
		a. 2-Inch Purification Branch			(6)
		b. 2-Inch Boss on Loop Isolation Valves			(6)
		c. 8-Inch Decay Heat Suction			

NOTES: (6) Configuration of weld area precludes volumetric examination.

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INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
		d. 6-Inch Decay Heat Discharge			
		e. Decay Heat Cooler Inlet and Outlet			
		f. 8-Inch Steam Lines			
		g. 10-Inch Steam Lines			
		h. 6-Inch Alternate Core Spray Line			
		i. 4-Inch Alternate Core Spray Line			(6)
		j. 2½-Inch Boron Inject Line			(2)
B4.2	B-G-1	Pressure-retaining bolts and studs	Volumetric & Surface		None Exist
B4.3	B-G-1	Pressure-retaining bolting	Visual		None Exist
B4.4	B-J	Circumferential and longitudinal piping welds in nominal pipe sizes 4-in. and greater	Volumetric & Surface	25%/10 Yrs.	(7)
B4.5	B-J	Circumferential and longitudinal piping welds in nominal pipe sizes less than 4-in.	Surface	25%/10 Yrs.	(7)
B4.6	B-J	Branch pipe connection welds	Surface	25%/10 Yrs.	(7)
B4.8	B-J	Socket welds	Surface	25%/10 Yrs.	(7)
B4.9	B-K-1	Integrally welded supports	Volumetric	25%/10 Yrs.	(6)(for some)

NOTES: (7) All circumferential and longitudinal piping welds, except those specifically listed in this table, located in the reactor vessel lower cavity are excluded from examination due to high radiation considerations.

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INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
B4.10	B-K-2	Support components	Visual	100%/10 Yrs.	(8)
B4.11	B-P	Exempted components	Visual	100%/10 Yrs.	(8)
B4.12	B-G-2	Pressure-retaining bolting	Visual	100%/10 Yrs.	
		a. Purification Filter Cover			
PUMP PRESSURE BOUNDARY					
B5.2	B-G-1	Pressure-retaining bolts and studs	Volumetric & Surface	100%/10 Yrs.	(9)
		a. Forced Circulation Pumps Casing			
B5.3	B-G-1	Pressure-retaining bolting	Visual	100%/10 Yrs.	None Exist
B5.4	B-K-1	Integrally welded supports	Volumetric	25%/10 Yrs.	None Exist
B5.5	B-K-2	Support components	Visual	100%/10 Yrs.	
B5.6	B-L-1	Pump casing welds	Volumetric	100%/20 Yrs.	None Exist
B5.7	B-L-2	Pump casings	Visual	100%/20 Yrs.	(9)
B5.8	B-P	Exempted components	Visual	100%/10 Yrs.	(8)
B5.9	B-G-2	Pressure-retaining bolting	Visual	100%/10 Yrs.	
		a. Forced Circulation Pumps Seal Cover			

NOTES: (8) Components in reactor vessel lower cavity excluded except when cavity is opened for other reasons.
(9) When disassembled for other reasons.

INSERVICE INSPECTION PROGRAM - LACBWR CLASS I COMPONENTS

ITEM NUMBER	EXAMINATION CATEGORY	COMPONENTS AND PARTS TO BE EXAMINED	METHOD	EXTENT AND FREQUENCY OF EXAMINATION	NOTES/REMARKS
VALVE PRESSURE BOUNDARY					
B6.2	B-G-1	Pressure-retaining bolts and studs	Volumetric & Surface	100%/10 Yrs.	(9)
		a. Forced Circulation Rotoport Upper Head			
B6.3	B-G-1	Pressure-retaining bolting	Visual	100%/10 Yrs.	None Exist
B6.4	B-K-1	Integrally welded supports	Volumetric	25%/10 Yrs.	None Exist
B6.5	B-K-2	Support components	Visual	100%/10 Yrs.	None Exist
B6.6	B-M-1	Valve-body welds	Volumetric	100%/10 Yrs.	None Exist
B6.7	B-M-2	Valve Bodies	Visual	As Applicable (1 of a type)	(10)
B6.8	B-P	Exempted components	Visual	100%/10 Yrs.	(8)
B6.9	B-G-2	Pressure-retaining bolting	Visual	100%/10 Yrs.	
		a. Forced Circulation Rotoport Lower Head			
		b. Main Steam Relief Valves in Mounting Flange			
		c. Decay Heat Pump Check Valve			
		d. Main Steam Rotoport Valve - Head			
		e. Feedwater Check Valve			

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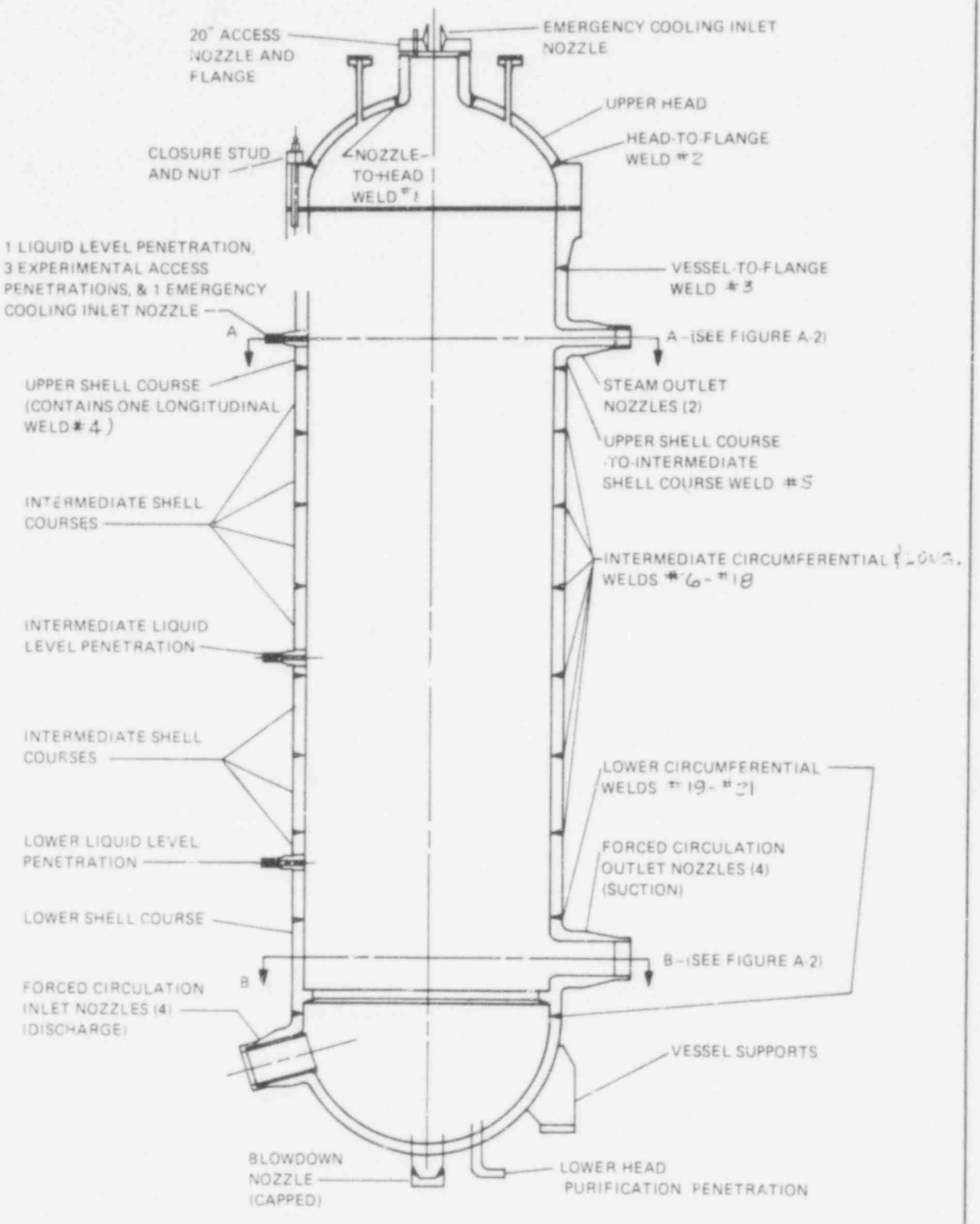
NOTES: (10) See Letter, Madgett to Keppler, LAC-2786, dated October 8, 1974.

APPENDIX A

WELD IDENTIFICATION DRAWINGS
LACBWR CLASS I COMPONENTS

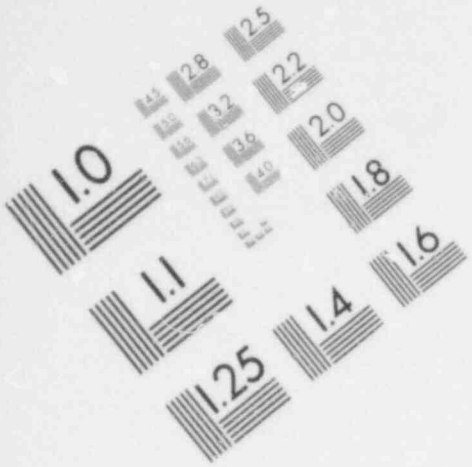
693 354



NOTE: EACH INTERMEDIATE SHELL COURSE CONTAINS ONE LONGITUDINAL WELD.
29 CRD'S PENETRATE LOWER HEAD.

FIGURE A-1. REACTOR PRESSURE VESSEL

693 355



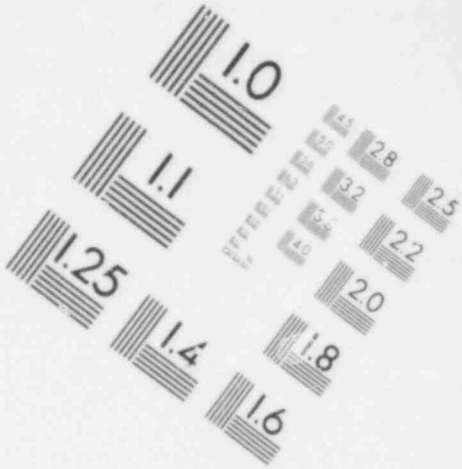
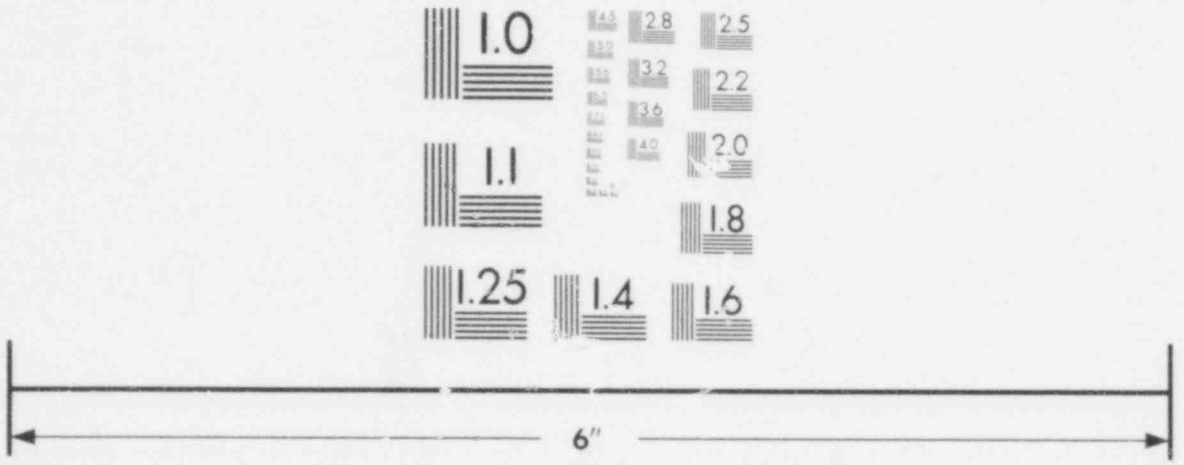
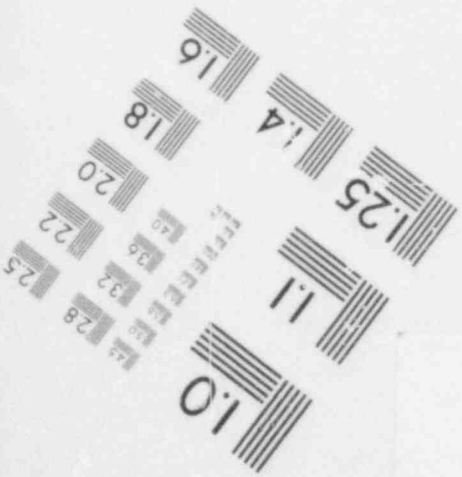
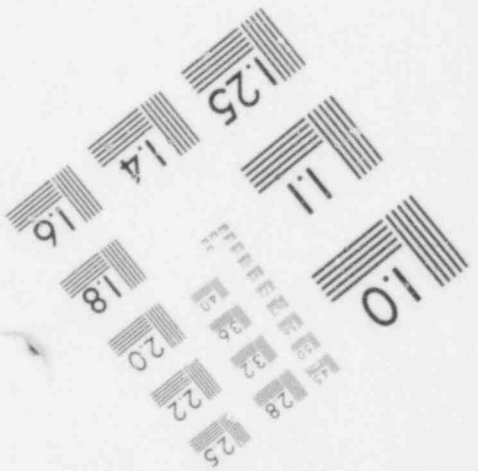
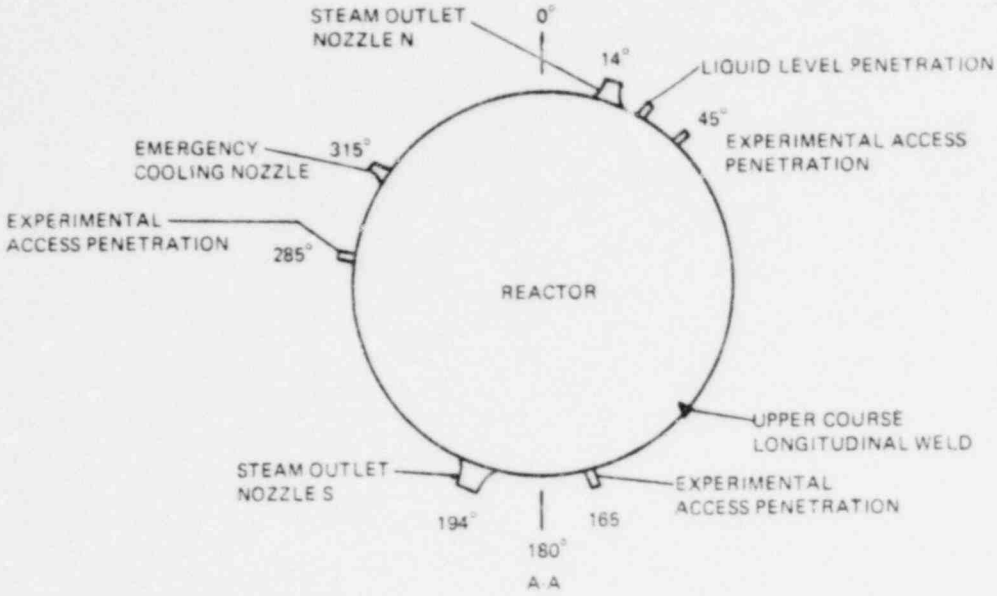


IMAGE EVALUATION
TEST TARGET (MT-3)









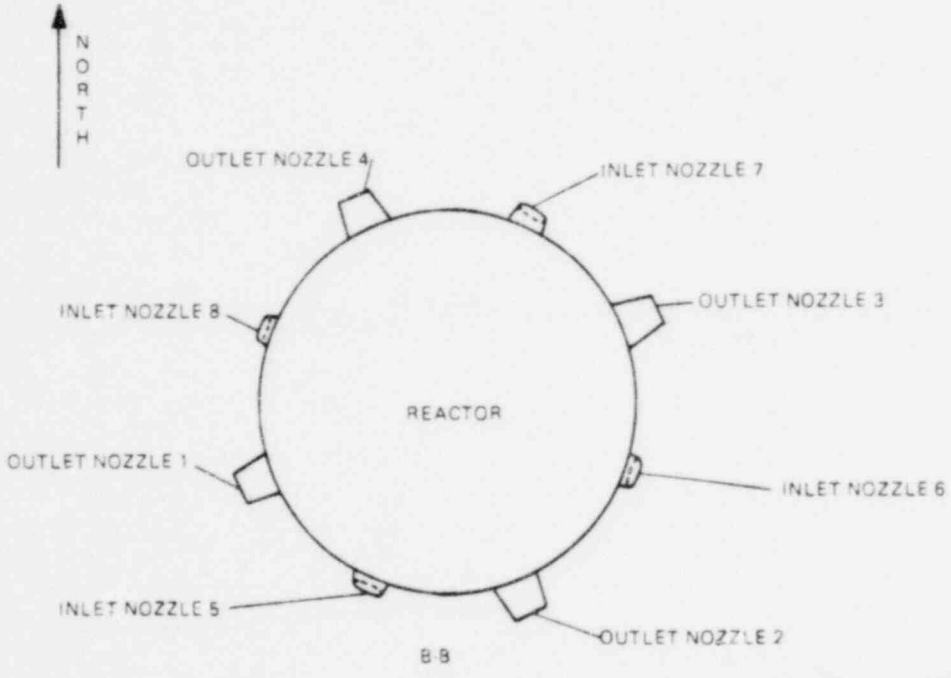


FIGURE A-2. NOZZLE LOCATIONS

693 356

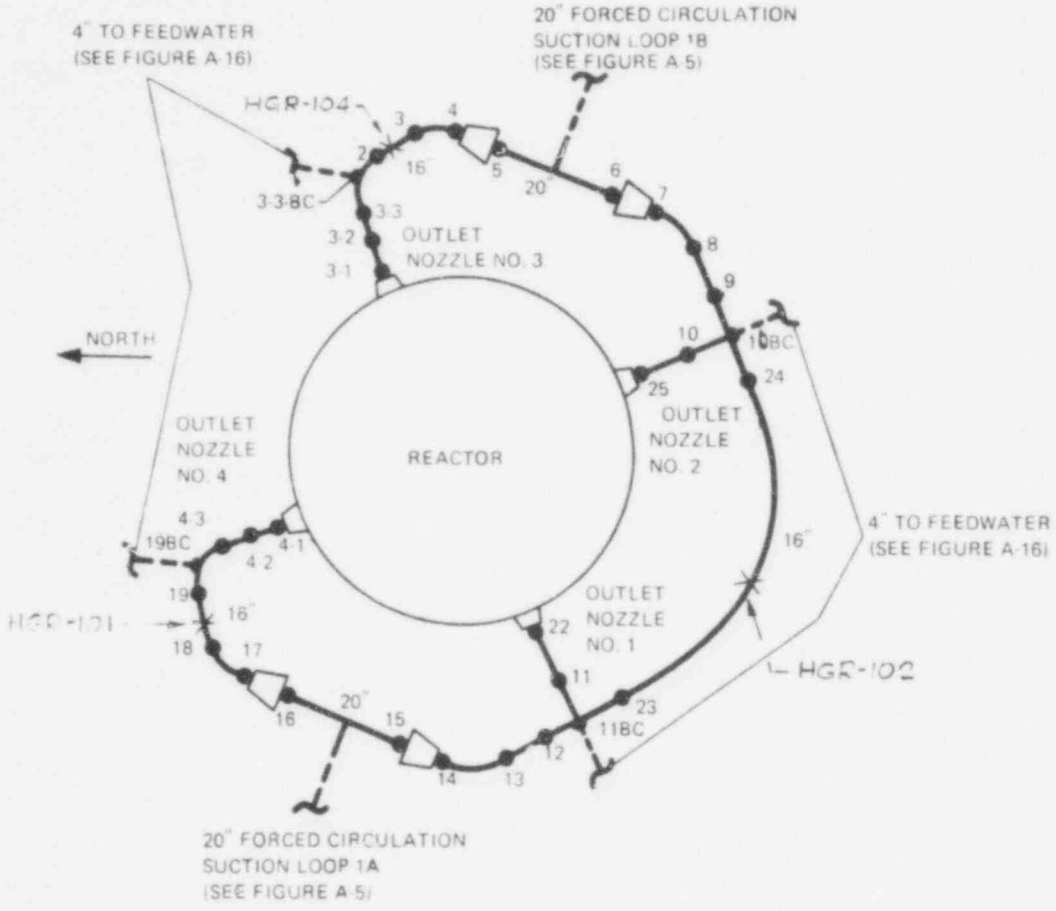


FIGURE A-3. FORCED CIRCULATION SUCTION (FCS) HEADER

NOTES:

ALL PIPING ON THIS SHEET IS SPECIAL WALL, FUSION WELDED, (STRAIGHT SEAM), INSIDE CLAD, PLATE PIPE, ASTM A-155, CLASS I, C.S. BACKING PLATE MATERIAL TO ASTM A-300 & A-212, FIREBOX QUALITY. 20" O.D. SIZE:
BASE 0.802" MIN.
S.S. CLAD 0.156" NOM. (0.125" MIN.)
TOTAL MIN. 0.927".

- • BUTT WELD
- X HANGER
- * DISSIMILAR METAL WELD

493 357

NOTES:

ALL PIPING ON THIS SHEET IS SPECIAL WALL, FUSION WELDED, (STRAIGHT SEAM), INSIDE CLAD, PLATE PIPE, ASTM A-155, CLASS I. C.S. BACKING PLATE MATERIAL TO ASTM A-300 & A-212, FIREBOX QUALITY. 20" O.D. SIZE.
BASE 0.802" MIN.
S.S. CLAD 0.156" NOM. (0.125" MIN.)
TOTAL MIN. 0.927".

- BUTT WELD
- X HANGER
- DISSIMILAR METAL WELD

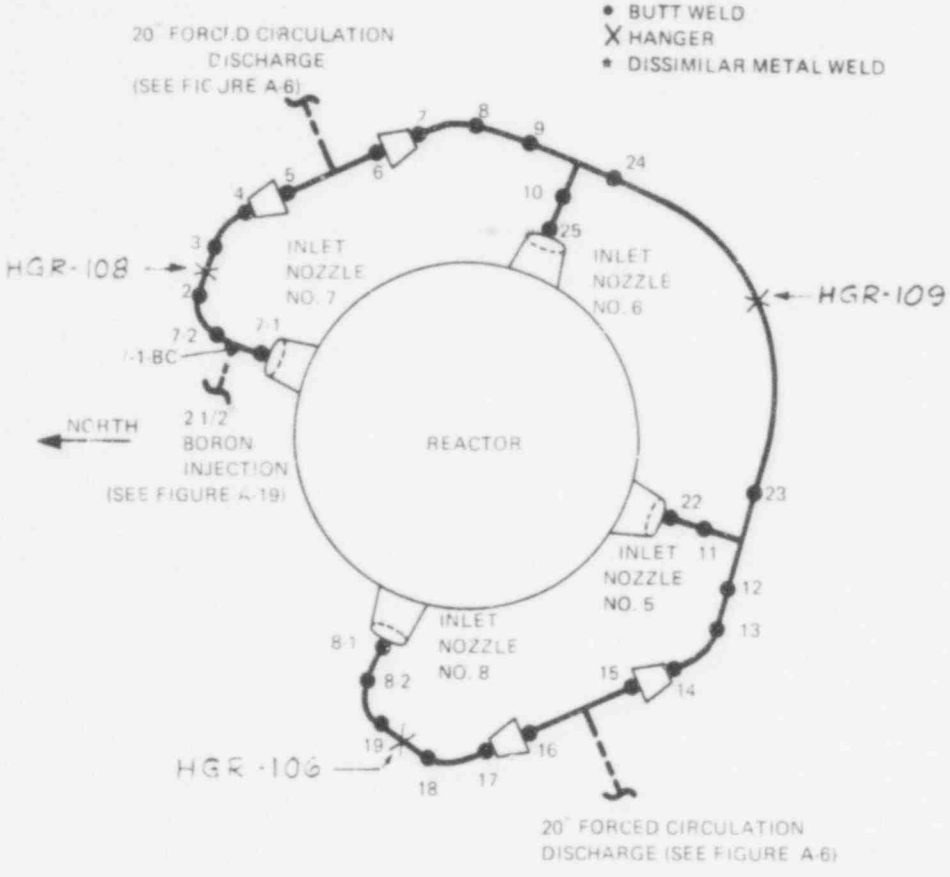
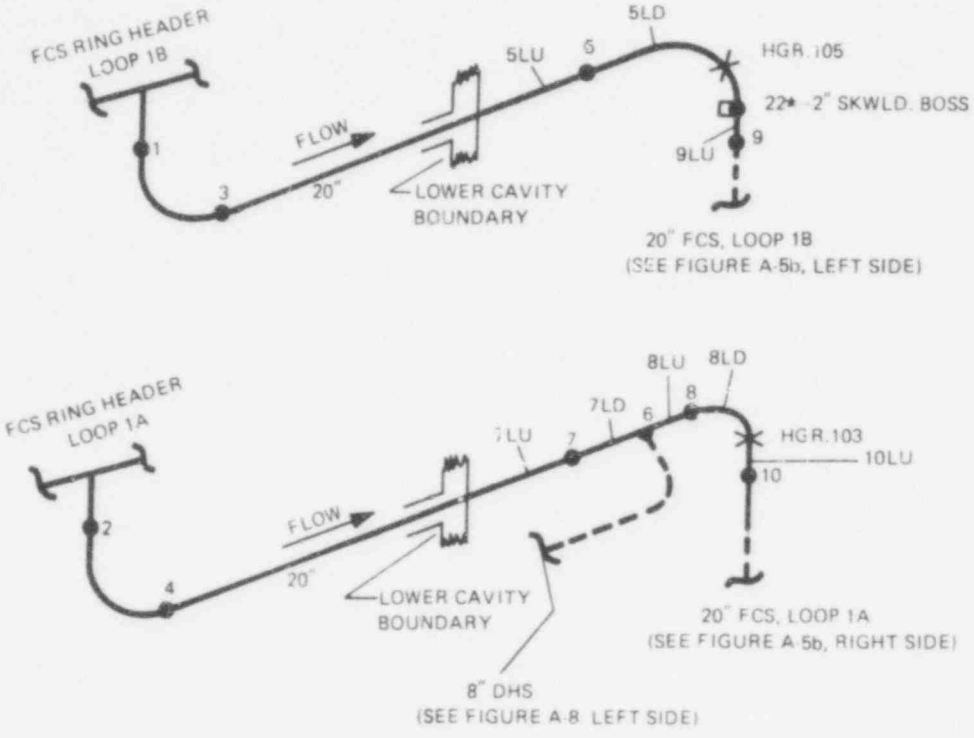


FIGURE A-4. FORCED CIRCULATION DISCHARGE (FEED) HEADER

595 358



NOTES:

ALL PIPING ON THIS SHEET IS SPECIAL WALL, FUSION WELDED, (STRAIGHT SEAM), INSIDE CLAD, PLATE PIPE, ASTM A-155, CLASS I. C.S. BACKING PLATE MATERIAL TO ASTM A-300 & A-212, FIREBOX QUALITY. 20" O.D. SIZE.
BASE 0.802" MIN.
S.S. CLAD 0.156" NOM. (0.125" MIN.)
TOTAL MIN. 0.927".

- • BUTT WELD
- X HANGER
- * DISSIMILAR METAL WELD

FIGURE A-5a FORCED CIRCULATION SUCTION PIPING

693 359

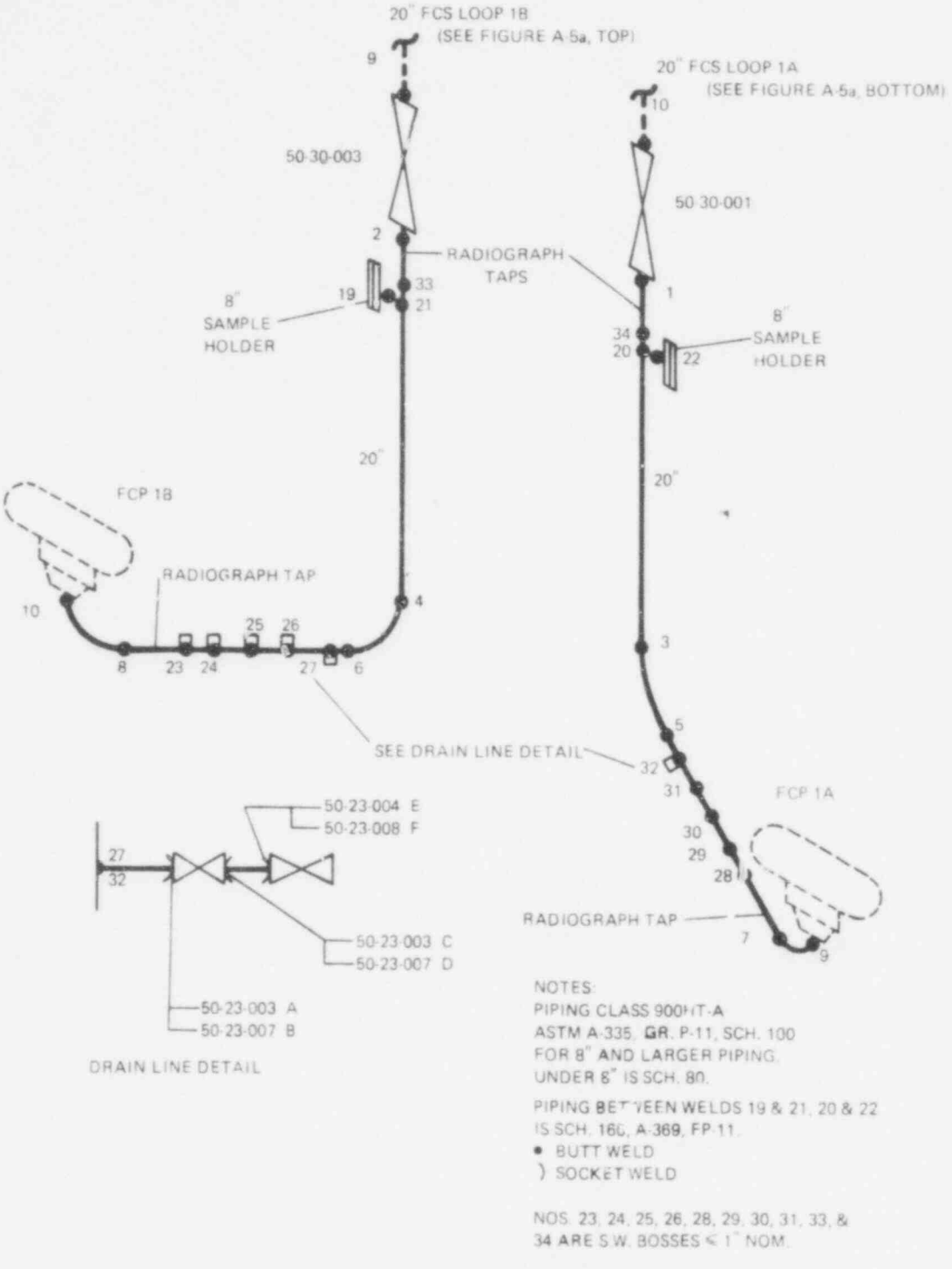
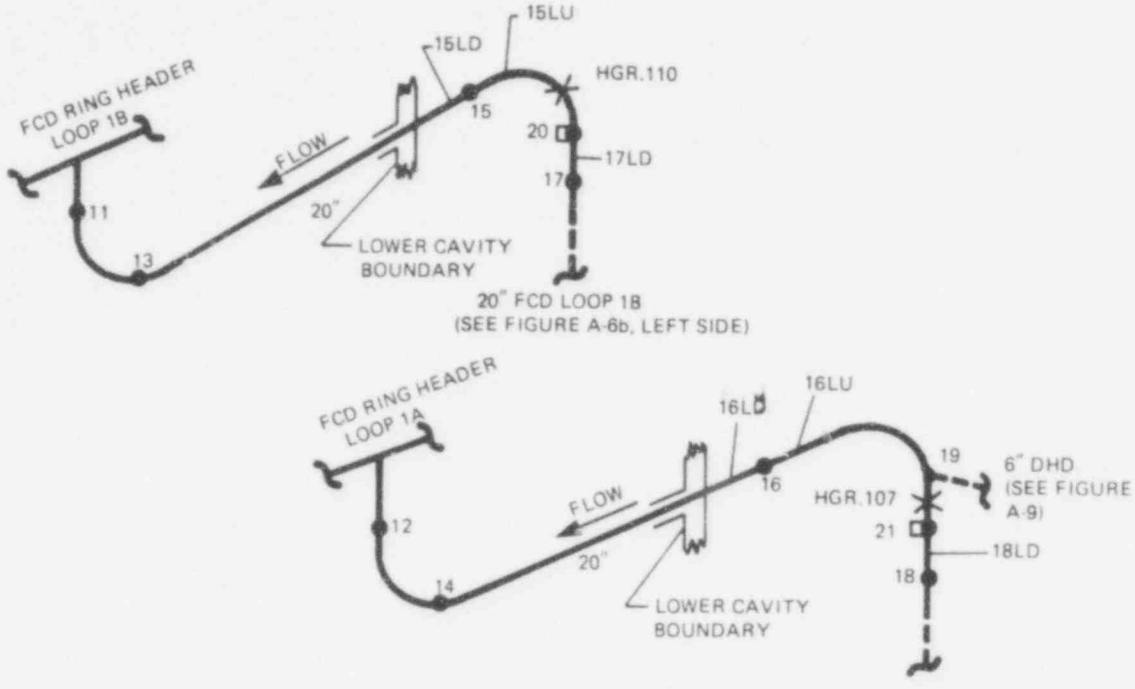


FIGURE A-5b. FORCED CIRCULATION SUCTION PIPING

3 September 1976

693 360



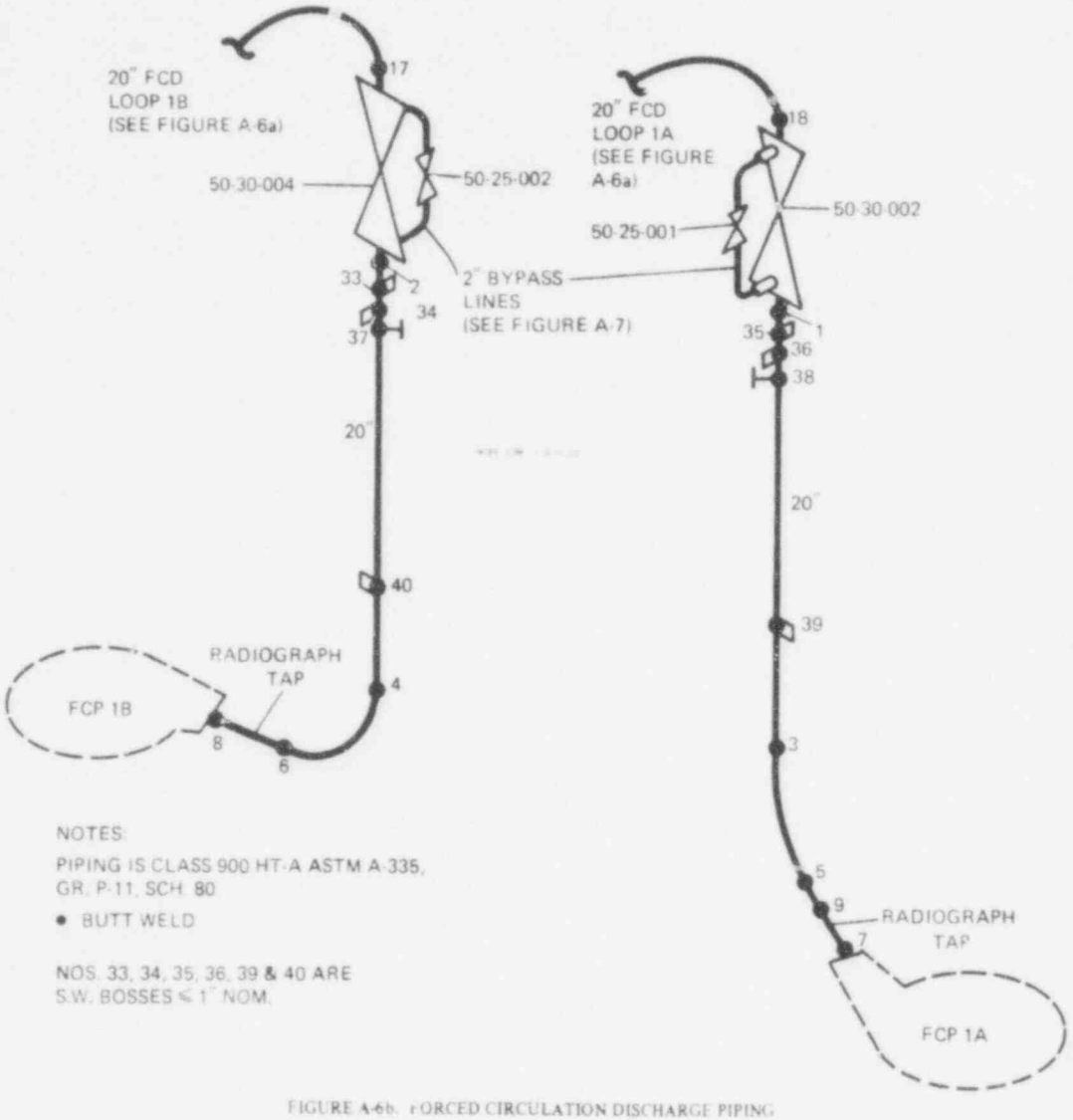
NOTES:

ALL PIPING ON THIS SHEET IS SPECIAL WALL, FUSION WELDED, (STRAIGHT SEAM), INSIDE CLAD, PLATE PIPE, ASTM A-155, CLASS I, C.S. BACKING PLATE MATERIAL TO ASTM A-300 & A-212, FIREBOX QUALITY, 20" O.D. SIZE.
BASE 0.802" MIN.
S.S. CLAD 0.156" NOM. (0.125" MIN.)
TOTAL MIN. 0.927".

• BUTT WELD
X HANGER
NOS. 20 & 21 ARE S.W. BOSSES ≤ 1" NOM.

FIGURE A-6a FORCED CIRCULATION DISCHARGE PIPING

694 001



NOTES:

PIPING IS CLASS 900 HT-A ASTM A-335, GR. P-11, SCH. 80

• BUTT WELD

NOS. 33, 34, 35, 36, 39 & 40 ARE S.W. BOSSES ≤ 1" NOM.

FIGURE A-6b. FORCED CIRCULATION DISCHARGE PIPING

694 002

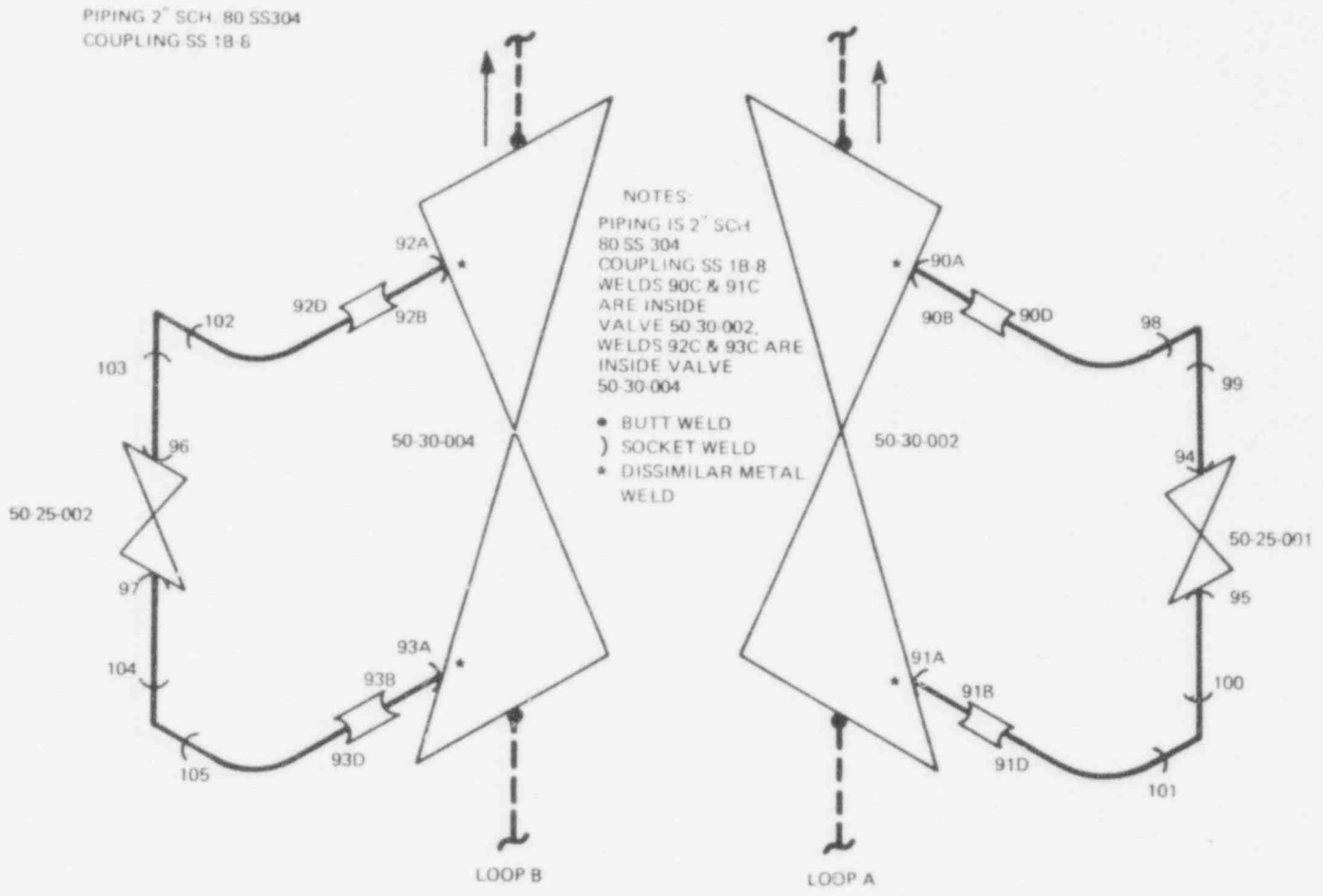


FIGURE A-7. 2" BY-PASS LINES OF 20" FORCED CIRCULATION DISCHARGE AT VALVES 50-30-002 AND 50-30-004

694 003

FIGURE A-8. DECAY HEAT SUCTION PIPING

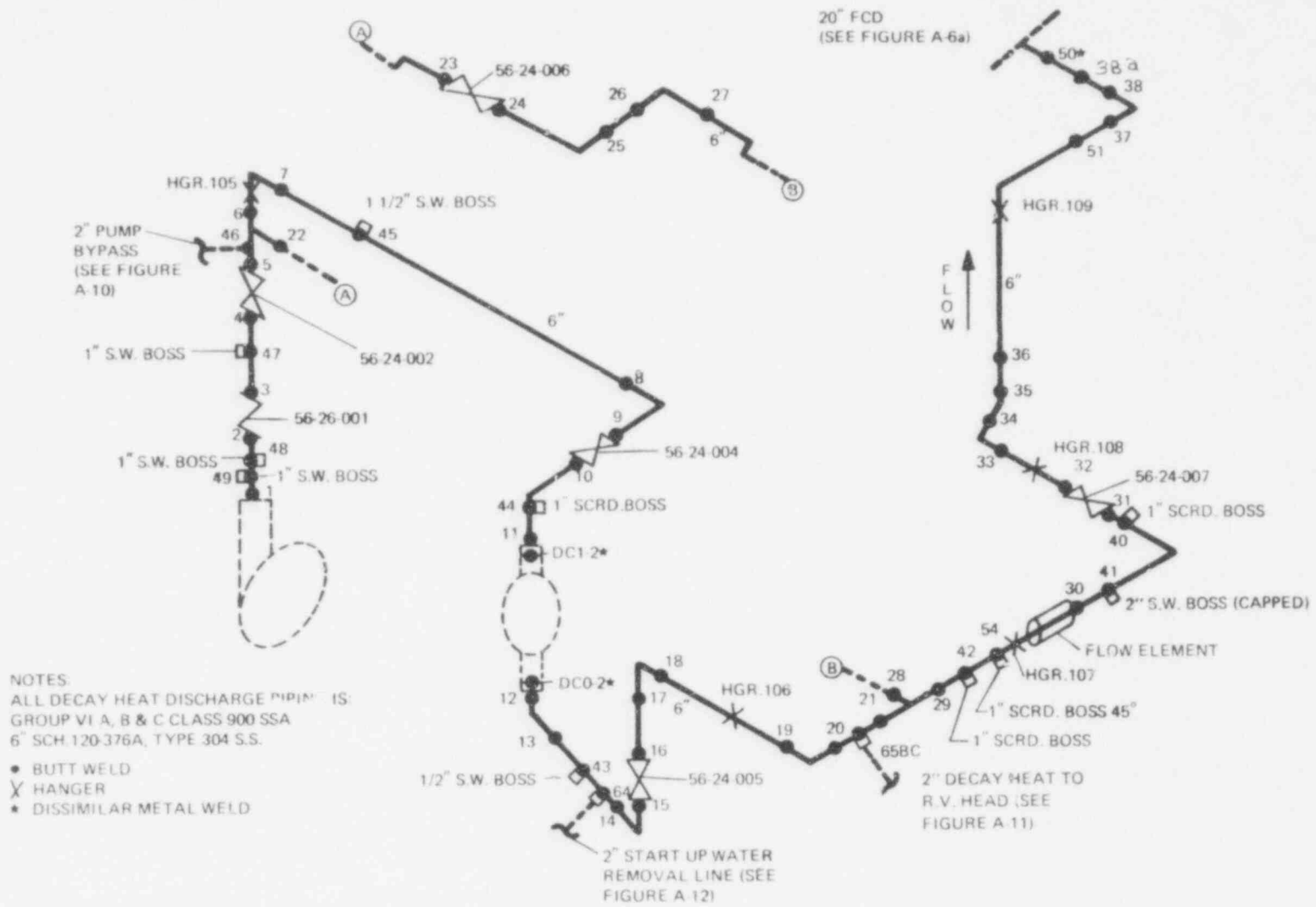


FIGURE A-9. DECAY HEAT DISCHARGE PIPING

694 005

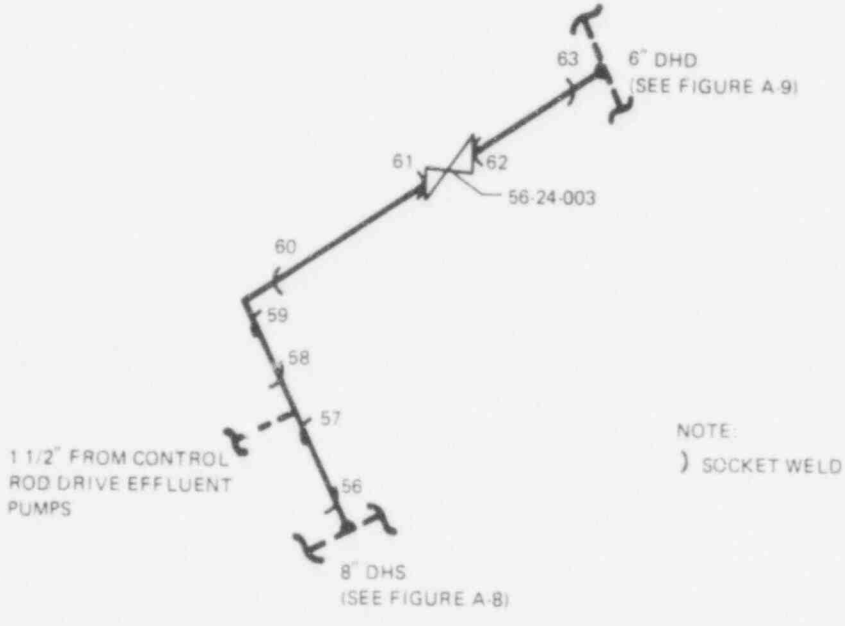


FIGURE A-10. 2" PUMP BYPASS

694 006

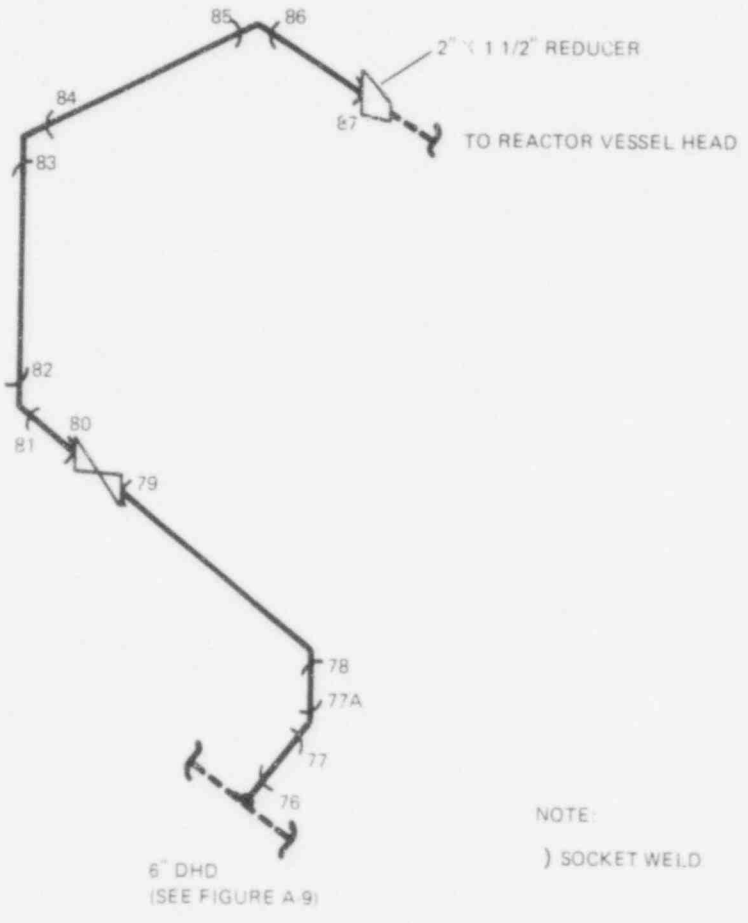
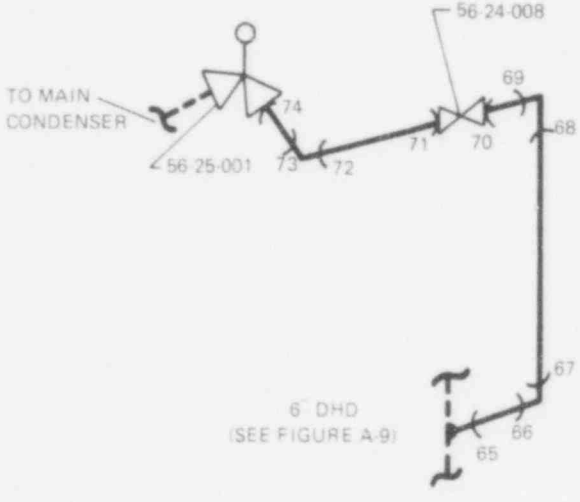


FIGURE A-11. 2" DECAY HEAT TO CLOSURE HEAD

694 007



NOTE:
) SOCKET WELD

FIGURE A-12 2" START-UP WATER REMOVAL

694 008

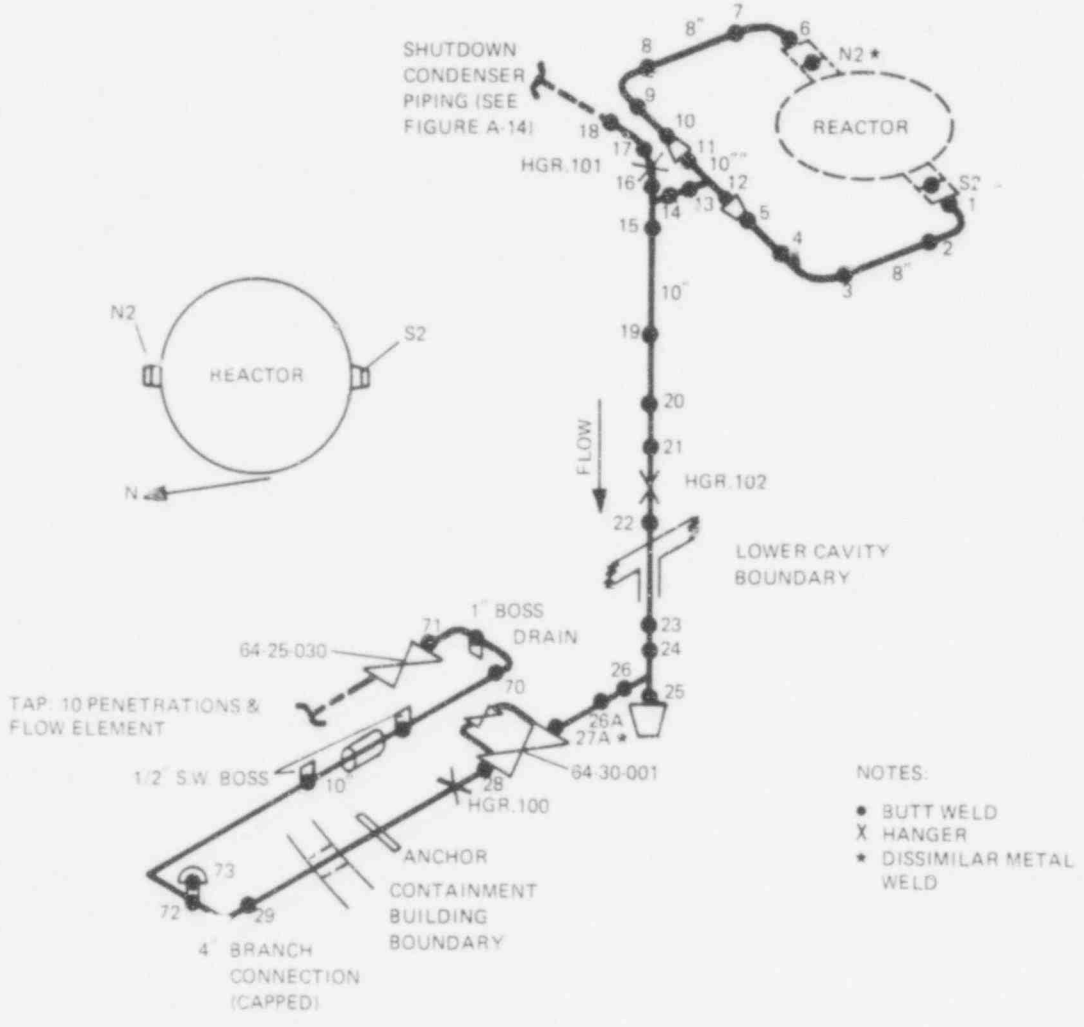
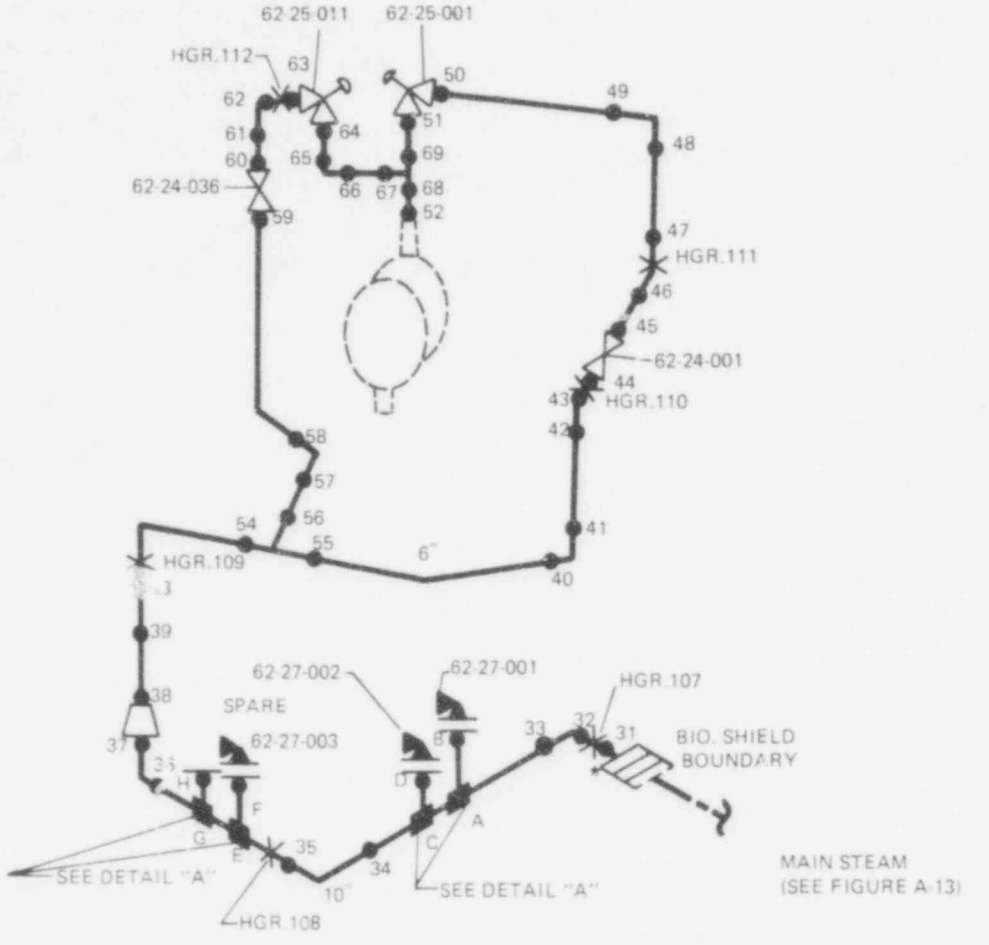


FIGURE A-13. MAIN STEAM PIPING

694 009



NOTES:
- BUTT WELD
- HANGER
- TANGENTIAL WELD
- DISSIMILAR METAL WELD

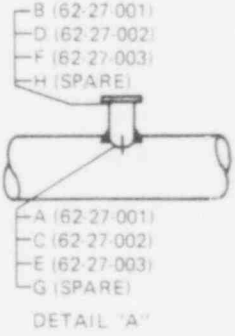


FIGURE A-14. SHUTDOWN CONDENSATE SYSTEM

694 010

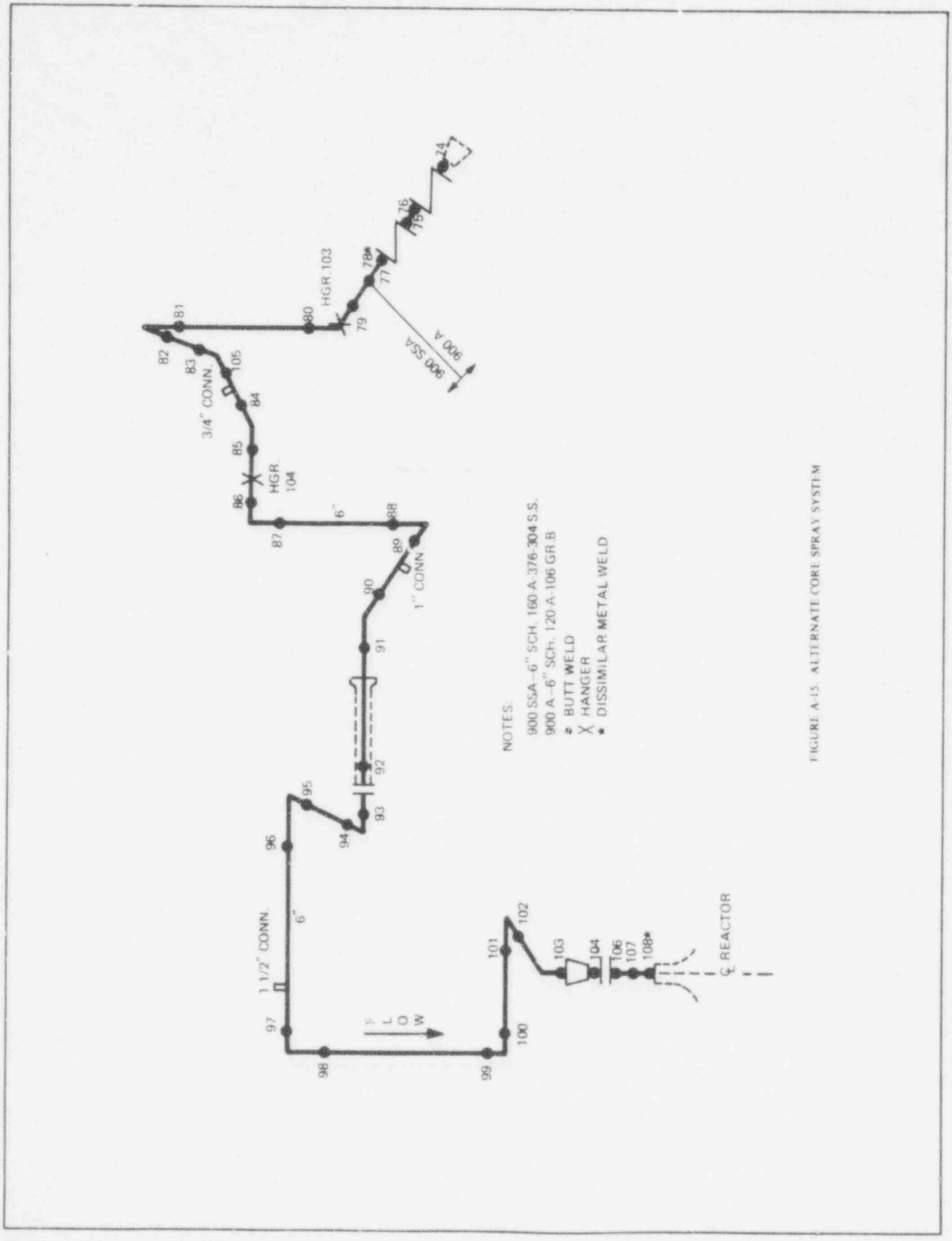


FIGURE A-15. ALTERNATE CORE SPRAY SYSTEM

694 011

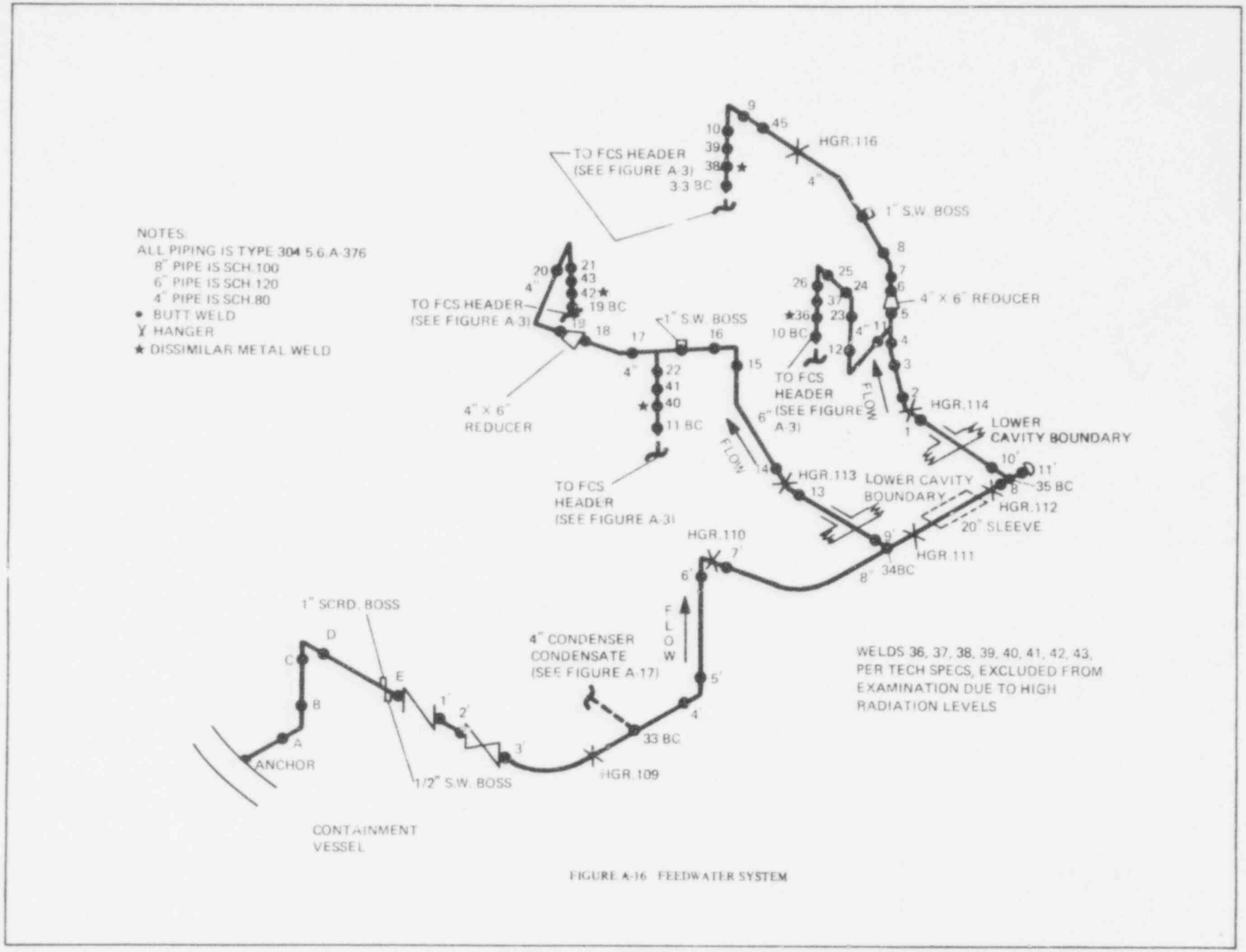


FIGURE A-16 FEEDWATER SYSTEM

694 012

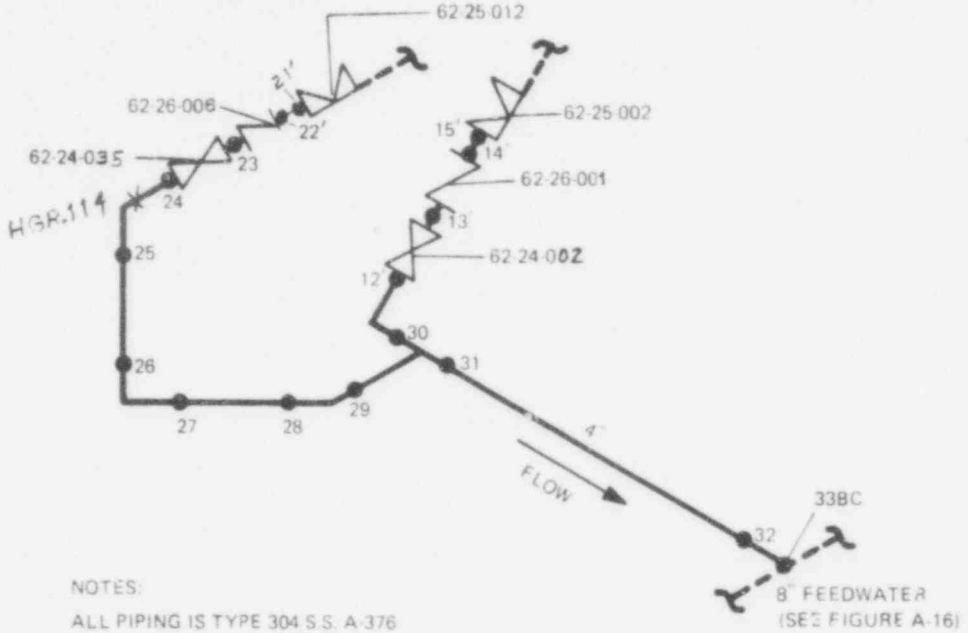


FIGURE A-17. 4" CONDENSER CONDENSATE

694 013

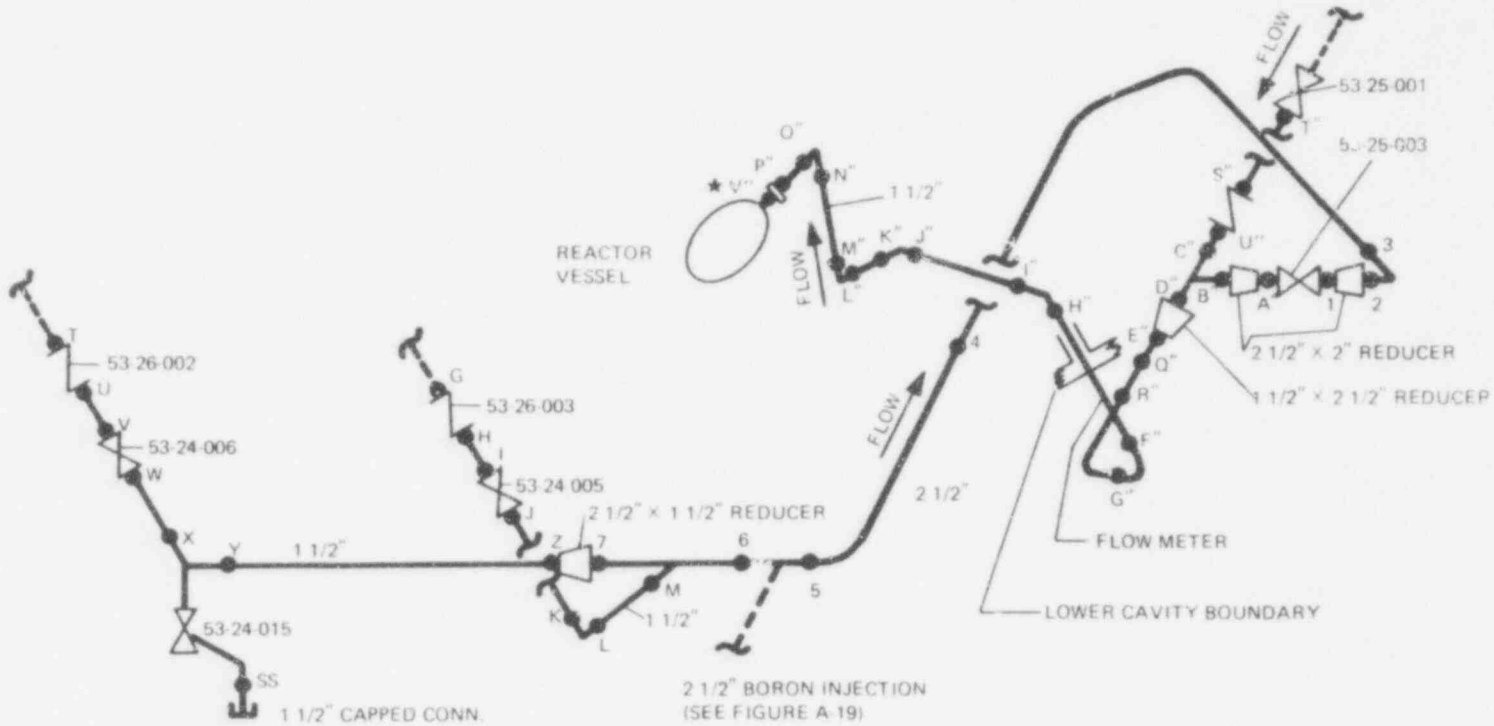


FIGURE A-18. HIGH PRESSURE CORE SPRAY SYSTEM

694 014

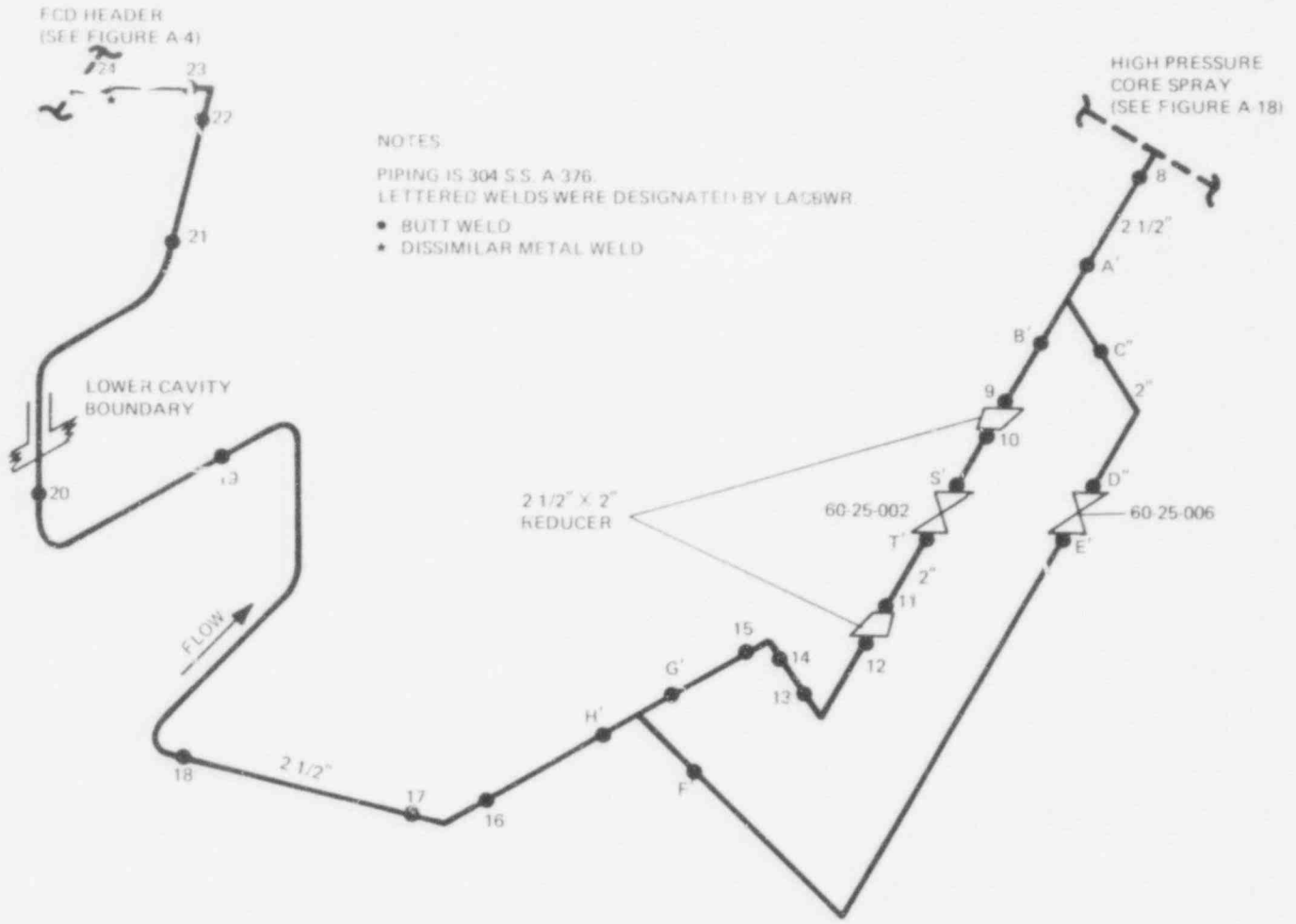
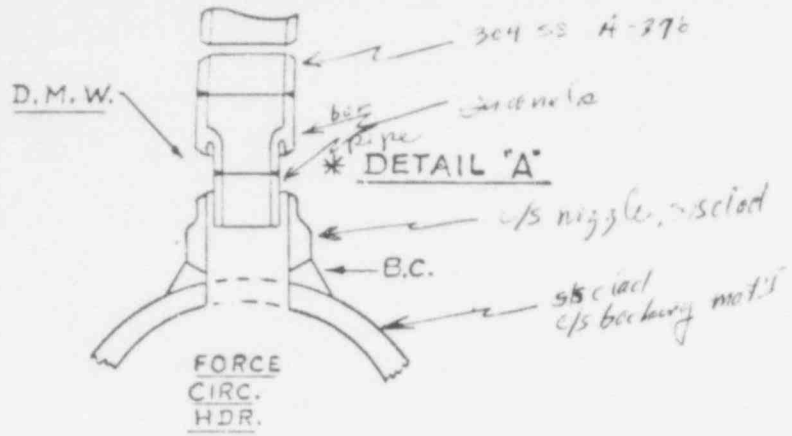


FIGURE A-19. BORON INJECTION SYSTEM

694 015



NOTES:

PRIME NOS. & LETTER WELDS ARE REFERENCED ON DWG. 10872-9.
OTHER WELD NOS. ARE REFERENCED ON DWG. 10872-10.
ALL PIPING IS TYPE 304 S.S. A-376.
8" PIPE IS SCH. 100.
6" PIPE IS SCH. 120.
4" PIPE IS SCH. 80.
V FIELD WELD.
● SHOP WELD.
X HANGER.

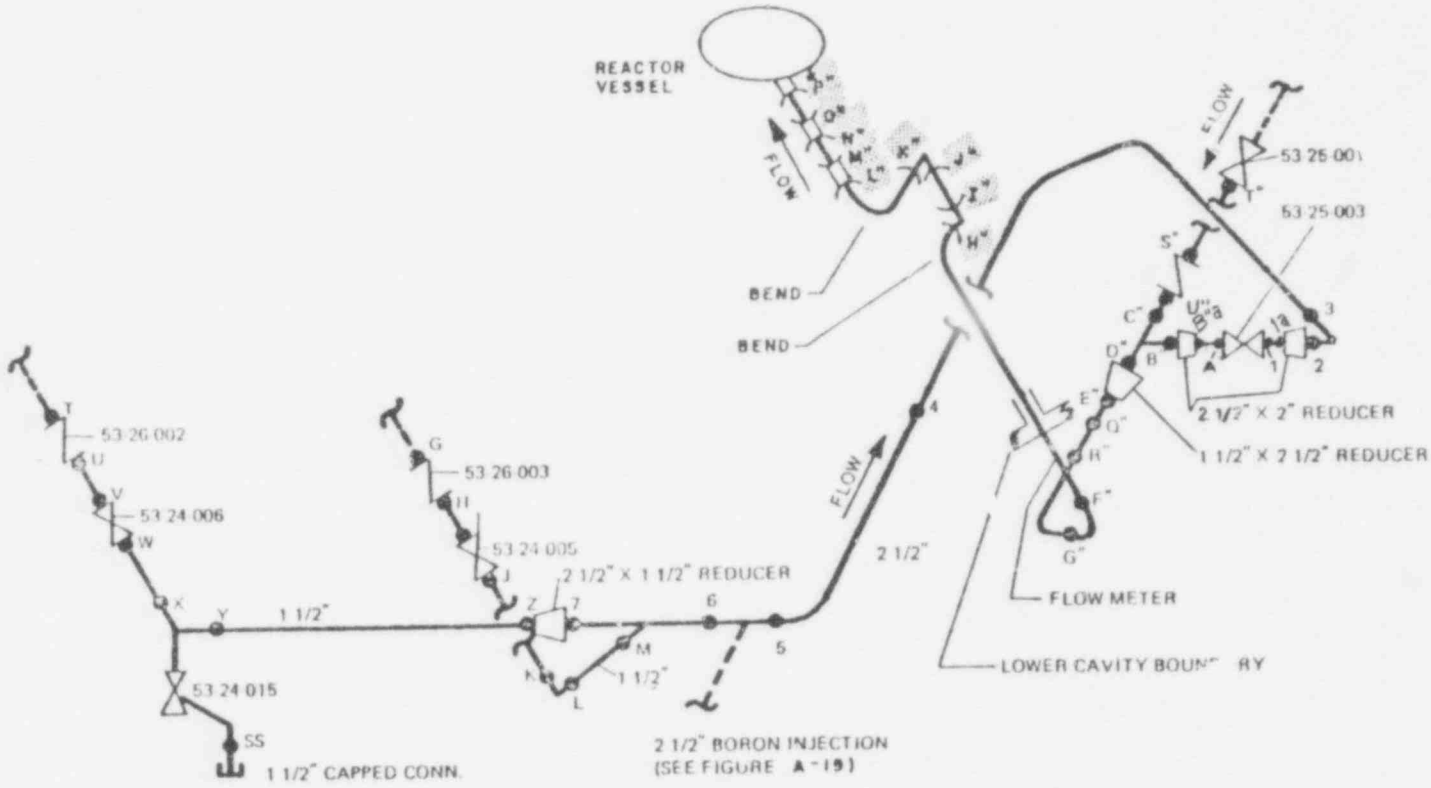
D.M.W. - DISSIMILAR METAL WELDS

FEEDWATER PIPING SYSTEM

A-16a

Rev. 1
4-18-72

910 094



NOTES:
PIPING IS 304 S.S., A-376, SCH. 80
LETTERED WELDS WERE DESIGNATED BY LACBWR.
o BUTT WELD
★ DISSIMILAR METAL WELD
) SOCKET WELD

FIGURE A-18. HIGH PRESSURE CORE SPRAY SYSTEM
REV. 1, NOV. 1978
A-18A

A-21

694 017

ENCLOSURE 2

INSERVICE INSPECTION PROGRAM

for

CLASS II AND III SYSTEMS

694 018

INTRODUCTION

The following Inservice Inspection Program for Class 2 and 3 components will be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code of 1974 and Summer of 1975 Addenda, as required by 10 CFR 50, Section 50.55a(g).

The Inservice Inspection Program for Class 2 and 3 components begins November 1, 1979, consisting of four (4) 10-year inspection intervals divided into 40-month periods, in which a selected percentage of component inspections will be completed.

All steam, water, and radioactive waste containing, pressure retaining components and their supports, other than those already covered under the current Inservice Inspection Program for Class I components will be tested and examined in accordance with the 1974 Edition of ASME Boiler and Pressure Vessel Code and Summer of 1975 Addenda Section XI.

Each component in the following Inservice Inspection Program is assigned an ASME Code classification (as defined in Regulatory Guide 1.26) which will determine the examination requirements and time intervals that will apply.

694 019

REQUIREMENTS

Class III Components shall be tested by performing a system hydrostatic test at 1.1 x design system pressure, and conducting a 100% visual examination of the system and its associated supports prior to the end of each inspection interval (10 years). Also, a 100% visual examination while at operating pressure once every 40 months.

Open-ended portions of a non-closed system will be exempt from the requirements of the pressure test.

Components such as surge tanks, storage tanks, or expansion tanks and their associated piping up to the first shut-off valve will be tested by filling the tank to the tank's design capacity and performing a 100% visual inspection of the tank, piping and associated supports.

All testing, examining and inspecting of Class III components shall be in accordance with the 1974 Edition of ASME Boiler and Pressure Vessel Code and 1975 Summer Addenda, Section XI, Article IWD.

Class II components shall be tested in accordance with Table IWC-2520 and prior to the end of each inspection interval, a system hydrostatic test of 1.25 x design system pressure will be performed on both exempt and non-exempt components of Table IWC-2520 including a 100% visual examination of system and its supports.

Open-ended portions of a non-closed system will be exempt fro the requirements of the hydrostatic test.

Components such as surge tanks, storage tanks or expansion tanks and their associated piping, and supports will be tested by filling the tank to the tank's design capacity, and performing a 100% visual examination of tank, piping and their associated supports.

All testing, examining, and inspecting of Class II components shall be in accordance with the 1974 Edition of the ASME Boiler and Pressure Vessel Code and the 1975 Summer Addenda, Section XI, Article IWC.

The following systems or portions of the systems as applicable are incorporated into the Inservice Inspection Program in accordance with 10 CFR 50 Section 50.55a and Regulatory Guide 1.26 and shown on enclosed referenced drawings (P & ID's).

694 020

CLASS II

Reference	System
1.	Purification
2.	Main Feed
3.	Main Steam
4.	Reactor Coolant Level and Pressure Instruments
5.	Decay Heat
6.	Shutdown Condenser
7.	High Pressure Core Spray

CLASS III

Reference	System
8.	Boron Inject
9.	Hydraulic Valve Accumulator
10.	Demineralized Water
11.	Fuel Element Storage Well
12.	Seal Injection
13.	Low Pressure Service Water
14.	Component Cooling Water
15.	High Pressure Service Water and Alternate Core Spray
16.	Shield Cooling
17.	Feed and Condensate Feed Heaters, Flash Tank, and Gland Seal Steam Generator
18.	Main Condensate System
19.	Air Ejector Off-Gas

Class IV(D) systems are exempt from Inservice Inspection Requirements. These include the Liquid Waste Management System, the Condensate Demineralizer System outside of the main flow path, and the Containment Spray System.

Although Class IV Systems do not require an Inservice Inspection, they shall follow the Quality Standards set forth in Regulatory Guide 1.26 Table 1 for Quality (D) components.

System pressure tests, other than those tests which are coordinated with Class I hydrostatic tests, shall be performed on those portions of the systems which are highlighted in red on the system P&ID's provided. System pressure tests shall be performed in accordance with LACBWR 10-Year Plan.

694 021

RELIEF REQUEST BASIS

COMPONENT:	Sodium Pentaborate Tank 60-19-001
FUNCTION:	Stores, at atmospheric pressure, concentrated sodium pentaborate, for injection into rea tor primary coolant, in the case of control rod(s) failure to insert.
CLASS:	III
TEST REQUIREMENT:	IWD-2410(b), system pressure test on the open tank.
BASIS FOR RELIEF:	In order to fill the tank to capacity, it would be necessary to mix a quantity of dry boric acid, dry borax in 120°F. water equal to approximately 25% of the tank's capacity. Then, at the completion of the inspection, drain the tank to normal level and dispose of the sodium pentaborate solution.
ALTERNATE TESTING:	System inservice test will be substituted at the scheduled intervals.

PURIFICATION SYSTEM (Dwg. 41-300-081) (1)

The Purification System was previously classified Class I, but without affecting the Inservice Inspection Program for Class I, the system is reclassified Class II.

With pipe size ≤ 2", the Purification System is exempt from the requirements of Article IWC-2520, but a system hydrostatic test is required prior to the end of each inspection interval. The Purification System hydrostatic test can be coordinated with the Class I systems hydrostatic test.

MAIN FEED (Dwg. C/LR-53) (2)

The Class II portion of the Main Feed System shall be inspected and tested in accordance with Articles IWC-2520 and IWC-2600 as shown on the enclosed LACBWR 10-Year Examination Plan.

Requirements for a hydrostatic test of the Main Feed System can be coordinated with the hydrostatic test required for Class I portion of the system prior to the end of each inspection interval.

MAIN STEAM SYSTEM (Dwg. M-12) (3)

Inspection of the Class II Main Steam System shall be in accordance with IWC-2520 and IWC-2600 as shown on the enclosed LACBWR 10-Year Examination Plan. Prior to the end of each inspection interval, a hydrostatic test shall be performed on the system, and can be coordinated with the hydrostatic test required for the Class I portion of the system.

REACTOR COOLANT LEVEL AND PRESSURE INSTRUMENTS (Dwg. C/LR-79) (4)

All level and pressure instruments in the Reactor Coolant System require a hydrostatic test prior to the end of each inspection interval. This hydrostatic test can be coordinated with the hydrostatic test of the Primary System for Class I systems.

DECAY HEAT REMOVAL SYSTEM (Dwg. 41-300-083) (5)

The entire Decay Heat Removal System is tested under the ISI Program for Class I components with the exception of the instrument lines, which require a hydrostatic test. This can be coordinated with the hydrostatic test required for Class I systems.

694 023

SHUTDOWN CONDENSER SYSTEMS (Dwg. 41-300-084) (6)

The Shutdown Condenser System (Primary side) requires a system hydrostatic test which can be coordinated with the hydrostatic test of the Class I systems.

HIGH PRESSURE CORE SPRAY SYSTEM (Dwg. 41-300-080) (7)

Portions of the Core Spray System associated with the Overhead Storage Tank (OHST) can be tested by filling the OHST to its design capacity and inspecting the system to the first isolation valve. The remainder of the system shall be hydrostatically tested prior to the end of the inspection interval. The hydrostatic test of the system can include portions of the Boron Injection System.

BORON INJECTION SYSTEM (Dwg. 41-300-080) (8)

The Sodium Pentaborate Tank and associated piping up to the first shutoff valve can be tested by filling the tank to its design capacity and performing a 100% visual examination.

The remainder of the system requires visual examination during operation and a pressure test which can be coordinated with the High Pressure Core Spray Suction Line hydrostatic test in accordance with LACBWR 10-Year Examination Plan.

HYDRAULIC VALVE ACCUMULATOR SYSTEM (Dwg. 41-300-087) (9)

Water return tank and all piping associated with the tank shall be tested by filling the tank to its design capacity and performing a 100% visual examination.

Visual examination of the remainder of the system is required during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

DEMINERALIZED WATER SYSTEM (Dwg. C/LR-74) (10)

The Virgin Water Tank will be tested by filling the tank to its design capacity and performing a visual examination of the tank and associated piping up to first shutoff valves.

A visual examination of the system is required for the remainder of the system during operation, and pressure testing, in accordance with LACBWR 10-Year Examination Plan.

694 024

FUEL ELEMENT STORAGE WELL SYSTEM (Dwg. 41-300-079) (11)

Fuel Element Storage Well and its associated piping up to the first shut-off valves will be tested by filling the Fuel Element Storage Well to its design capacity and performing a 100% visual examination of those portions of the system.

The remaining portions of the system will be visually examined during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

SEAL INJECTION SYSTEM (Dwgs. 41-300-102 & 41-400-195) (12)

Seal Injection Reservoir and pump suction lines will be tested by visual examination while the system is filled to design capacity.

A visual examination of the remaining portion of the system shall be performed during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan. The pressure test can be coordinated with Class I System hydrostatic test.

LOW PRESSURE SERVICE WATER SYSTEM (Dwg. M-17) (13)

Those portions of the system essential for plant safety, Control Room operations, primary heat removal, and post accident heat removal, shall be tested by visual examination during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

COMPONENT COOLING WATER SYSTEM (Dwg. 41-400-416) (14)

Piping associated with Surge Tank and the Surge Tank shall be tested by filling the tank to its design capacity and performing a 100% visual examination.

The remainder of the system shall be tested by visual examination during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

HIGH PRESSURE SERVICE WATER AND ALTERNATE CORE SPRAY SYSTEMS (Dwgs. M-21 & 41-507-358) (15)

In the Alternate Core Spray System the series check valves are the Primary System Pressure Boundary. The two (2) systems will be tested together up to the 6" flange inside the Biological Shield, by performing a visual inspection during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

694 025

SHIELD COOLING SYSTEM (Dwg. 41-300-082) (16)

Return lines and Surge Tank shall be tested by filling the tank to design capacity and performing a 100% visual inspection.

The remainder of the system shall be tested by performing a visual inspection during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

FEED AND CONDENSATE HEATERS, FLASH TANK AND GLAND SEAL STEAM GENERATOR (Dwg. b/LR-69 & C/LR-57) (17)

Perform visual examination during operation and pressure testing of all portions of the system which does not operate at condenser pressure in accordance with LACBWR 10-Year Examination Plan.

MAIN CONDENSATE SYSTEM (Dwg. M-13) (18)

Perform system test by visual examination during system operation and pressure testing in accordance with LACBWR 10-Year Examination Plan. The test shall include the reactor feed pump suction.

AIR EJECTOR OFF-GAS SYSTEM (Dwg. 41-300-169) (19)

Test the system by performing a visual examination during operation and pressure testing in accordance with LACBWR 10-Year Examination Plan.

For the system pressure test, the portion of the system on the suction side of the Waste Gas Compressor shall be tested pneumatically and the discharge side of the compressor will be tested with water. The two tests will be at different pressures.

694 026

LACROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

CLASS	SYSTEM	TYPE OF TEST	ASME ARTICLE	INSPECTION INTERVALS									REMARKS
				0 - 3 1/3			3 1/3 - 6 2/3			6 2/3 - 10 YRS.			
				OUTAGES									
				1	2	3	4	5	6	7	8	9	
III	HIGH PRESSURE SERVICE WATER AND ALTERNATE CORE SPRAY SYSTEMS AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			Blank Flange On The Alternate Core Spray Header For System Pressure Test
III	SHIELD COOLING SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	MAIN CONDENSATE SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	FEED AND CONDENSATE HEATERS, FLASH TANK AND GLAND SEAL GENERATOR SYSTEMS AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	AIR EJECTOR OFF GAS AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			

120 694

LACROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

CLASS*	SYSTEM	TYPE OF TEST	ASME ARTICLE	INSPECTION INTERVALS									REMARKS
				0 - 3 1/3			3 1/3 - 6 2/3			6 2/3 - 10 YRS.			
				OUTAGES									
				1	2	3	4	5	6	7	8	9	
III	BORON INJECTION SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			Pressure Test May Include Portions of High Pressure Core Spray System
III	HYDRAULIC VALVE ACCUMULATOR SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	DEMINERALIZED WATER SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	FUEL ELEMENT STORAGE WELL SYS. AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	SEAL INJECT SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			Pressure Test is To Be Coordinated With Hydrostatic Test of Primary System
III	LOW PRESSURE SERVICE WATER SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			
III	COMPONENT COOLING WATER SYSTEM AND SUPPORTS	SYS. LEAK	IWD 5000, 2600 IWA 5000	TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			TEST TYPE_____ PRESS._____ DATE_____			

820 469

LACROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

CLASS*	SYSTEM		ASME ARTICLE	INSPECTION INTERVALS									REMARKS
				0 - 3 1/3			3 1/3 - 6 2/3			6 2/3 - 10 YRS.			
				OUTAGES									
				1	2	3	4	5	6	7	8	9	
II	PURIFICATION AND SUPPORTS		IWC 5000, 2000 IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	MAIN FEED AND SUPPORTS		IWC 5000, 2000 IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	MAIN STEAM AND SUPPORTS		IWC 5000, 2000 IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	REACTOR COOLANT LEVEL AND PRESSURE INSTRUMENTS AND SUPPORTS		IWC 5000, 2000 IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	SHUTDOWN CONDENSER SYSTEM AND SUPPORTS		IWC 5000 2000, IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	DECAY HEAT SYSTEM AND SUPPORTS		IWC 5000 2000, IWA 5000	TYPE_____			PRESS._____			DATE_____			To Be Coordinated With Primary System Hydrostatic Test
II	HIGH PRESSURE CORE SPRAY AND SUPPORTS		IWC 5000 2000, IWA 5000	TYPE_____			PRESS._____			DATE_____			Shall Include Sodium Pentaborate System

*System Pressure Test for Class II is 1.25 x Design Pressure; For Class III is 1.1 x Design Pressure.

620 769

LA CROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

(MAIN FEED CLASS II) (SEE ISOMETRIC #1)

ASME SEC. XI ITEM NO.	ASME SEC. XI CATGY.	EXAMINATION AREA IDENTIFICATION	EXAM METHOD	PROCEDURE NO./REV.	INSPECTION INTERVAL 0-3-1/3 YRS / 3-1/3-6-2/3 YRS / 6-2/3-10 YRS — OUTAGES 1	2	3	4	5	6	7	8	9	REMARKS
C2.1	C-F	1- Circumferential Butt Welds	UT			X								100% of Weld to be Inspected
C2.1	C-F	2- Circumferential Butt Welds	UT			X								
C2.5	C-E-1	34- Integrally Welded Support	PT			X								
C2.1	C-F	3- Circumferential Butt Weld	UT			X								
C2.1	C-F	4- Circumferential Butt Weld	UT						X					
C2.1	C-F	5- Circumferential Butt Weld	UT						X					
C2.4	C-D	#3 Feed Water Htr. Pressure Retaining Bolting	VT PT						X X					At least 10% PT Examined but not less than 2 bolts and 100% Visual Examination.
C1.1	C-A	#3 Feed Water Htr. Circumferential Head Weld	UT						X					20% of Weld, uniformly distributed among three areas of the Weld.
C2.1	C-F	22-Circumferential Butt Weld	UT						X					

1ST INSPECTION INTERVAL

020 769

LA CROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

(MAIN FEED CLASS II) (SEE ISOMETRIC #1 & 1a)

	ASME SEC. XI ITEM NO.	ASME SEC.XI CATGY.	EXAMINATION AREA IDENTIFICATION	EXAM METHOD	PROCEDURE NO./REV.	INSPECTION INTERVAL 0-3-1/3 YRS / 3-1/3-6-2/3 YRS / 6-2/3-10 YRS — OUTAGES 1	2	3	4	5	6	7	8	9	REMARKS
1ST INSPECTION INTERVAL	C2.1	C-F	33-Circumferential Butt Weld	UT									X		
	C2.1	C-F	36-Circumferential Butt Weld	UT									X		
	C2.4	C-D	Pressure Retaining Bolting for Pump 1A	VT PT									X		
	C2.1	C-F	6- Circumferential Butt Weld	UT									X		
	C2.1	C-F	7- Circumferential Butt Weld	UT									X		
2ND INSPECTION INTERVAL	C2.1	C-F	8- Circumferential Butt Weld	UT		X									
	C2.1	C-F	9- Circumferential Butt Weld	UT		X									
	C2.1	C-F	10-Circumferential Butt Weld	UT		X									
	C2.1	C-F	11-Circumferential Butt Weld	UT		X									
	C2.1	C-F	12-Circumferential Butt Weld	UT					X						

LA CROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

MAIN FEED PIPING CLASS II (SEE ISOMETRIC 1a)

	ASME SEC. XI ITEM NO.	ASME SEC. XI CATGY.	EXAMINATION AREA IDENTIFICATION	EXAM METHOD	PROCEDURE NO./REV.	INSPECTION INTERVAL 0-3•1/3 YRS OUTAGES 1	2	3	3•1/3-6•2/3 YRS OUTAGES 4	5	6	6•2/3-10 YRS OUTAGES 7	8	9	REMARKS
2ND INSPECTION INTERVAL	C2.3	C-F	35- Branch Pipe to Pipe	UT					X						
	C2.1	C-F	13-Circumferential Butt Weld	UT					X						
	C2.1	C-F	14-Circumferential Butt Weld	UT					X						
	C2.1	C-F	15-Circumferential Butt Weld	UT								X			
	C2.1	C-F	16-Circumferential Butt Weld	UT								X			
	C2.1	C-F	17-Circumferential Butt Weld	UT								X			
	C2.1	C-F	18-Circumferential Butt Weld	UT								X			
3RD INSPECTION INTERVAL	C2.1	C-F	19-Circumferential Butt Weld	UT							X				
	C2.1	C-F	20-Circumferential Butt Weld	UT							X				
	C2.1	C-F	21-Circumferential Butt Weld	UT							X				
	C2.1	C-F	23-Circumferential Butt Weld	UT										X	

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694 032

LA CROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

MAIN FEED PIPING CLASS II (SEE ISOMETRIC 1a)

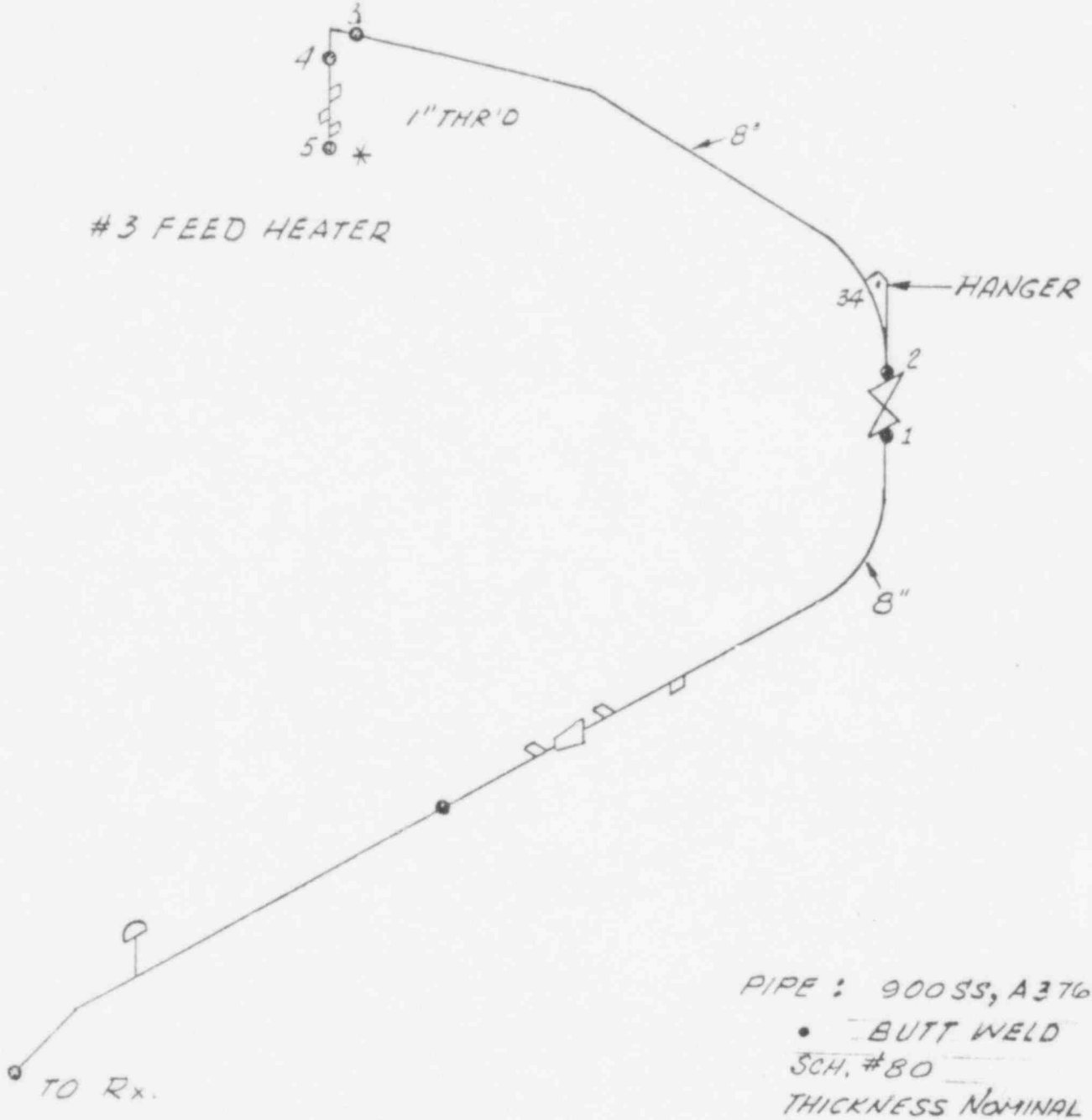
ASME SEC. XI ITEM NO.	ASME SEC. XI CATGY.	EXAMINATION AREA IDENTIFICATION	EXAM METHOD	PROCEDURE NO./REV.	INSPECTION INTERVAL 0-3-1/3 YRS / 3-1/3-6-2/3 YRS / 6-2/3-10 YRS — OUTAGES 1	2	3	4	5	6	7	8	9	REMARK
C2.1	C-F	24-Circumferential Butt Weld	UT										X	
C2.1	C-F	25-Circumferential Butt Weld	UT										X	
C2.1	C-F	26-Circumferential Butt Weld	UT										X	
C2.1	C-F	27-Circumferential Butt Weld	UT										X	
C2.1	C-F	28-Circumferential Butt Weld	UT				X							
C2.1	C-F	29-Circumferential Butt Weld	UT				X							
C2.1	C-F	30-Circumferential Butt Weld	UT				X							
C2.1	C-F	31-Circumferential Butt Weld	UT				X							
C2.4	C-D	Pressure Retaining Bolting for Pump 1B	VT PT				X X							At least 10% PT examined but not less than two bolts also. 100% Visual examination.
C2.1	C-F	37-Circumferential Butt Weld	UT				X							
C2.1	C-F	32-Circumferential Butt Weld	UT				X							

3RD INSPECTION INTERVAL

694 053

LA CROSSE BOILING WATER REACTOR
10-YEAR EXAMINATION PLAN

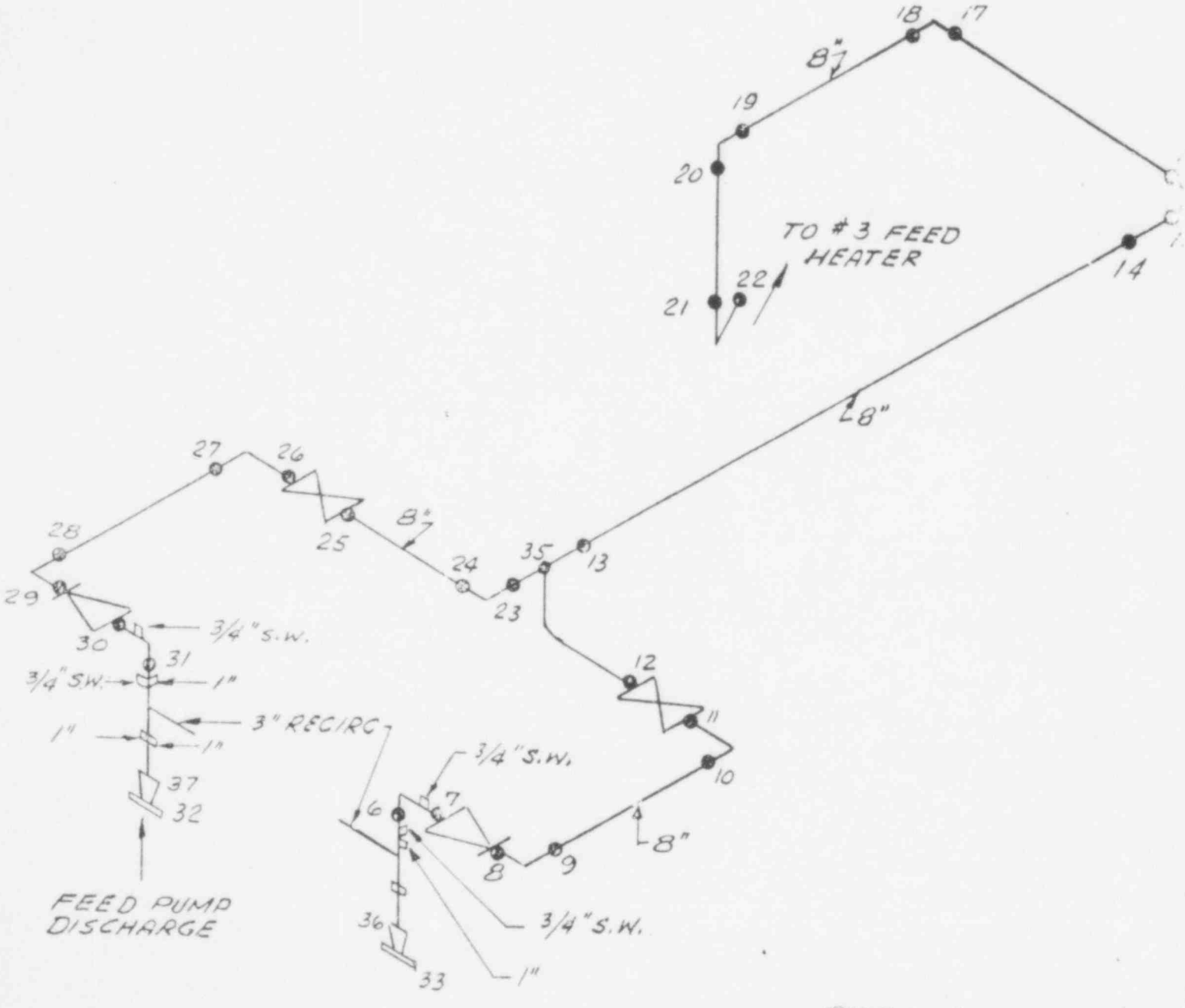
ASME SEC. XI ITEM NO.	ASME SEC.XI CATGY.	EXAMINATION AREA IDENTIFICATION	EXAM METHOD	PROCEDURE NO./REV.	INSPECTION INTERVAL 0-3-1/3 YRS / 3-1/3-6-2/3 YRS / 6-2/3-10 YRS — OUTAGES 1	2	3	4	5	6	7	8	9	REMARKS
C2.1	C-F	10-MS-A-4 Circumferential Butt Welds	UT			X								
C2.5	C-E-1	Hanger-Integrally Welded Support	PT						X					
C2.1	C-F	10-MS-A-5 Circumferential Butt Weld	UT									X		
C2.3	C-F	10-MS-A-5/8-MS-A Branch Pipe to Pipe Weld Joint	UT		X									
C2.1	C-F	10-MS-A-6 Circumferential Butt Weld	UT								X			
C2.1	C-F	8-MS-A-1 Circumferential Butt Weld	UT					X						
C2.1	C-F	8-MS-A-2 Circumferential Butt Weld	UT							X				
C2.1	C-F	8-MS-A-3 Circumferential Butt Weld											X	



PIPE : 900SS, A376
• BUTT WELD
SCH. #80
THICKNESS NOMINAL .5
* DISSIMILAR METAL WELD

MAIN FEED

694 035



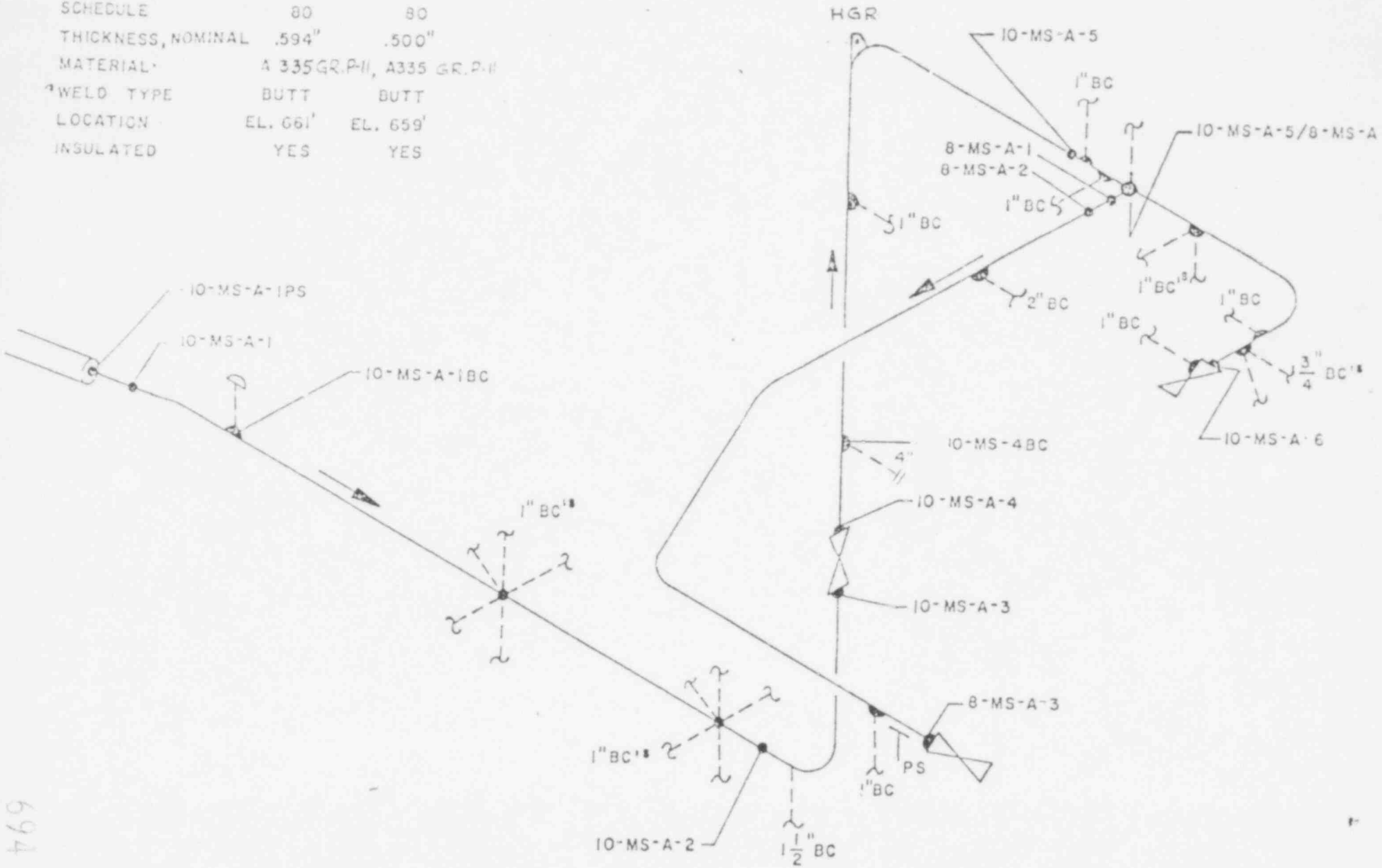
PIPE: A-106

SCH. #100
THICKNESS
NOMINAL - .59.

694 036

MAIN FEED

DIAMETER, NOMINAL	10"	6"
SCHEDULE	80	80
THICKNESS, NOMINAL	.594"	.500"
MATERIAL	A 335 GR. P-11,	A335 GR. P-11
WELD TYPE	BUTT	BUTT
LOCATION	EL. 661'	EL. 659'
INSULATED	YES	YES



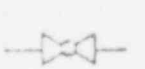
MAIN STEAM

694 057

SUBJECT - VALVE SYMBOLS

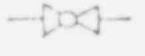

GATE VALVE (OPEN)


GATE VALVE (CLOSED)


GLOBE VALVE (OPEN)


GLOBE VALVE (CLOSED)


TRANSFER COCK - 2 WAY (OPEN)


TRANSFER COCK - 2 WAY (CLOSED)

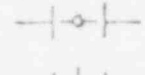

CHECK VALVE


PLUG OR BALL VALVE (OPEN)


PLUG OR BALL VALVE (CLOSED)


BUTTERFLY VALVE (OPEN)


BUTTERFLY VALVE (CLOSED)


EXPLOSIVE VALVE


4 WAY VALVE (PLUG TYPE)


ANGLE VALVE


PRESSURE SAFETY RELIEF VALVE


NON-RETURN VALVE

REVERSE CURRENT VALVE

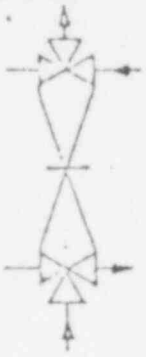

TURBINE STOP VALVE


THREE-WAY VALVE (PLUG TYPE)


THREE-WAY VALVE (GLOBE TYPE)

POOR ORIGINAL

SUBJECT - VALVE SYMBOLS



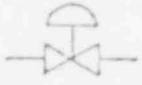
INTERCONNECTED THREE-WAY VALVES(PLUG TYPE)

VACUUM RELIEF VALVE

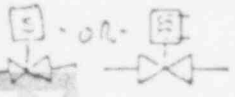
GATE VALVE WITH BLIND FLANGE

NEEDLE VALVE

SELF-CONTAINED PRESSURE CONTROL VALVE



CONTROL VALVE WITH DIAPHRAGM OPERATOR



CONTROL VALVE WITH SOLENOID OPERATOR

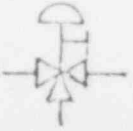
CONTROL VALVE - ELECTRIC MOTOR OPERATOR

CONTROL VALVE WITH POSITIONER - (DIAPHRAGM OPERATOR)

CONTROL VLAVE WITH SINGLE ACTING SPRING RETURN PISTON OPERATOR

CONTROL VALVE - WITH DOUBLE ACTING PISTON OPERATOR

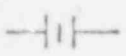
CONTROL VALVE - WITH HANDJACK (DIAPHRAGM OPERATOR)



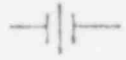
3-WAY CONTROL VALVE WITH HANDWHEEL (DIAPHRAGM OPERATOR)

ENGINEERING DOCUMENT

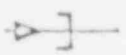
SUBJECT - PIPING SYMBOLS

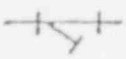

RESTRICTING FLOW ORIFICE


BREAKDOWN ORIFICE


METERING ORIFICE


FLOW NOZZLE (VENTURI TYPE)

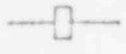

RUPTURE DISC


STRAINER

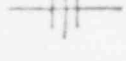
TRAP


REDUCER

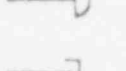

MOISTURE TRAP


MECHANICAL JOINT


FLANGE JOINT

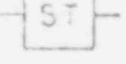

SCREWED UNION JOINT


SOCKET WELD JOINT

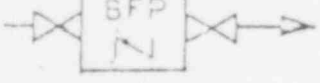

WELDED CAP


SCREWED CAP

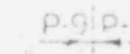
BLIND FLANGED END



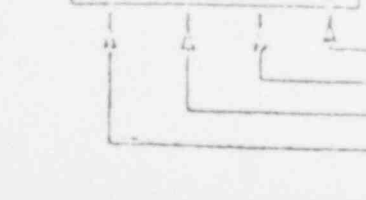
STEAM TRAP



BACK FLOW PREVENTOR WITH GATE VALVES


SPECIFICATION OR CODE LIMIT

P-9 P-8

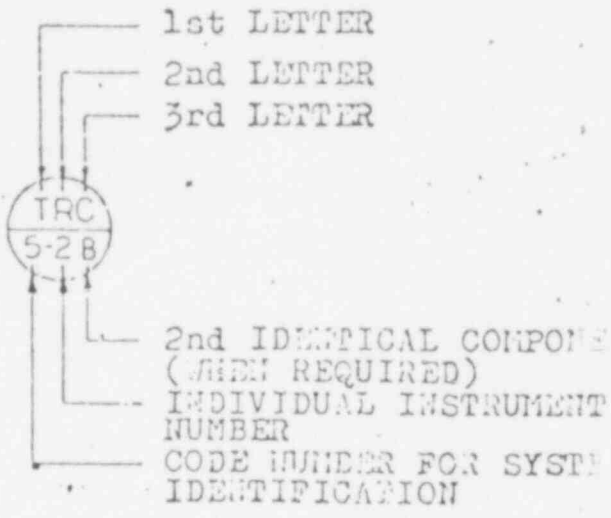


POOR ORIGINAL

SUBJECT - INSTRUMENT LEGEND

SUBSCRIPT TO 1st LETTER

d = differential
m = moisture
ph = hydrogen ion concentration
r = ratio
co = carbon monoxide
co_2 = carbon dioxide
H_2 = hydrogen

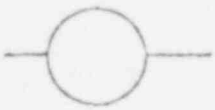


	1st LETTER	2nd LETTER	3rd LETTER
A	analysis	alarm	alarm
C	conductivity	control	control
D	density	-	-
E	electrical	element	-
F	flow	-	-
G	-	glass	-
H	manual (hand oper.)	-	-
I	interval (TIME)	indicator	-
L	level	-	-
M	-	modifier	modifier
O	-	-	operator
P	pressure	-	-
Q	-	quantity (totalizer)	quantity (total
R	radiation	recorder	-
S	speed	switch*	switch
T	temperature	transmitter	transmitter
V	viscosity	valve	valve
W	weight	well	-
X	special	special	special
Z	position (zone)	-	-

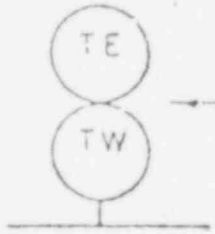
*Safety - when used for relief valves (PSV) and rupture discs (PSX only.

POOR ORIGINAL

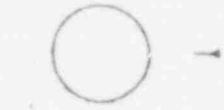
SUBJECT - INSTRUMENT SYMBOLS



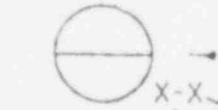
IN LINE TYPE INSTRUMENTS OR ELEMENTS (EXCEPT THERMOMETERS & TEST WELLS)



IN LINE THERMOMETER AND TEST WELL



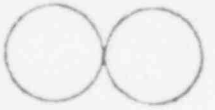
LOCALLY MOUNTED INSTRUMENT



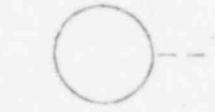
BOARD OR PANEL MOUNTED INSTRUMENT

LOCATION NUMBER ON BOARD OR PANEL

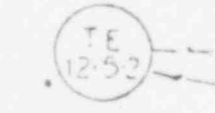
BOARD OR PANEL NUMBER



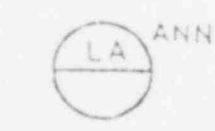
MECHANICALLY COUPLED INSTRUMENTS



LEADS TO ELECTRICAL CONTROL CIRCUIT NO. 5 ON DRAWING NUMBER LISTED AT REF. 7 ON PIPING & INSTR. DIAGRAM.

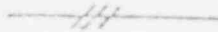


DENOTES POINT NUMBER 2 ON MULTIPOINT TEMPERATURE INDICATOR NO. 12-5



ANNUNCIATOR UNIT NO. X

ANNUNCIATOR POINT NO. XX



HYDRAULIC LINES

ELECTRICAL LEADS

PNEUMATIC LINES

CAPILLARY TUBING

INSTRUMENT AIR

"X" DENOTES VALVE FAILS CLOSED ON ACTUATING MEDIUM FAIL

"O" DENOTES VALVE FAILS OPEN ON ACTUATING MEDIUM FAILU

"O" DENOTES VALVE REMAINS STATIONARY ON ACTUATING MEDIU FAILURE (VALVE FAILS IN "AS IS POSITION")

694 · 042

POOR ORIGINAL

ENCLOSURE 3

PUMP TESTING PROGRAM

694 043

INSERVICE INSPECTION FOR PUMPS

Quantities to be measured are listed below.

QUANTITY	MEASURE	OBSERVE
Speed, N	X	
Inlet Pressure, Pi	X[2]	
Differential Pressure, ΔP	X[1]	
Flow Rate, Q	X[1]	
Vibration Amplitude, V	X	
Proper Lubricant Level or Pressure		X
Bearing Temperature, Tb	X	

[1]In a fixed resistance system, it is required to measure ΔP or Q, not both. In a variable resistance system, both shall be measured.
[2]Measure before pump startup and during the test.

Each pump shall have an inservice test performed monthly during operation where applicable. During shutdown conditions the testing should be performed, but is not mandatory.

The allowable ranges of quantities measured are stated in Table IWP-3100-2.

Initial testing of the pumps will establish the reference quantities required to conduct future tests on the pumps.

Pump Test shall be performed by establishing system conditions the same as the previous test; this is done to determine the pump's operability with reference to the quantities established in the initial test.

The duration of the test when bearing temperature is not required is 5 min. under stable conditions; then take data.

When bearing temperatures are required, the data shall be taken when three successive bearing temperature readings taken at 10 min. intervals do not vary by more than 3%.

Pumps to be tested are:

1) High Pressure Core Spray Pump 1A 53-06-001
2) High Pressure Core Spray Pump 1B 53-06-002
3) Alternate Core Spray Pump 1A 38-06-001
4) High Pressure Service Water Pump 1B 75-06-002
5) Demin. Water Transfer Pump 1A 67-06-001
6) Demin. Water Transfer Pump 1B 67-06-002
7) Component Cooling Water Pump 1A 57-06-001
8) Component Cooling Water Pump 1B 57-06-002

All quantities that are measured for a test shall be reviewed and analyzed within 96 hours of the test. If any of the quantities are outside of the acceptable range, that quantity will be in either the Alert Range or Required Action Range. To determine which range the quantity is in, and what action is to be taken, refer to ASME Boiler and Pressure Vessel Code, Section XI, Article I.W.P. Table IWP-3100-2 and Paragraph IWP-3230, 1974 Edition with Summer 1975 Addenda.

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
II	EMERGENCY CORE SPRAY PUMP 1A (53-06-001) John Bean S.N. 117981	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							
			4							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			5							
			6							
			7							
			8							
			9							3. Test data may b obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

694 046

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
II	EMERGENCY CORE SPRAY PUMP 1B (53-06-002) John Bean S.N. 117981	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			4							
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
III	ALTERNATE CORE SPRAY SYSTEM 36-06-001 1A Worthington S.N. VIP 18824	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							
			4							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
III	HIGH PRESSURE SERVICE WATER PUMP 75-06-002 1B Worthington S.N. VIB-10285	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			3							
			4							
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

694 049

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS 0-1 2/3 Date	1 2/3-3 1/3 Date	3 1/3- 5 Date	5-6 2/3 Date	6 2/3-8 1/3 Date	8 1/3-10 Date	REMARKS
III	DEMIN. WATER TRANSFER PUMP 1B (67-06-002) Allis-Chalmers S.N. 1-01796-1-2	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							
			4							2. If not done during plant shutdown, then test must be done within one week of plant start-up.
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

694 050

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
III	DEMIN. WATER TRANSFER PUMP 1A (67-06-001) Allis-Chalmers S.N. 1-01796-1-1	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			4							
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR 143HS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1 2/3	1 2/3-3 1/3	3 1/3- 5	5-6 2/3	6 2/3-8 1/3	8 1/3-10	
				Date	Date	Date	Date	Date	Date	
III	COMPONENT COOLING WATER PUMP 1A (57-06-001) Allis-Chalmers S.N. 7-1907-1-1	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation. 2. If not done during plant shutdown, then test must be done within one week of plant startup. 3. Test data may be obtained during normal pump operation if reference conditions can be established.
			2							
			3							
			4							
			5							
			6							
			7							
			8							
			9							
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

694 052

LACROSSE BOILING WATER REACTOR

EXAMINATION PLAN
FOR PUMPS

CLASS	SYSTEM	TYPE OF TEST	MONTHS	INSPECTION INTERVALS						REMARKS
				0-1⅔	1⅔-3⅓	3⅓-5	5-6⅔	6⅔-8¼	8¼-10	
				Date	Date	Date	Date	Date	Date	
III	COMPONENT COOLING WATER PUMP 1B (57-06-002) Allis-Chalmers S.N. 7-1907-1-2	SPECIAL OR OPER'L	1							1. To be accomplished monthly during plant operation.
			2							
			3							
			4							2. If not done during plant shutdown, then test must be done within one week of plant startup.
			5							
			6							
			7							
			8							
			9							3. Test data may be obtained during normal pump operation if reference conditions can be established.
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

POOR ORIGINAL

694 053

PUMP INSERVICE INSPECTION
DATA SHEET

SYSTEM_____ PUMP NO._____

Date_____

	INSTRUMENTS USED	ALLOWABLE ERROR	CALIBRATION DUE DATE
V	_____	± 5% of Full Scale	_____
T	_____	± 5% of Full Scale	_____
ΔP	_____	± 2% of Full Scale	_____
Pi	_____	± 2% of Full Scale	_____
Q	_____	± 2% of Full Scale	_____
N	_____	± 2% of Full Scale	_____

QUANTITIES

	MEASURED	REFERENCE	ACCEPTABLE
[1] N	_____	_____	_____
T	_____	_____	_____
Q	_____	_____	_____
ΔP	_____	_____	_____
[1] Pi	_____	_____	_____
[2] Tb	_____	_____	_____

If Measured Quantities Exceed Acceptable Quantitie Refer To Table IWP-3100-2, And Paragraph IWP 3230 Of Subsection IWP of Section X Of ASME Boiler And Pressure Vessel Code For Requirement For Corrective Action.

PERSON CONDUCTING TEST:_____
Signature

[3]ANALYSIS

SHIFT SUPERVISOR NOTIFIED OF RESULTS. TIME_____ DATE_____

ANALYZER'S SIGNATURE:_____

[1]Prior to and after startup.
[2]Temperature required yearly on bearings.
[3]All data is required to be analyzed within 96 hours of test completion.

CORRECTIVE ACTION REPORT

DATE_____

SUMMARY OF CORRECTIVE ACTION

SIGNATURE OF PERSON RESPONSIBLE FOR CORRECTIVE ACTION:_____

ACCEPTANCE TEST RESULTS

DATE_____

VERIFICATION SIGNATURE:_____

ENCLOSURE 4

VALVE TESTING PROGRAM

694 056

INSERVICE INSPECTION FOR VALVES

Valves Inservice Inspection Program for safety-related Class 1, 2 and 3 valves is established in accordance with ASME Boiler and Pressure Vessel Code, 1974 Edition, and 1975 Summer Addenda, Section XI, Subsection IWV.

The Inservice Inspection Program for Valves is intended to verify operational readiness of safety-related valves in Class 1, 2 and 3 systems on a continuing basis.

Valves used for operating convenience such as manual vent, drains, sample, instrument test, and valves used for maintenance only are excluded from the requirements of Article IWV of the ASME Code.

To determine the test requirements for applicable valves, there are five (5) categories, and each valve will fall into one (1) or more categories. If a valve has more than one (1) category, that valve will meet the requirements for each category.

The five (5) categories will be defined as:

Category A - valves in which a limited seat leakage is specified in the closed position to fulfill their function.

Category B - valves in which seat leakage is inconsequential for the fulfillment of their function.

Category C - valves which are self-actuating by some system characteristic.

Category D - valves actuated by an energy source capable of only one (1) operation.

Category E - valves which are normally locked, or sealed, closed or open.

Tests which require a measured characteristic of a valve (such as stroke time or seat leakage,) will have a data sheet to document the test results.

For power-operated valves which require stroke time, the full stroke time is the time required for a valve to travel in the direction required to fulfill its function, from full shut to full open, or full open to full shut (etc.)

In the case of power-operated valves which do not have an assigned stroke time, the first test performed on these valves will be used to determine the stroke time for future tests. The operational readiness during the first test for the above-mentioned valves will be determined by operating experience.

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To maintain the current status of valve testing and exercising, each valve is listed under the applicable category heading, and the date of the last test or cycle shall be entered.

The test frequency is determined from the appropriate IWV Article of the ASME Code. The test frequency is dependent upon category, type of test to be performed, and type of valve to be tested.

This testing program for valves will be performed using a 20-month inspection interval for the service life of the valves. The first inspection interval will begin November 1, 1979.

If a leak rate for category "A" valves 6 in. and larger exceeds the previous test by an amount that reduces the margin between the measured rate and the maximum permissible rate by 50% or more, then the test frequency shall be doubled until the valve is repaired. When a test shows that the leak rate is increasing with time, and a projected leak rate using three or more test shows that the next test will exceed the maximum permissible leakage rate by 10%, the valve will be repaired or replaced before being returned to service.

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LIST OF ABBREVIATIONS

CONT.	CONTROL VALVE
DIA.	DIAPHRAM OPERATED
REL.	RELIEF VALVE
S.C.	ACTUATED BY SOME SYSTEM CHARACTERISTIC
SOL.	SOLENOID OPERATED
EL	ELECTRIC ACTUATION
ROTO	ROTOPORT VALVE
MO.	MOTOR OPERATED
SAF.	SAFETY VALVE
DAMP.	DAMPER OR BUTTERFLY TYPE VALVE
AIP	PISTON ACTUATED BY AIR

POOR ORIGINAL

HIGH AND LOW PRESSURE EMERGENCY CORE S PRAY SYSTEMS

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
53-25-001	2	--		X				2½	Cont.	DIA.	C	Q		CS	LOW PRESSURE EMERGENCY CORE SPRAY SUPPLY
												MT			_____ Sec. Stroke Time
53-25-002	2	--		X				3	Cont.	DIA.	O	Q			CORE SPRAY PUMP SUCTION WATER SUPPLY
												MT			_____ Sec. Stroke Time
53-25-003	1	--		X				2	Cont.	DIA.	C	Q			CORE SPRAY PUMP DISCHARGE TO CORE SPRAY BUNDLE
												MT			_____ Sec. Stroke Time
53-25-004	3	--		X				2	Cont.	DIA.	C	Q	X	CS	HPSW SUPPLY TO EMERGENCY CORE SPRAY
												MT			_____ Sec. Stroke Time
53-25-008	2	--		X				3	Cont.	DIA.	O	Q			CORE SPRAY PUMP SUCTION SUPPLY STANDBY
												MT			_____ Sec. Stroke Time
53-27-001	2	--			X			1	REL.	S.C.	--	SRV			PUMP 53-06-001 DISCHARGE RELIEF
53-27-002	2	--			X			1	REL.	S.C.	--	SRV			PUMP 53-06-002 DISCHARGE RELIEF
53-26-001	1	--			X			2½	CK	S.C.	C	CV	X	CS	BACK-UP ISOLATION FROM OHST TO LOW PRESSURE CORE SPRAY
53-26-002	1	--			X			1½	CK	S.C.	C	CV	X	CS	PUMP 53-06-002 DISCHARGE CHECK VALVE
53-26-003	1	--			X			1½	CK	S.C.	C	CV	X	CS	PUMP 53-06-001 DISCHARGE CHECK VALVE
69-26-001	2	--			X			3	CK	S.C.	C	CV	X	CS	PREVENT BACKFLOW FROM HPSW OR PRIMARY INTO OHST

POOR ORIGINAL

BORON INJECTION SYSTEM AND PURIFICATION

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
60-25-001	3	--		X				3	CONT	DIA	C	Q			BORON TANK OUTLET
												MT			_____ SEC. STROKE TIME
60-25-005	3	--		X				3	CONT	DIA	C	Q			BORON TANK OUTLET STANDBY
												MT			_____ SEC. STROKE TIME
60-25-002	1	--		X				2	CONT	DIA	C	Q			BORON VALVE TO PRIMARY SYSTEM FROM CORE SPRAY PUMP DISCHARGE
												MT			_____ SEC. STROKE TIME
60-25-006	1	--		X				2	CONT	DIA	C	Q			BORON VALVE TO PRIMARY SYSTEM FROM CORE SPRAY PUMP DISCHARGE
												MT			_____ SEC. STROKE TIME
51-25-001	2			X				2	CONT	DIA	O	Q			PURIFICATION STOP VALVE
												MT			_____ SEC. STROKE TIME

K & E 10-5188 100-6-71

694 061

POOR ORIGINAL

CONTROL ROD DRIVE HYDRAULIC SYSTEM (SCRAM FUNCTION)

VALVE NUMBER	EAST	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS	RELIEF REQUEST	TESTING ALTERNATIVE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
32-58-001															
THRU															
32-58-029	2	--	X					--	SO.	EL.	--	Q	A	CS	CONTROL ROD DRIVE LOWER MECHANISM SOLENOID VALVES, REQUIRED FOR SCRAM FUNCTION

694 062

POOR ORIGINAL

ALTERNATE CORE SPRAY SYSTEM

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TESTING REQUIREMENTS	PRESENT TESTING	FUTURE ALTERNATIVE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
38-25-001	3	--	X					1	GCK	MIA	--	Q			DIESEL ENGINE COOLING WATER SUPPLY FOR PUMP 38-06-001
75-25-023	3	--	X					1	GCK	MIA	--	Q			DIESEL ENGINE COOLING WATER SUPPLY FOR PUMP 75-06-002
38-26-001	1	--	X	X				6x4	CK	S.C.	C	CV LT	X	CS	REACTOR VESSEL ALTERNATE CORE SPRAY SUPPLY CHECK
38-26-002	1	--	X	X				6x4	CK	S.C.	C	CV LT	X	CS	REACTOR VESSEL ALTERNATE CORE SPRAY SUPPLY CHECK BACKUP
38-27-001	3	--		X				1½	REL	S.C.	--	SRV			ALTERNATE CORE SPRAY SUPPLY RELIEF
38-27-002	3	--		X				4	REL	S.C.	--	SRV			PUMP 38-06-001 DISCHARGE RELIEF
75-27-022	3	--		X				4	REL	S.C.	--	SRV			PUMP 75-06-002 DISCHARGE RELIEF
38-30-001	3	--	X					6x4	MOTO	M.O.	C	Q MT	X	CS	REACTOR VESSEL ALTERNATE CORE SPRAY SUPPLY _____ Sec. Stroke Time
38-30-002	3	--	X					6x4	MOTO	M.O.	C	Q MT	X	CS	REACTOR VESSEL ALTERNATE CORE SPRAY SUPPLY _____ Sec. Stroke Time
38-26-003	3	--		X				6	CK	S.C.	C	CV			PUMP 38-06-001 DISCHARGE CHECK
75-26-023	3	--		X				6	CK	S.C.	C	CV			PUMP 75-06-002 DISCHARGE CHECK

POOR ORIGINAL

MAIN STEAM SAFETY VALVES

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	LEAKAGE POSITION	TESTABLE/UNTESTABLE	PRE-SET REQUESTS	TESTING ALTERNATIVE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
62-27-001	1	--			X			3x6	SAF.	S.C.	--	SRV.			MAIN STEAM SAFETY VALVE, SHUTDOWN CONDENSER STEAM INLET LINE
62-27-002	1	--			X			3x6	SAF.	S.C.	--	SRV.			MAIN STEAM SAFETY VALVE, SHUTDOWN CONDENSER STEAM INLET LINE
62-27-003	1	--			X			2x5	SAF.	S.C.	--	SRV.			MAIN STEAM SAFETY VALVE, SHUTDOWN CONDENSER STEAM INLET LINE

694 064

POOR ORIGINAL

MANUAL DEPRESSURIZATION SYSTEM

VALVE NUMBER	CLASS	COURSE NOTES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS	FAIL SAFE REQUIRED	TESTING NECESSARY	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
E2-25-001	1	--		X				6	CONT	DIA	C	Q	X	CS	SHUTDOWN CONDENSER STEAM INLET
												MT			____ SEC. STROKE TIME
E2-25-011	1	--			X			6	CONT	DIA	C	Q	X	CS	SHUTDOWN CONDENSER STEAM INLET STANDBY
												MT			____ SEC. STROKE TIME
E2-25-013	2	--			X			4	CONT	DIA	C	Q	X	CS	SHUTDOWN CONDENSER VENT TO CONTAINMENT
												MT			____ SEC. STROKE TIME
E2-25-014	2	--			X			4	CONT	DIA	C	Q	X	CS	SHUTDOWN CONDENSER VENT TO CONTAINMENT STANDBY
												MT			____ SEC. STROKE TIME

POOR ORIGINAL

OVERHEAD STORAGE TANK, HIGH PRESSURE SERVICE WATER, DEMINERALIZED WATER AND COMPONENT COOLING WATER SYSTEMS

VALVE NUMBER	CLASS	CODE CATEGORY	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS		RELIEF REQUESTS	TESTING ALLOWABLE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
59-25-001	3	--		X				3	Gate	DIA.	C	Q				DEMIN. WATER TO OBST
												MT				_____ Sec. Stroke Time
59-25-002	3	--			X			3	CK	S.C.	C	CV				DEMIN. WATER TO OBST CHECK
75-25-003	3	--			X			3	CK	S.C.	C	CV				HPSW HEADER CHECK VALVE
75-25-002	3	--		X				3	Gate	S.C.	O	Q				HPSW HEADER ISOLATION VALVE
												MT				_____ Sec. Stroke Time
75-26-021	3	--			X			6	CK	S.C.	O	CV				HPSW PUMP 75-06-001 DISCHARGE CHECK
67-25-001	3	--		X				3	Gate	DIA.	O	Q				DEMIN. WATER HEADER ISOLATION VALVE
												MT				_____ Sec. Stroke Time
67-26-001	3	--			X			3	CK	S.C.	C	CV				DEMIN. WATER CHECK VALVE INSIDE CONTAINMENT
67-26-020	3	--			X			2½	CK	S.C.	--	CV				DEMIN. WATER PUMP 67-06-001 DISCHARGE CHECK
67-26-021	3	--			X			2½	CK	S.C.	--	CV				DEMIN. WATER PUMP 67-06-001 DISCHARGE CHECK
57-26-001	3	--			X			8	CK	S.C.	--	CV				CCW PUMP 57-06-001 DISCHARGE CHECK
57-26-002	3	--			X			8	CK	S.C.	--	CV				CCW PUMP 57-06-002 DISCHARGE CHECK

POOR ORIGINAL

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS		P&ID REQUIREMENTS	TESTING ASSEMBLE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
64-30-001	1	--	X					10	ROTO	HYD	O	Q		X	CS	MAIN STEAM ISOLATION VALVE INSIDE CONTAINMENT
												MT				10 SEC. STROKE TIME
												LT				
64-25-001	1	--	X					1½	CONT	DIA	C	Q				MAIN STEAM ISOLATION VALVE (64-30-001) BYPASS
												MT				10 SEC. STROKE TIME
												LT				
56-25-001	1		X					2	CONT	DIA	C	Q				STARTUP WATER REMOVAL CONTROL VALVE
												MT				10 SEC. STROKE TIME
												LT				
73-25-001	0	--	X					20	DAMP	AIR	C	Q				CONTAINMENT BUILDING VENTILATION SUPPLY
												MT				10 SEC. STROKE TIME
												LT				
73-25-002	0	--	X					20	DAMP	AIR	O	Q				CONTAINMENT BUILDING VENTILATION SUPPLY
												MT				10 SEC. STROKE TIME
												LT				
73-25-005	0	--	X					20	DAMP	AIR	O	Q				CONTAINMENT BUILDING VENTILATION EXHAUST
												MT				10 SEC. STROKE TIME
												LT				

K & E 10-8188 100-4-71

694 067

POOR ORIGINAL

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	CLASS	COORD. VALVES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENTS	RELIEF REQUESTS	TESTING ALTERNATIVE	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
73-25-006	D	--	X					20	DAMP	AIR	O	Q			CONTAINMENT BUILDING VENTILATION EXHAUST
												MT			10 SEC. STROKE TIME
												LT			
73-25-021	D	--	X					1½	CONT	DIA.	O	Q	X	CS	HEATING STEAM CONDENSATE RETURN LINE
												MT			10 SEC. STROKE TIME
												LT			
62-25-017	2	--	X					¾	CONT.	DIA.	O	Q			CONDENSATE TO CONDENSER HOTWELL FROM TRAP OUTLET
												MT			10 SEC. STROKE TIME
												LT			
62-25-003	2	--	X					1	CONT	DIA.	C	Q			SHUTDOWN CONDENSER VENT TO OFF GAS SYSTEM
												MT			10 SEC. STROKE TIME
												LT			
55-25-003	D	--	X					4	CONT	DIA.	O	Q	X	CS	CONTAINMENT VESSEL OFF GAS VENT TO STACK
												MT			10 SEC. STROKE TIME
												LT			
65-26-001	1		X		X			8	CK	--	O	CV	X	CS	MAIN FEED SUPPLY CHECK VALVE INSIDE CONTAINMENT
												LT			
37-27-001	D				X			6	REL	S.C.	C	SRV			CONTAINMENT VESSEL VACUUM RELIEF
37-27-002	D				X			6	REL	S.C.	C	SRV			CONTAINMENT VESSEL VACUUM RELIEF

K & E 10-8198 (90-4-7)

RELIEF REQUEST BASIS

VALVE:	53-25-001
CATEGORY:	B
CLASS:	2
FUNCTION:	LOW PRESSURE CORE SPRAY SUPPLY ISOLATION
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	This valve is required to operate at low plant pressure (30#); to cycle this valve during plant operations could cause an overpressure condition in the system which supplies the valve and depressurization of primary through one check valve.
ALTERNATE TESTING:	This valve will be exercised at each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	53-25-004
CATEGORY:	B
CLASS:	3
FUNCTION:	ISOLATE HIGH PRESSURE SERVICE WATER FROM THE CORE SPRAY SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Isolating this valve during plant operation is not permitted by LACBWR Technical Specifications.
ALTERNATE TESTING:	This valve will be exercised at each cold shutdown.

POOR ORIGINAL

RELIEF REQUEST BASIS

VALVE:	53-26-001
CATEGORY:	C
CLASS:	2
FUNCTION:	PREVENT BACKFLOW FROM REACTOR PLANT TO OVERHEAD STORAGE TANK
TEST REQUIREMENT:	Ex cise valve for operability every three months.
BASIS FOR RELIEF:	To establish flow through this valve, the reactor plant must be depressurized; therefore, this valve cannot be exercised during plant operation.
ALTERNATE TESTING:	This valve will be exercised at each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	53-26-002
CATEGORY:	C
CLASS:	1
FUNCTION:	PUMP 53-06-002 DISCHARGE CHECK VALVE
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Any exercising of this valve would require injecting cold high pressure core spray water into the reactor vessel, which would cause adverse effects unless the plant is shutdown and cooldown.
ALTERNATE TESTING:	This valve will be exercised each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	53-26-003
CATEGORY:	C
CLASS:	1
FUNCTION:	PUMP 53-06-001 DISCHARGE CHECK VALVE
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Any exercising of this valve would require injecting cold high pressure core spray water into the reactor vessel, which would cause adverse effects unless the plant is shutdown and cooldown.
ALTERNATE TESTING:	This valve will be exercised each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	69-26-001
CATEGORY:	C
CLASS:	2
FUNCTION:	PREVENT BACKFLOW FROM HIGH PRESSURE SERVICE WATER OR REACTOR PLANT INTO OVERHEAD STORAGE TANK (OHST)
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve would require establishing flow through the Core Spray System, which is not allowed during normal plant operation.
ALTERNATE TESTING:	This valve will be exercised each cold shutdown.

RELIEF REQUEST BASIS

VALVES:	32-98-001 thru 32-98-029 (LOWER CONTROL ROD DRIVE MECHANISMS)
CATEGORY:	B
CLASS:	2
FUNCTION:	TO ACTUATE LOWER CONTROL ROD DRIVE MECHANISMS HYDRAULIC MOTORS WHEN SCRAM SIGNAL IS INITIATED
TEST REQUIREMENT:	Exercise valves for operability every three months.
BASIS FOR RELIEF:	Exercising these valves requires inserting the control rods, requiring plant shutdown.
ALTERNATE TEST:	The valves will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	38-26-001
CATEGORY:	C
CLASS:	2
FUNCTION:	PREVENT BACKFLOW FROM REACTOR VESSEL TO ALTERNATE CORE SPRAY SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Any exercising of this valve would require isolating the primary system from the alternate core spray system, which would decrease the plant's accident protection, thus placing the plant in an unsafe condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	38-26-002
CATEGORY:	C
CLASS:	2
FUNCTION:	BACKUP PREVENTION FOR BACKFLOW OF REACTOR COOLANT TO ALTERNATE CORE SPRAY SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Any exercising of this valve would require isolating the primary system from the alternate core spray system, which would decrease the plant's accident protection, thus placing the plant in an unsafe condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	38-30-001
CATEGORY:	B
CLASS:	3
FUNCTION:	TO OPEN UPON INITIATION OF THE ALTERNATE CORE SPRAY SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve requires isolating the alternate core spray system from the primary plant, which would place the plant in an unsafe condition in the event of an accident.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	38-30-002
CATEGORY:	B
CLASS:	3
FUNCTION:	TO OPEN UPON INITIATION OF THE ALTERNATE CORE SPRAY SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve requires isolating the alternate core spray system from the primary plant, which would place the plant in an unsafe condition in the event of an accident.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	64-30-001
CATEGORY:	A
CLASS:	1
FUNCTION:	TO ISOLATE MAIN STEAM LINE INSIDE THE CONTAINMENT BUILDING
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Movement of this valve from full open will initiate a full scram.
ALTERNATE TEST:	Valve will be exercised each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	73-25-021
CATEGORY:	A
CLASS:	D
FUNCTION:	TO ISOLATE CONDENSATE RETURNING TO HEATING STEAM SYSTEM UPON A HIGH CONTAINMENT BUILDING PRESSURE
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	To exercise this valve during plant operations would require inserting a high Containment Building pressure signal which could cause other safety system actuations and place the plant in an unsafe condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	55-25-003
CATEGORY:	A
CLASS:	D
FUNCTION:	TO ISOLATE CONTAINMENT VESSEL FROM OFF GAS SYSTEM
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	To exercise this valve during plant operations would require inserting a high Containment Building pressure signal which could cause other safety system actuations and place the plant in an unsafe condition.
ALTERNATE TEST:	Valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	65-26-001
CATEGORY:	A, C
CLASS:	1
FUNCTION:	TO PREVENT BACKFLOW FROM PRIMARY SYSTEM INTO REACTOR FEED SYSTEM
TEST REQUIREMENTS:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve during plant operations would require stopping feedwater flow to the reactor, thus placing the plant in an unstable condition.
ALTERNATE TESTING:	This valve will be exercised each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	62-25-001
CATEGORY:	B
CLASS:	1
FUNCTION:	TO ISOLATE THE SHUTDOWN CONDENSER FROM THE MAIN STEAM SYSTEM AND TO OPEN DURING PLANT MANUAL DEPRESSURIZATION
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	This system is not designed to operate during plant operations; therefore, exercising this valve would place the plant in an unstable condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	62-25-011
CATEGORY:	B
CLASS:	1
FUNCTION:	TO ISOLATE THE SHUTDOWN CONDENSER FROM THE MAIN STEAM SYSTEM AND TO OPEN DURING PLANT MANUAL DEPRESSURIZATION
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	This system is not designed to operate during plant operations; therefore, exercising this valve would place the plant in an unstable condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	62-25-013
CATEGORY:	B
CLASS:	2
FUNCTION:	TO OPEN DURING PLANT MANUAL DEPRESSURIZATION
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve during plant operations could cause plant depressurization, thus placing the plant in an unsafe condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

RELIEF REQUEST BASIS

VALVE:	62-25-014
CATEGORY:	B
CLASS:	2
FUNCTION:	TO OPEN DURING PLANT MANUAL DEPRESSURIZATION
TEST REQUIREMENT:	Exercise valve for operability every three months.
BASIS FOR RELIEF:	Exercising this valve during plant operations could cause plant depressurization, thus placing the plant in an unsafe condition.
ALTERNATE TEST:	The valve will be exercised for operability each cold shutdown.

CATEGORY A VALVE LEAK RATE TEST

DATA SHEET

VALVE ID_____ SIZE_____ DATE_____

TYPE "C" TEST DATA SHEET: _____

PART I LEAK MEASUREMENT

Permissible Leak Rate _____SCFH

Measured Leak Rate _____SCFH

If Valve <6", go to Summary. If valve ≥6", complete Parts 2 and 3.

PART II MARGIN CALCULATION

$$R = \frac{MR - LR}{MR - PR} = \frac{\_\_\_\_ - \_\_\_\_}{\_\_\_\_ - \_\_\_\_} = \_\_\_\_$$

$R > 0.5$ PASS_____

$R \leq 0.5$ FAIL_____

MR Maximum Permissible Leak Rate
LR Measured Leak Rate (this test)
PR Measured Leak Rate (previous test)

PART III PROJECTION CALCULATION

Estimate Projected Rate for Next Test if:
(1) At least 3 successive tests have passed, and
(2) Leakage rates increase with time

Projected Leak Rate for Next Test _____ N/A
_____ SCFH

Projection below 1.1 x MR PASS_____
Projection above 1.1 x MR FAIL_____

SUMMARY OF RESULTS

		PASS	FAIL	N/A
≥6"	Part I			
	Part II			
	Part III			

ADDITIONAL COMMENTS:

SIGNATURE OF PERSON CONDUCTING THE TEST_____ _____ Date

POWER OPERATED VALVE

STROKE TIME
DATA SHEET

VALVE NUMBER _____

DATE _____

RANGE FOR ALLOWABLE STROKE TIME: _____ SEC.

MEASURED STROKE TIME: _____ SEC.

Loss of air/nitrogen, valve: OPEN CLOSE Required: _____

Loss of power, valve: OPEN CLOSE Required: _____

REMARKS:

CALCULATION:

INCREASE IN STROKE TIME

$$R = \frac{\text{Measured Stroke Time (this test)} \quad \_\_\_\_\_ \text{Sec.}}{\text{Measured Stroke Time (previous test)} \quad \_\_\_\_\_ \text{Sec.}} =$$

IF ALLOWABLE STROKE TIME ≤ 10 SEC.,

R < 1.5 Pass _____
R ≥ 1.5 Fail _____

IF ALLOWABLE STROKE TIME > 10 SEC.,

R < 1.25 Pass _____
R ≥ 1.25 Fail _____

SIGNATURE OF PERSON PERFORMING VALVE CYCLING:

_____

CORRECTIVE ACTION

REPORT SHEET

DATE _____

REASON FOR CORRECTIVE ACTION:

CORRECTIVE ACTION TAKEN:

SIGNATURE OF PERSON RESPONSIBLE FOR ACTION:

DATE

_____ _____

DATA SHEET 3.5.14

TYPE "C" LEAK TESTS

Primary System Containment Isolation Valves

GAUGE NO. _____ TEST PRESSURE _____

REACTOR MAIN STEAM ISOLATION AND BYPASS VALVE (M-6) 64-30-001 A & C
64-26-001

TEST DATA:

Time At Start of Leakage Measurement _____

Time At Completion of Leakage Measurement _____

Meter Reading Final _____

Meter Reading Initial _____

COMPUTATIONS AND EVALUATION:

Total Length of Test _____ Hours

Difference In Meter Readings _____ SCF

Leak Rate Standardized _____ SCFH

FEEDWATER CHECK VALVE (M-7)

TEST DATA:

Time At Start of Leakage Measurement _____

Time At Completion of Leakage Measurement _____

Water Collected _____ Liters

COMPUTATIONS AND EVALUATION:

Total Length of Test _____ Hours

Leak Rate _____ Liters/Hour

Leak Rate Standardized _____ SCFH

Leak Rate (SCFH) = Leak Rate (Liters/Hour) x .1603

ACCEPTANCE CRITERIA: 22.47 SCFH - Total for MSIV, MSIV Bypass, and Feedwater Check Valves.

REMARKS:

DATE _____ PERFORMED BY _____
(Operator)

APPROVED BY _____
(Shift Supervisor)

REVIEWED BY _____
(Operations Supervisor)

Prepared or Revised By: J. D. Parker Date: 5/21/76 | Oper Rev Com Approval: [signature] Date: 5/21/76 | Safety Rev Com Approval: [signature] Date: 5/21/76

DATA SHEET 3.5.14 - Primary System Containment Isolation Valves - (Cont'd)

DECAY HEAT BLOWDOWN AND STEAM TRAPS DRAIN TO HOTWELL CONTAINMENT ISOLATION VALVES (M-17) 56-25-001 AND 62-25-017

TEST DATA:

Time At Start Of Leakage Measurement _____

Time At Completion of Leakage Measurement _____

Water Collected _____ Liters

COMPUTATIONS AND EVALUATION:

Total Length Of Test _____ Hours

Leak Rate _____ Liters/Hour

Leak Rate Standardized _____ SCFH

Leak Rate (SCFH) = Leak Rate(Liters/Hour) x .1603

ACCEPTANCE CRITERIA: .375 SCFH (Reference: Tech. Spec. 5.2.1.3(b))

If total leakage for both valves exceeds .375 SCFH, the individual leak rates must be determined or the valves repaired or adjusted as necessary to reduce total leakage to ≤ .375 SCFH. Technical Specifications permit .375 SCFH through each valve but this test does not provide for individual measurement.

REMARKS:

DATE _____ PERFORMED BY _____
(Operator)

APPROVED BY _____
(Shift Supervisor)

REVIEWED BY _____
(Operations Supervisor)

Prepared or Revised By	Date	Oper. Rev. Com. Approval	Date	Safety Rev. Com. Approval	Date
J. D. Parkyn	5/21/76		5/21/76		5/21/76

694 092

DATA SHEET 3.5.9

TYPE "C" LEAK TEST

Ventilation Inlet Dampers (M-31)

73-25-001 AND 73-25-002

TEST DATA:

	Initial Reading	After 1 Hour	After 2 Hour
Time			
Temperature			
Pressure Gauge No. 1			
Pressure Gauge No. 2			

COMPUTATIONS AND EVALUATION FOR VENTILATION INLET DAMPERS:

	Pressure Change Over 2 Hours	Pressure Change Per Hour	Leak Rate (SCFH)
Pressure Gauge No. 1			
Pressure Gauge No. 2			

$$\text{Leak Rate (SCFH)} = \left(\frac{\text{Pressure Change Per Hour}}{14.7}\right)(3.9977\ \text{ft}^3)$$

ACCEPTANCE CRITERIA: .375 SCFH Maximum (Ref.: Tech. Spec. 5.2.1.2(b)4)

TEST_____ **RETEST_____ PASS_____ *FAIL_____

TYPE "B" LEAK TEST

Soap bubble test of outside flange of outside damper shows no leakage

TEST_____ **RETEST_____ PASS_____ *FAIL_____

Cap of test connection between discharge dampers in in place. _____

*If test is observed to be failing after several data points, extend points to ensure six (6) sets of data are taken. (Reference: Technical Specification 5.2.1.5)

**List repairs performed before retest including MR No._____.

REMARKS:

DATE_____ PERFORMED BY_____
(Operator)

APPROVED BY_____
(Shift Supervisor)

REVIEWED BY_____
(Operations Supervisor)

Prepared or Revised By	Date	Oper Rev Com Approval	Date	Safety Rev Com Approval	Date
J. D. Parkyn	5/21/76		5/21/76		5/21/76

DATA SHEET 3.5.9

TYPE "C" LEAK TEST

Ventilation Discharge Dampers (M-21)

73-25-005 AND 73-25-006

Prepared or Revised By: J. D. Parkyn | Date: 5/21/76 | Oper. Rev. Com. Approval | Date: 5/21/76 | Safety Rev. Com. Approval | Date: 5/21/76

TEST DATA:

	Initial Reading	After 1 Hour	After 2 Hou
Time			
Temperature	°F	°F	
Pressure Gauge No. 1	PSIG	PSIG	PS
Pressure Gauge No. 2	PSIG	PSIG	PS

COMPUTATIONS AND EVALUATION FOR VENTILATION DISCHARGE DAMPERS:

	Pressure Change Over 2 Hours	Pressure Change Per Hour	Leak Rate (SCFH)
Pressure Gauge No. 1			
Pressure Gauge No. 2			

$$\text{Leak Rate (SCFH)} = \left(\frac{\text{Pressure Change Per Hour}}{14.7}\right)(3.9977\ ft^3)$$

ACCEPTANCE CRITERIA: .375 SCFH Maximum (Ref.: Tech. Spec. 5.2.1.2(b)4)

TEST_____ *RETEST_____ PASS_____ *FAIL_____

TYPE "B" LEAK TEST

Soap bubble test of outside flange of outside damper shows no leakag

TEST_____ **RETEST_____ PASS_____ *FAIL_____

Cap of test connection between discharge dampers is in place. _____

*If test is observed to be failing after several data points, extend points to ensure six (6) sets of data are taken. (Reference: Technical Specification 5.2.1.5)

**List repairs performed before retest including MR No._____.

REMARKS:

DATE_____ PERFORMED BY_____
(Operator)

APPROVED BY_____
(Shift Supervisor)

REVIEWED BY_____
(Operations Supervisor)

DATA SHEET 3.5.12

TYPE "C" LEAK TEST

Containment 71-25-021 Condensate Valve (M-26)

TEST DATA - HEATING STEAM:

	Time	Gas Meter Reading
One Hour Later		
Initial		

Difference of Gas Meter Readings _____ SCFH

TEST DATA - CONDENSATE:

	Time	Gas Meter Reading
One Hour Later		
Initial		

Difference of Gas Meter Readings _____ SCFH

ACCEPTANCE CRITERIA: Heating Steam Leakage----- .375 SCFH
Condensate Leakage-------- .375 SCFH
(Reference: Technical Specification 5.2.1.3)

TEST_____ PASS_____

**RETEST_____ *FAIL_____

*If test is observed to be failing after several data points, extend points to ensure six (6) sets of data are taken. (Reference: Technical Specification 5.2...5)

**List repairs performed before retest including MR No._____.

REMARKS:

DATE_____ PERFORMED BY_____
(Operator)

APPROVED BY_____
(Shift Supervisor)

REVIEWED BY_____
(Operations Supervisor)

Prepared or Revised By	Date	Oper. Rev. Com. Approval	Date	Safety Rev. Com. Approval	Date
J. D. Parkyn	5/21/76	[illegible]	5/21/76	[illegible]	5/21/76

DATA SHEET 3.5.14 - Primary System Containment Isolation Valves - (Cont'd)

SHUTDOWN CONDENSER VENT TO OFF-GAS (M-19) 62-25-003

Prepared or Revised by	Date	Oper. Rev. Com. Approval	Date	Safety Rev. Com. Approval	Date
J. D. Parkyn	5/21/76	[signature]	5/21/76	[signature]	5/21/76

TEST DATA:

Time At Start Of Leakage Measurement _____

Time At Completion Of Leakage Measurement _____

Meter Reading Final _____

Meter Reading Initial _____

COMPUTATIONS AND EVALUATION:

Total Length Of Test _____ Hours

Difference In Meter Readings _____ SCF

Leak Rate Standardized _____ SCFH

ACCEPTANCE CRITERIA: .375 SCFH (Reference: Tech. Spec. 5.2.1.3(b))

REMARKS:

DATE _____ PERFORMED BY _____
(Operator)

APPROVED BY _____
(Shift Supervisor)

REVIEWED BY _____
(Operations Supervisor)

DATA SHEET 3.5.11

TYPE "C" LEAK TEST

Reactor Vent Header Valve Seat (55-~~23~~25-003) (M-29)

Prepared or Revised By	Date	Oper Rev. Com. Approval	Date	Safety Rev Com Approval	Date
J. D. Parkyn	5/21/76		5/21/76		5/21/76

TEST DATA:

	Initial Reading	After 30 Minutes	After 60 Min
Time			
Temperature	°F	°F	
Pressure Gauge No. 1	PSIG	PSIG	
Pressure Gauge No. 2	PSIG	PSIG	

COMPUTATIONS AND EVALUATION:

	Pressure Change Over 60 Minutes	Leak Rate (SCFH)
Pressuge Gauge No. 1		
Pressure Gauge No. 2		

$$\text{Leak Rate(SCFH)} = \left(\frac{\text{Pressure Change Per Hour}}{14.7}\right)(2.9061\ ft^3)$$

ACCEPTANCE CRITERIA: .375 SCFH (Reference: Tech. Spec. 5.2.1.2(b)4)

TEST_____ PASS_____

**RETEST_____ *FAIL_____

Test connection caps have been replaced. _____

*If test is observed to be failing after several data points, extend points to ensure six (6) sets of data are taken. (Reference: Technical Specification 5.2.1.5)

**List repairs performed before retest including MR No._____.

REMARKS:

DATE_____ PERFORMED BY_____
(Operator)

APPROVED BY_____
(Shift Supervisor)

REVIEWED BY_____
(Operations Supervisor)

694 097

DATA SHEET 3.5.14 - Primary System Containment Isolation Valves - (Cont'd)

ALTERNATE CORE SPRAY CHECK VALVES (1-A)

Prepared or Revised By	Date	Oper. Rev. Com. Approval	Date	Safety Rev. Com. Approval	Date
J. D. Parker	5/21/76		5/21/76		8/21/76

TEST DATA:

Time At Start Of Leakage Measurement _____

Time At Completion of Leakage Measurement _____

Water Collected _____ Liters

COMPUTATIONS AND EVALUATION:

Total Length Of Test _____ Hours

Leak Rate _____ Liters/Hour

Leak Rate Standardized _____ SCFH

Leak Rate (SCFH) = Leak Rate(Liters/Hour) x .1603

ACCEPTANCE CRITERIA: .375 SCFH (Reference: Tech. Spec. 5.2.1.3(b))

TEST_____ PASS_____

**RETEST_____ *FAIL_____

REFERENCE: Type "C" Leak Test - Technical Specification 5.2.1.3.

*If test is observed to be failing after several data points, extend to ensure six (6) sets of data are taken. (Reference: Technical Specification 5.2.1.5)

**List repairs performed before retest including MR No._____.

REMARKS:

DATE _____ PERFORMED BY _____
(Operator)

APPROVED BY _____
(Shift Supervisor)

REVIEWED BY _____
(Operations Supervisor)