REVISION 8
OCTOBER 1993

INSERVICE INSPECTION

PROGRAM PLAN

FIRST TEN-YEAR INSPECTION INTERVAL

DIABLO CANYON POWER PLANT

UNIT 1

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DIABLO CANYON POWER PLANT
UNIT 1

INSERVICE INSPECTION PROGRAM PLAN
(FIRST 10-YEAR INTERVAL)

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INSERVICE INSPECTION PROGRAM PLAN
FIRST TEN-YEAR INTERVAL

INTRODUCTION

This volume describes the Inservice Inspection Program Plan for the Diablo Canyon Power Plant Unit 1 pressure retaining components (including supports) which are classified ASME Code Class 1, Class 2 and Class 3.

This ISI Program Plan complies with the requirements of 10 CFR Part 50.55a(b) (2) and Part 50.55a(g), effective November 1, 1980 and uses the ASME Boiler and Pressure Vessel Code Section XI, 1977 Edition through and including the Summer 1978 Addenda[1] as the basis for the inservice examinations and tests to be conducted during the initial 120-month inspection interval. The initial inspection interval began May 7, 1985 when the Unit was placed in commercial operation.

Where conformance with certain Code requirements is impractical, requests for relief[2] are included in each section with supporting information and proposed alternatives.

Preservice examinations, where required, have been completed and are summarized under separate cover. All preservice examination data is available for review at the plant site.

Should the examinations described in this volume reveal flaw conditions which require repair by welding, such repairs shall be made in accordance with approved procedures pursuant to the requirements of Article IWA-4000 of Section XI.

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[1] For Code Class 1 pipe welds only, the extent and frequency of examination has been determined by Tables IWB-2500 and IWB-2600, Category B-J, of the 1974 Edition through Summer 1975 Addenda of Section XI(10 CFR 50.55a(b)(2)(ii)). For Code Class 2 pipe welds only, the extent and frequency of examination has been determined by Table IWC-2520, Category C-F and C-G and paragraph IWC-2411 of the 1974 Edition through Summer 1975 Addenda of Section XI (10 CFR 50.55a(b)(2)(iv)(B)). These exceptions to the use of the 1977 Edition through Summer 1978 Addenda only affect the Code Class 1 and Class 2 piping system welds extent and frequency of examination. Examination techniques for the pipe welds and all other components requirements conform to the 1977 Edition through Summer 1978 Addenda of Section XI.

[2] Reference 10 CFR 50.55a(g)(5)(iii)

ASME SECTION XI CODE BOUNDARY DRAWINGS

Section 2.0 contains the ASME Code Classification Boundary Drawings, PG&E Number 102028. Regulatory Guide 1.26[3] was used as the governing document in setting up the ISI boundary. The drawings show the Code Class 1, 2 and 3 systems and components subject to inservice inspection and testing requirements. Systems and components are identified by Code Class and are color coded as applicable to indicate exemptions from various code requirements[4]. These drawings are extracted from the piping schematics (P&ID's) for the plant that are contained in Volume V of the FSAR (Section 3.2). All ASME Code Class 1, 2 and 3 lines subject to Inservice Inspection are shown on the drawings. To emphasize the Section XI Code Boundaries, P&ID pages containing lines other than ASME Code Piping have been omitted and non-ASME lines have been ghosted on the pages included. An explanation of the color coding system is provided at the end of the drawings.

Revisions to these drawings may occur from time to time but will not be distributed to this Program Plan as they are issued. Current drawings are maintained by the Plant Document Services Group and may be incorporated into this Program Plan with other changes as necessary. In all cases, the latest approved drawing shall apply.

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[3] Regulatory Guide 1.26, "Quality Classifications and Standards for Water-Steam-,and Radioactive-Waste-Containing Components of Nuclear Power Plants.

[4] As allowed by Paragraphs IWB-1220, IWC-1220, IWC-1230 and Table IWD-2500-1 of Section XI.

INSERVICE INSPECTION (ISI) PROGRAM

Nondestructive Examination of Components

Sections 3.1, 3.2, 3.3, and 3.4 set forth the Nondestructive Examination Program Plan for Diablo Canyon Unit 1. It describes the ASME Code Class 1, 2 and 3 components subject to surface, volumetric and visual (VT-1, VT-3, VT-4) examination as required by Section XI during the first ten-year inspection interval.

Construction permits for Diablo Canyon were issued prior to development of ASME Code requirements for piping systems[5]. The piping was designed and built to the requirements of ASA B31.1, USAS B31.1.0 and USAS B31.7 which did not require stress analysis calculations. In 1972, the ASME Code incorporated piping requirements which included stress analysis calculations. Plants designed or built before the new rules became effective were exempted from the requirements. The Summer 1978 Addenda to Section XI, on which this ISI Program Plan is based, requires Class 1 and Class 2 pipe welds to be selected for examination based on the stress analysis data. In recognition of the fact that no stress analysis data was computed for older plants, 10 CFR 50.55a[6] allows use of the Summer 1975 Addenda for pipe weld scheduling. The Summer 1975 Addenda does not require stress analysis calculations, but instead requires welds to be chosen at structural discontinuities (these are presumed to be the highest stress areas). The extent and frequency of examination for pipe welds in this ISI Program Plan therefore conforms to the Summer 1975 Addenda.

Sections 3.1, 3.2 and 3.3 address ASME Code Class 1, 2 and 3 components. Section 3.4 covers requests for relief for each Code Class where it has been determined that a Code requirement is impractical. In Sections 3.1 and 3.2 the tables identify the Code Class, Code Category and Item Number, name of the component or system, and general identification. The general identification includes as applicable the serial number, the reference drawing number or ISI drawing (isometric) by page number, component number and line number. Also given are the total number of items in the system, the required NDE methods, the number of items to be examined and extent of examination, the examination period in which the examination will be conducted[7],

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[5] April 23, 1968 for Unit 1 (CPPR-39)

[6] 10 CFR 50.55a(b)(2)(ii) and 10 CFR 50.55a(b)(2)(iv)(B)

[7] Each 3 1/3 year examination period will be further subdivided by refueling outages. Items scheduled for each refueling outage will be listed on an ISI Examination Schedule which will be developed prior to the outage.

percent to date (which accumulates the percentage of total number of code-required items through the given time period[8]), and applicable remarks or references to requests for relief that appear in Section 3.4.

In Section 3.3 each Class 3 component and system is identified, along with its coordinates on drawing 102028 and the reference drawings or seismic drawing number. The examination methods and total number of supports for each component or system is then given.

In Section 3.4, NDE requests for relief are presented. The tables identify the component or item, Code Class, program table (reference Sections 3.1, 3.2, and 3.3), Code Category and Code Item Number. The code requirement that is deemed impractical is then stated and the basis for the request for relief, alternate examination proposal, and schedule for implementation of the alternate examination are given. All requests for relief appear as approved by the NRC in separate transmittals.

Calibration Blocks and Standards

Calibration blocks and standards are controlled by PG&E procedure ISI D-851.

[8] The sum of "percent to date" shall equal or exceed the percentage of total items required to be examined by the Code.

System Pressure Tests

Section 3.5 sets forth the System Pressure Test Program Plan for Diablo Canyon Unit 1. Pressure retaining components within each system boundary are subjected to appropriate system pressure tests to verify their structural integrity and to assure they remain leak tight for continued safe operation. During all pressure tests, visual examination (VT-2 per IWA-2212 and IWA-5240 of Section XI) will be conducted on the pressure retaining boundary of all applicable components and systems.

The Pressure Test section consists of four tables: pressure tests for Code Class 1, 2 and 3 systems and the request for relief where pressure test is impractical. The table for each Code Class shows the component or piping system description, the drawing sheet number of the Code classification drawing (Dwg. 102028), the applicable Section XI pressure test requirement, the required test pressure, the test frequency, and any amplifying remarks for the pressure test. The table of requests for relief show which system and Code Class, test number, basis for the request, test to be performed in lieu of the Code required test, and the schedule for any test performed in lieu of the Code requirement. All requests for relief appear as approved by the NRC in separate transmittals.

Code Cases

PG&E has adopted the following ASME Code Cases, as approved for generic use in NRC Regulatory Guide 1.147:

- N-98 Ultrasonic Examination - Calibration Block Tolerances
- N-113-1 Basic Calibration Block for Ultrasonic Examination of Welds 10 in. to 14 in. Thick
- N-211 Recalibration of Ultrasonic Equipment Upon Change of Personnel
- N-234 Time Between Ultrasonic Calibration Checks
- N-235 Ultrasonic Calibration Checks per Section V
- N-307-1 Revised Ultrasonic Examination Volume for Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1, When the Examinations are Conducted From the Center-Drilled Hole
- N-308 Documentation of Repairs and Replacements of Components in Nuclear Power Plants
- N-335-1 Rules for Ultrasonic Examination of Similar and Dissimilar Metal Piping Welds
- N-355 Calibration Block for Angle Beam Ultrasonic Examination of Large Fittings in Accordance with Appendix III-3410
- N-356 Certification Period for Level III NDE Personnel (NOTE: Code Case N-356 was also approved for use at Diablo Canyon in NRC letter dated March 24, 1988.)
- N-401-1 Eddy Current Examination
- N-416 Alternative Rules for Hydrostatic Testing of Repair or Replacement of Class 2 Piping
- N-427 Code Cases in Inspection Plans
- N-432 Repair Welding Using Automatic or Machine Gas Tungsten-Arc Welding (GTAW) Temperbead Technique
- N-435-1 Alternative Examination Requirements for Vessels With Wall Thickness 2 in. or Less
- N-437 Use of Digital Readout and Digital Measurement Devices for Performing Pressure Tests
- N-446 Recertification of Visual Examination Personnel
- N-460 Alternative Examination Coverage for Class 1 and Class 2 Welds
- N-461 Alternative Rules for Piping Calibration Block Thickness
- N-481 Alternative Examination Requirements for Cast Austenitic Pump Casings
- N-498 Alternative Rules for 10-year Hydrostatic Pressure Testing of Class 1 and 2 Systems
- N-505* Alternative Rules for the Examination of Butt Welds Used as Closure Welds for Electrical Penetration Assemblies in Containment Structures (Section III, Division 1)*

* Not yet approved for generic use by the NRC. Approved for use at Diablo Canyon in NRC letter of March 4, 1993.

Augmented Examinations

Augmented examinations, if required by NRC[9], are normally included as provisions in the plant Technical Specifications. Examples include examinations required for the steam generator tubes and the functional test of mechanical and hydraulic snubbers.

- o Eddy current examination of steam generators' tubing, although mentioned for completeness in the ISI Program Plan tables and performed in accordance with Section XI recommendations, are scheduled and conducted in accordance with Plant Technical Specifications and separate regulatory commitments.

- o Visual inspection of snubbers (VT-3, VT-4) is generally performed every other refueling outage, a schedule which exceeds Section XI requirements. Credit for these examinations is allocated as shown in the tables, meeting the Code requirement.

For convenience, the following augmented inspections are scheduled in this ISI Program Plan:

- o Reactor coolant pump flywheels are inspected by ultrasonic and magnetic particle methods in accordance with Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

- o Ultrasonic examination of 7½ percent of Containment Spray System welds.

INSERVICE TESTING OF PUMPS AND VALVES

Inservice testing of pumps and valves is described in the Inservice Testing Program Plan.

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9 Pursuant to 10 CFR 50.55 a (g)(6)(ii)

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 1

REV. 8

MAJOR ITEM: Reactor Vessel
TABLE: 1.1

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel	* [1.1-1] Serial No. C.E. 66104 Dwg. Ref. CE232-442-6			Exam area meets or exceeds req'ts. of fig. IWB-2500-1 & fig. IWB-2500-2				[*] ISI Dwg Page Nos.
B-A	Pressure Retaining Welds	DC663201-38							
B1.10	Shell Welds								

B1.11	-Circumferential-
	Upper Course to
		Weld No.		(3)	(Length)				Relief # NDE 001
									T = 10.75" to

	Intermediate (to)	8-442	UT	1	543.5"	100%	Three	100	T = 8.6"
	Lower Course (to)	9-442	UT	1	543.5"	100%	Three	100	T = 8.6" to
	Bottom Head	10-442	UT	1	As Accessible	100%	Three	100	T = 5.3"
B1.12	-Longitudinal- Upper Course	Weld No.		(3)					
		1-442A	UT	1	99.5"	100%	Three	100	T = 10.75"
		1-442B	UT	1	99.5"	100%	Three	100	
		1-442C	UT	1	99.5"	100%	Three	100	
	Intermediate Course	Weld No.		(3)					
		2-442A	UT	1	108.8"	100%	Three	100	T = 8.6"
		2-442B	UT	1	108.8"	100%	Three	100	
		2-442C	UT	1	108.8"	100%	Three	100	
	Lower Course	Weld No.		(3)					
		3-442A	UT	1	106.5"	100%	Three	100	T = 8.6"
		3-442B	UT	1	106.5"	100%	Three	100	
		3-442C	UT	1	106.5"	100%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd [1.1-1]							
B1.20	Head Welds							Closure Head Serial No. C. E. 66204
B1.21	- Circumferential -	Weld No.		(2)				Relief # NDE 002
	Bottom Head	4-443	-	1	Not Accessible			T = 5.3"
	Closure Head	6-446B	-	1	Not Accessible			T = 7.0"
					Exam'n area meets or exceeds req'ts of figure IWB-2500-3			
B1.22	- Meridional Welds -	Weld No.		(6)	As Accessible			Relief # NDE 002
	Bottom Head	1-443A	UT	1	As Accessible[1]	Three	100	T = 5.3"
		1-443B	UT	1	As Accessible[1]	Three	100	[1]Portion of welds examined is dependent on examination vendor selected, and capability of their equipment
		1-443C	UT	1	As Accessible[1]	Three	100	
		1-443D	UT	1	As Accessible[1]	Three	100	
		1-443E	UT	1	As Accessible[1]	Three	100	
		1-443F	UT	1	As Accessible[1]	Three	100	
		Weld No.		(6)	As Accessible			Relief # NDE 002
	Closure Head @Stud							
	#5-6	1-446A	UT	1	38" 100%*	One	16	T = 7.0"
	#14-15	1-446B	UT	1	38" 100%*	One	33	
	#23-24	1-446C	UT	1	38" 100%*	Two	50	
	#33-34	1-446D	UT	1	38" 100%*	Two	66	*As Accessible below CRD vent shroud
	#41-42	1-446E	UT	1	38" 100%*	Three	83	
	#50-51	1-446F	UT	1	38" 100%*	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd [1.1-1]				Exam'n area meets Req'ts of figure IWB-2500-4				
B1.30	Shell To Flange Weld	Weld No.		(1)	As Accessible				T = 10.75"
		7-442 (From Flange)	UT	1	182"	34%	One	33	Nominal 0° Exam. From Flange Face.
					182"	34%	Two	66	
					182"	34%	Three	100	
		7-442 (Remaining Exam From Vessel Wall)	UT	1	546"	100%	Three	100	Exam. From Vessel Wall
					Exam'n area meets Req'ts of figure IWB-2500-5				
B1.40	Head To Flange Weld	Weld No.		(1)	As Accessible				Relief # NDE 003
		6-446A	UT	1	182"	34%	One	33	T = 7.0"
					182"	34%	Two	66	
					182"	34%	Three	100	
B1.50	Repair Welds								
B1.51	Beltline Region (Vessel Base Metal)	-	-	-	-	-	-	-	No Known Repair area in base metal in core region or elsewhere

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd [1.1-1]				Exam'n area meets Req'ts of figure IWB-2500-7				
B-D	Full penetration welds of nozzles in vessels								
B3.90	Nozzle To Vessel Welds				As Accessible				Relief # NDE 004
B3.100	Nozzle inside radius Section								For B3.100 see IWB-2500-1 footnote 5
		Weld No's							
B3.90	Outlet Nozzle Loop 1	*1-29SPL	UT	1	360°	100%	One	13	From Bore
B3.90		@ 338°	UT				Three	13	From Shell
B3.100			UT				One	13	Inner Radius
	Outlet Nozzle Loop 2	*2-29SPL	UT	1	360°	100%	One	25	From Bore
		@ 22°	UT				Three	25	From Shell
			UT				One	25	Inner Radius
	Outlet Nozzle Loop 3	*3-29SPL	UT	1	360°	100%	One	38	From Bore
		@ 158°	UT				Three	38	From Shell
			UT				One	38	Inner Radius
	Outlet Nozzle Loop 4	*4-29SPL	UT	1	360°	100%	One	50	From Bore
		@ 202°	UT				Three	50	From Shell
			UT				One	50	Inner Radius
	Inlet Nozzle Loop 1	*9-27.5SPL	UT	1	360°	100%	Three	63	From Bore
		@ 293°	UT				Three	63	From Shell
			UT				Three	63	Inner Radius

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd [1.1-1]								
B3.90	Inlet Nozzle Loop 2	*10-27.5SPL	UT	1	360°	100%	Three	75	From Bore
B3.90		@ 67°	UT				Three	75	From Shell
B3.100			UT				Three	75	Inner Radius
	Inlet Nozzle Loop 3	*11-27.5SPL	UT	1	360°	100%	Three	88	From Bore
		@ 113°	UT				Three	88	From Shell
			UT				Three	88	Inner Radius
	Inlet Nozzle Loop 4	*12-27.5SPL	UT	1	360°	100%	Three	100	From Bore
		@ 247°	UT				Three	100	From Shell
			UT				Three	100	Inner Radius

NOTE: Code Category B-E references pressure test. See Table 5.1

B-F Pressure Retaining Dissimilar Metal Welds

B5.10 Nozzle Safe Ends Welds

See Table 1.4 page 2

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd		[1.1-1]					
B-G-1	Pressure Retaining Bolting (Larger Than 2-Inch Dia)							
B6.10	Closure Head Nuts	RPV Stud Nuts No.1(to)No.54	MT or PT	54	18 Nuts 100% 18 " 18 " Exams area meets req'ts of figure IWB-2500-12	One Two Three	33 66 100	OD=10.56" HT=7.94"
B6.20	Closure Studs (In Place)	RPV Studs No.1(to)No.54	UT	54	-	-	-	OD=6.8" L=57.7" It is anticipated that studs will be removed as scheduled.
B6.30	Closure Studs (When Removed)	RPV Studs No.1(to)No.54	UT PT or MT	54	18 Studs 100% 18 " 18 " Exam area meets or exceeds req'ts of figure IWB-2500-4	One Two Three	33 66 100	Should that not be possible, studs will be examined in place as scheduled for removed studs. Interval end deferral is not anticipated.
B6.40	Flange Ligaments (Between Stud Holes)	RPV Ligaments No. 1(to)No. 54	UT	54	18 Ligaments 100% 18 " 18 "	One Two Three	33 66 100	
	Stud Holes in Flange	Threads	VT-1	54	18 Holes 100% 18 " 18 "	One Two Three	33 66 100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd		[1.1-1]						
B6.50	Closure Washers (and Bushing*)	RPV Stud Washer Pair No. 1(to)No. 54	VT-1	54 (Pair)	18 Pair 18 Pair 18 Pair	100%	One Two Three	33 66 100	* Bushings Not Applicable
B-G-2	Pressure Retaining Bolting (2 in. Dia. and Less)								
B7.10	Marmon Clamps (Bolts, Studs, & Nuts)	Conoseal Bolts (For) Incore Thermocouples, total of five assemblies, three bolts each	VT-1	15 (Bolts)	15 bolts 15 bolts 15 bolts	100%	One Two Three	33 66 100	NOTE: All clamps and bolts examined once each inspection period during a scheduled refueling outage.
	Part Length CRDMs (Bolts, Studs, & Nuts)	8 Part Length CRDMs with 6 Bolts each		48 (Bolts)	48 Bolts	100%	Three	100	
B-H	Vessel Supports								
B8.10	Integrally Welded Attachments	-	-	-	-		-	-	B8.10 Item not applicable vessel is supported by integrally cast nozzle pads

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd		[1.1-1]					
B-N-1	Interior of Reactor Vessel							
B13.10	Vessel Interior	Lower Internals and area made accessible by component removal	VT-3	-	100% of surface area made accessible by removal of components during normal refueling outages	One Two Three	100 100 100	At first scheduled refueling outage and two subsequent outages at approximately three year increments.
B13.10	Core Support Structure	RPV (Core Barrel area)	VT-3	1	100% of welds and surface area made accessible by removal of core barrel and supporting structure	Three	100	Includes core support welds and attachment lugs
B-N-3	Removable Core Support Structures							
B13.30	Reactor Core Barrel	Core Barrel	VT-3	1	100% of core barrel welds and surface area made accessible by core barrel's removal from vessel	Three	100	Examine to extent practical

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reactor Vessel - Cont'd		[1.1-1]			Exam. area meets or exceeds req'ts Fig. IWB-2500-18		
B-O	Pressure Retaining Welds in Control Rod Housings							
B14.10	Welds in CRD Housing	CRDM	PT	73	3 Welds 360° Note: There are twenty-four peripheral CRD Housing Welds	Three	10	Surface exam elected to be performed

End of Table 1.1

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pressurizer Vessel							
B-B	Pressure Retaining Welds in Vessels other than Reactor	Serial No. W 1051 Dwg. Ref.			Exam'n area meets or exceeds req'ts of Figure IWB-2500-1 and Figure IWB-2500-2			[*] ISI Dwg Page No.
B2.10	Pressurizer Vessel Shell to Head Welds	DC663208-8-1						
B2.11	- Circumferential -	* [1.2-1]		(2)	(Length)			T = 4.2" L = 291"
	Bottom Head to Lower Course	Weld No. Girth 1	UT	1	97" 34% 97" 34% 97" 34%	One Two Three	33 66 100	Note remarks for B2.12
	Upper Course to Top Head	Weld No. Girth 5	UT	1	97" 34% 97" 34% 97" 34%	One Two Three	33 66 100	T = 4.2" L = 291"
				(2)				
B2.12	-Longitudinal- Lower Course @ [Bottom Head]	Weld No. Long'l 6	UT	1	12" 7%[1]	Two	100	Schedule exam area for first and second period to enable coincident examination of circumferential and longitudinal welds
	Upper Course @ [Top Head]	Weld No. Long'l 9	UT	1	12" 9%[1]	One	50	[1]Equals 100% of code req't

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 1

REV. 8

MAJOR ITEM: Pressurizer
TABLE: 1.2
PAGE 2 of 3

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-B	Pressurizer Vessel-Cont'd	[1.2-1]						
B2.20	Head Welds							B2.20 items are not applicable. Upper and lower heads are cast carbon steel
B2.21	Circumferential							
B2.22	Meridional							
B-D	Full Penetration Welds of Nozzles in Vessels							
B3.110	Nozzle to Vessel Welds				Not Applicable			Nozzles are integrally cast
B3.120	Nozzle Inside Radius Section (Upper Head)	Safety Noz A 1-RV-8010A S6-729-6SPL	-	1	Not Accessible	-	-	Relief # NDE 012 for inner radius
		Safety Noz B 1-RV-8010B S6-728-6SPL	-	1	"	-	-	
		Safety Noz C 1-RV-727-6SPL	-	1	"	-	-	
		Relief Noz. S6-730-6SPL	-	1	"	-	-	
		Spray Line Noz S6-15-4SPL	-	1	"	-	-	
	Lower Head	Surge Noz. @ Loop 2 *16-14SPL	-	1	Not Accessible	-	-	

NOTE: Code Category B-E references pressure test, See Table 5.1

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pressurizer Vessel - Cont'd [1.2-1]								
B-F	Pressure Retaining Dissimilar Metal Welds								
B5.20	Nozzle to Safe-end Welds								
	See Table. 1.4 Page 4								
B-G-1	Pressure Retaining Bolting (Larger Than 2 Inch Dia)								
B6.60	Bolts & Studs, (In place)		-	-	-		-	-	B6.60, B6.70 & B6.80
B6.70	Bolts & Studs, (Removed)		-	-	-		-	-	Items not
B6.80	Bolting		-	-	-		-	-	applicable
B-G-2	Pressure Retaining Bolting (2 Inch Dia and less)								
B7.20	Upper Head	Manway Bolting	(VT-1)	16	5 Bolts 5 " 6 "	100%	One Two Three	31 62 100	Bolting may be examined in place, or when removed. (accessible surfaces)
B-H B8.20	Vessel Supports Integrally welded attachments (Support)				Exam area meets or exceeds req'ts of Fig. IWB-2500-14				
	Support Skirt	Weld No. Girth 10	(UT)	1	97" 97" 97"	34% 34% 34%	One Two Three	33 66 100	T = 1.5" L = 291"

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Steam Generators	Dwg. REF. DC-663206-26-1 * [1.3-1]			Exam'n area meets or exceeds req'ts of Figure IWB-2500-6(B)				[*] ISI Dwg. Page No.
B-B	Pressure Retaining Welds in Vessels other than Reactor Steam Generators (Primary Side)								See Table 2.1 for secondary side
B2.30	Head Welds								
B2.31 B2.32	Circumferential and Meridional Welds	-	-	-	-		-	-	B2.31 & B2.32 Items not applicable, channel heads are cast carbon steel
B2.40	Tubesheet to Head Welds	Weld No.		(4)					
	Steam Generator 1-1 (Serial No. 1041)	Channel W 1-1	UT	1	12'	34%	One	33	T = 5.16" L = 36'
					12'	34%	Two	66	
					12'	34%	Three	100	
	Steam Generator 1-2 (Serial No. 1042)	Channel W 2-1	UT	1	12'	34%	One	33	
					12'	34%	Two	66	
					12'	34%	Three	100	
	Steam Generator 1-3 (Serial No. 1043)	Channel W 3-1	UT	1	12'	34%	One	33	
					12'	34%	Two	66	
					12'	34%	Three	100	
	Steam Generator 1-4 (Serial No. 1044)	Channel W 4-1	UT	1	12'	34%	One	33	
					12'	34%	Two	66	
					12'	34%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Steam Generators - Cont'd		[1.3-1]					
B-D	Full Penetration Welds of Nozzles in Vessels							Weld Examination Not Applicable Nozzles are integrally cast to channel head
B3.130	Nozzle to Vessel Welds							
B3.140	Nozzle Inside Radius Section (Channel Head)	Channel Hd						
	Steam Generator 1-1	Inlet *1-29SPL	-	1	Not Accessible	-	-	Relief # NDE 012 for inner radius
		Outlet *5-31SPL	-	1	"	-	-	
	Steam Generator 1-2	Inlet *2-29SPL	-	1	"	-	-	
		Outlet *6-31SPL	-	1	"	-	-	
	Steam Generator 1-3	Inlet *3-29SPL	-	1	"	-	-	
		Outlet *7-31SPL	-	1	"	-	-	
	Steam Generator 1-4	Inlet *4-29SPL	-	1	"	-	-	
		Outlet *8-31SPL	-	1	Not Accessible	-	-	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Steam Generators - Cont'd	[1.3-1]						
NOTE: Code Category B-E Not Applicable to Stm. Gen.								
B-F	Pressure Retaining Dissimilar Metal Welds							
B5.30	Nozzle to Safe-end Welds							
	(Channel head)							
	See Table 1.4 page 5							

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Steam Generators- Cont'd	[1.3-1]							
B-G-1	Pressure Retaining Bolting (Larger Than 2 in. Dia)								B-G-1 Items Not Applicable
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less	Channel Hd Manway Bolting		(128)					*Original Manway Bolts Replaced with Studs & Nuts, SG 1-1 Exam Rescheduled to complete ISI.
B7.30	Bolts, Studs and Nuts								
	Steam Generator 1-1	No.1(to)No.16	VT-1	16	16 Studs	100%	Two*	12	Inlet
		"	VT-1	16	16 Studs and Nuts		Two*	25	Outlet
	Steam Generator 1-2	No.1(to)No.16	VT-1	16	16 Studs	100%	Two	37	Inlet
		"	VT-1	16	16 Studs and Nuts		Two	50	Outlet
	Steam Generator 1-3	No.1(to)No.16	VT-1	16	16 Studs	100%	Three	62	Inlet
		"	VT-1	16	16 Studs and Nuts		Three	75	Outlet
	Steam Generator 1-4	No.1(to)No.16	VT-1	16	16 Studs	100%	Three	87	Inlet
		"	VT-1	16	16 Studs and Nuts		Three	100	Outlet
B-H	Vessel Supports								
B8.30	Integrally Welded Attachments	-	-	-	-		-	-	B8.30 Item not applicable. Vessel is supported by integrally cast pads

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Steam Generator's - Cont'd							
B-Q	Steam Generator Tubing							
B16.10	Straight Tube Design							B16.10 Item Not Applicable
B16.20	U-Tube Design Steam Generator							
		Tube Map		Tubes*				
		Gen 1-1	ET	3,388	102 (*) 3%			*10 CFR 50 Requires Program to be based on the Plant's Approved Technical Specification (3/4.4.5) Ref: 10 CFR 50.55a(b)(2)(iii)
		Gen 1-2	ET	3,388	102 (*) 3%			
		Gen 1-3	ET	3,388	102 (*) 3%			
		Gen 1-4	ET	3,388	102 (*) 3%			

End Of Table 1.3

CODE CLASS 1

ASME SECTION XI
PIPING SYSTEM WELDS

The extent and frequency of examination for pipe welds scheduled in the following table conforms to Tables IWB-2500 and IWB-2600, Category B-J, in the 1974 Edition of Section XI through Summer 1975 Addenda. This requires all of the area of 25% of the circumferential joints, including the adjoining 1-foot section of longitudinal joints, and 25% of the pipe branch connection joints to be examined each inspection interval. Weld selection distribution has been made to assure a representative sampling from all Code Class 1 lines in the Plant.

NOTE: An internal inconsistency in the Summer 1978 Addenda required branch connection welds between two and four inches nominal branch size to receive volumetric examination, while pipe welds require volumetric examination only if they are four inch nominal pipe size or greater. This condition was corrected in the Winder 1980 Addenda (referenced in 10 CFR 50.55a) to require volumetric examination of those branch connections greater than or equal to four inch nominal diameter. As a result, branch connections four inches and greater in nominal diameter are scheduled for volumetric and surface examination, while those less than four inch diameter are scheduled for surface examination only.

Occasional portions of certain pipe welds are inaccessible for examination. See request for relief # NDE-008. Any inaccessible portions will be fully documented and the remaining weld area examined to the fullest extent possible as scheduled. An estimate of the percentage of the code - required examination that can be completed for welds having limited accessibility is provided in Appendix B, as discussed in NDE-008. Updates listing exact accessibility* will be submitted to the NRC as part of each Owners Report of Inservice Inspection, following each refueling outage.

Ref. 10 CFR 50.55a(b)(2)(ii)

* PG&E uses Code Case N-460 to determine weld accessibility

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-F	Pressure Retaining Dissimilar Metal Welds	Reactor Vessel Piping "Pup" is 316 stainless welded directly to RPV clad buttering. "Pup" to pipe is not considered a bi-metalic weld joint.			Volumetric exam scheduled coincident with vessel nozzle exam. per Section XI See Appendix A for piping schedule/cal. std. Exam area meets or exceeds req'ts of Fig. IWB-2500-8				Welds are those referenced in cat'y B-F, B5.10 Table 1-1 Pg. 5 of 9
B5.50	Piping-Safe End Welds Reactor Vessel	Note B9.10 for system schedule continuation							
		Weld No. & Line No.		(8)			[ ] ISI DWG.		Page No.
	Outlet Nozzle Loop 1 (7-30) [1.4-1]	WIB-RC-1-1SE *1-29SPL	PT UT	1	360°	100%	One One		( ) Construction Dwg. Page No.
	Outlet Nozzle Loop 2 (7-31) [1.4-2]	WIB-RC-2-1SE *2-29SPL	PT UT	1	360°	100%	One One	25 (Vol)	Four nozzles (safe-ends) will be volumetrically examined the first inspection period. Remaining volumetric exams may be deferred until the end of the inspection interval. (Category B-F, Footnote 2)
	Outlet Nozzle Loop 3 (7-31A) [1.4-3]	WIB-RC-3-1SE *3-29SPL	PT UT	1	360°	100%	One One	38 (Sur)	
	Outlet Nozzle Loop 4 (7-30A) [1.4-4]	WIB-RC-4-1SE *4-29SPL	PT UT	1	360°	100%	Two One		
	Inlet Nozzle Loop 1 (7-30) [1.4-1]	WIB-RC-1-18SE *9-27.5SPL	PT UT	1	360°	100%	Two Three	63 (Sur)	
	Inlet Nozzle Loop 2 (7-31) [1.4-2]	WIB-RC-2-20SE *10-27.5SPL	PT UT	1	360°	100%	Three Three		
	Inlet Nozzle Loop 3 (7-31A) [1.4-3]	WIB-RC-3-18SE *11-27.5SPL	PT UT	1	360°	100%	Three Three		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-F	Pressure Retaining Dissimilar Metal Welds (Cont'd)							
B5.50	Piping-Safe End Welds (Cont'd)	Weld No.						
	Reactor Vessel	Line No.						
	Inlet Nozzle Loop 4	WIB-RC-4-18SE	PT	1	360° 100%	Three	100	
	(7-30A) [1.4-4]	*12-27.5SPL	UT			Three	(Sur, Vol)	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-F	Pressure Retaining Dissimilar Metal (Cont'd)	Nozzle end reducer sections are 316 SS welded directly to nozzle. Reducer to pipe is not considered a bi-metalic weld joint.			Exam area meets or exceeds req'ts of fig. IWB-2500-8				Welds are those referenced in cat'y B-F, B5.20 Table 1.2 Page 3 of 3
B5.50	Piping-Safe Ends, (Cont'd)	Note B9.10 for system schedule continuation							
	Pressurizer	Weld No. & Line No.		(6)					(Pzr = Pressurizer)
	Pzr RV-8010A, Inlet (7-27) [1.4-21]	WIB-313SE S6-729-6SPL	PT UT	1	21"	360°	One	17	(Upper Head)
	Pzr RV-8010B, Inlet (7-28) [1.4-22]	WIB-322SE S6-728-6SPL	PT UT	1	21"	360°	One	33	
	Pzr RV-8010C, Inlet (7-29) [1.4-23]	WIB-331-SE S6-727-6SPL	PT UT	1	21"	360°	Two	50	
	Pzr Power RV, Inlet (7-25) [1.4-24]	WIB-340-SE S6-730-6SPL	PT UT	1	21"	360°	Two	66	
	Pzr Spray Line (7-9) [1.4-29]	WIB-374SE S6-15-4SPL	PT UT	1	14"	360°	Three	83	
	Pzr Surge Line (8-59A) [1.4-5]	WIB-71SE *16-14SPL	PT UT	1	44"	360°	Three	100	(Lower Head)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-F	Pressure Retaining Dissimilar Metal (Cont'd)	NOTE: Stainless steel piping is welded directly to Nozzle but treated as "safe ends"			Exam area meets or exceeds req'ts of fig. IWB-2500-8				Welds are those referenced in cat'y B-F, B5.30 Table 1.3 Page 3 of 5.
B5.50	Piping-Safe Ends - Cont'd	Note B9.10 for system schedule continuation							
	Steam Generator	Weld No. & Line No.		(8)					Channel Head
	Steam Generator 1-1 Reactor Coolant Out (7-30) [1.4-1]	WIB-RC-1-5SE *1-29SPL	PT UT	1	92"	360°	One	13	Inlet
	Reactor Coolant Pp Suct Loop 1 (7-30) [1.4-1]	WIB-RC-1-6SE *5-31SPL	PT UT	1	98"	360°	One	25	Outlet
	Steam Generator 1-2 Reactor Coolant Out Loop 2 (*7-31)[1.4-2]	WIB-RC-2-6SE *2-29SPL	PT UT	1	92"	360°	Two	38	Inlet
	Reactor Coolant Pp Suct Loop 2 (7-31) [1.4-2]	WIB-RC-2-7SE *6-31SPL	PT UT	1	98"	360°	Two	50	Outlet
	Steam Generator 1-3 Reactor Coolant Out Loop 3 (7-31A)[1.4-3]	WIB-RC-3-5SE *3-29SPL	PT UT	1	92"	360°	Three	63	Inlet
	Reactor Coolant Pp Suct Loop 3 (7-31A) [1.4-3]	WIB-RC-3-6SE *7-31SPL	PT UT	1	98"	360°	Three	75	Outlet

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-F	Pressure Retaining Dissimilar Metal (Cont'd)	NOTE: B 9.10 for system schedule configuration.							
B5.50	Piping-Safe Ends - Cont'd Steam Generators	Weld No. & Line No.							
	Steam Generator 1-4								
	Reactor Coolant Out Loop 4 (7-30A) [1.4-4]	WIB-RC-4-5SE *4-29SPL	PT UT	1	92"	360°	Three	88	Inlet
	Reactor Coolant Pp Suct Loop 4(7-30A) [1.4-4]	WIB-RC-4-6SE *8-31SPL	PT UT	1	98"	360°	Three	100	Outlet

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G	Piping - Cont'd								
B-G-1	Pressure Retaining Bolting (Larger than 2 in. Dia)								B-G-1 Items not Applicable
B-G-2	Pressure Retaining Bolting (2 in. Dia & Less)								
B7.50	Bolts, Studs, and Nuts				Flange Bolting				% to Date based on total ( ) for each pipe size
	6 Inch Diameter Pipe	Line No. & Valve No.		(36)					
	Pressurizer RV-8010A Inlet (7-27) [1.4-21]	S6-729-6 RV-8010A	VT-1	12 24	12 Studs 24 Nuts	100%	One	33	Flanges at Pressurizer RV Inlets
	Pressurizer RV-8010B Inlet (7-28) [1.4-22]	S6-728-6 RV-8010B	VT-1	12 24	12 Studs 24 Nuts	100%	Two	66	
	Pressurizer RV-8010C Inlet (7-29) [1.4-23]	S6-727-6 RV-8010C	VT-1	12 24	12 Studs 24 Nuts	100%	Three	100	
	3 Inch Diameter Pipe			(32)					
	Loop 1 RTD Manifold Rtn Hdr (7-23) [1.4-30]	S6-1141-3SPL 1-FE-499A	VT-1	8 16	8 Studs 16 Nuts	100%	One	25	FE=Flow Element
	Loop 2 RTD Manifold Rtn Hdr (7-24) [1.4-31]	26-1147-3SPL 1-FE-499B	VT-1	8 16	8 Studs 16 Nuts	100%	Two	50	
	Loop 3 RTD Manifold Rtn Hdr (7-21) [1.4-32]	S6-1153-3SPL 1-FE-499C	VT-1	8 16	8 Studs 16 Nuts	100%	Three	75	
	Loop 4 RTD Manifold Rtn Hdr (7-22) [1.4-33]	S6-1158-3SPL 1-FE-499D	VT-1	8 16	8 Studs 16 Nuts	100%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G-2 B7.50	Piping - Cont'd Bolting - Cont'd								
	2 Inch Diameter Pipe	Line No. & Flange No.		(32)	Flange Bolting				Flange Between Welds Number below
	Loop 1 Cold Leg RTD Conn (7-220) [1.4-60]	S6-1140-2SPL	VT-1	8 16	8 Studs 16 Nuts	100%	One	25	WIB-37/WIB-38
	Loop 2 Cold Leg RTD Conn (7-222) [1.4-61]	S6-1146-2SPL	VT-1	8 16	8 Studs 16 Nuts	100%	Two	50	WIB-155/WIB-156
	Loop 3 Cold Leg RTD Conn (7-236) [1.4-62]	S7-1152-2SPL	VT-1	8 16	8 Studs 16 Nuts	100%	Three	75	WIB-270/WIB-271
	Loop 4 Cold Leg RTD Conn (7-234) [1.4-63]	S6-1159-2SPL	VT-1	8 16	8 Studs 16 Nuts	100%	Three	100	WIB-362/WIB-363
	1.5 Inch Diameter Pipe	(After 2x1.5 Reducer)		(32)					
	Reac Cool Pp 1 Seal Wtr In (8-736) [1.4-42]	S6-54-1.5	VT-1	4 8	4 Studs 8 Nuts	100%	One	12	WIB-1021/WIB-1022
	Reac Cool Pp 2 Seal Wtr In (8-713) [1.4-43]	S6-55-1.5	VT-1	4 8	4 Studs 8 Nuts	100%	Two	25	WIB-980/WIB-981
	Reac Cool Pp 3 Seal Wtr In (8-376) [1.4-44]	S6-56-1.5	VT-1	4 8	4 Studs 8 Nuts	100%	Three	37	WIB-991/WIB-992
	Reac Cool Pp 4 Seal Wtr In (8-741) [1.4-45]	S6-57-1.5	VT-1	4 8	4 Studs 8 Nuts	100%	Three	50	WIB-1004/WIB-1005

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G-2 B7.50	Piping - Cont'd Bolting - Cont'd								
	1.5 Inch Dia. Cont'd	Line No. & Flange No.			Flange Bolting				
	Boron Inj Tk Out Loop 1 C.L.(9-212) [1.4-64]	S6-1991-1.5 1-FE-924	VT-1	4 8	4 Studs 8 Nuts	100%	One	62	FE = Flow Element
	Boron Inj Tk Out Loop 2 C.L.(9-210) [1.4-67]	S6-1992-1.5 1-FE-925	VT-1	4 8	4 Studs 8 Nuts	100%	Two	75	
	Boron Inj Tk Out Loop 3 C.L.(9-209) [1.4-70]	S6-1993-1.5 1-FE-926	VT-1	4 8	4 Studs 8 Nuts	100%	Three	87	
	Boron Inj Tk Out Loop 4 C.L.(9-212) [1.4-64]	S6-1994-1.5 1-FE-927	VT-1	4 8	4 Studs 8 Nuts	100%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Pressure Retaining Welds in Piping							
B9.10	Nominal Pipe size 4 in. and Greater				Exam'n area meets or exceeds req'ts of figure IWB-2500-8			*Schedule in accordance with discussion, page 1 of this table section
	B-J Items are identified by System Under Applicable Code Item*							
B9.11	Circumferential Welds (Including Intersecting Longitudinal Welds)							One foot of each longitudinal weld will be done at the intersection with the circumferential weld
B9.12	Longitudinal Welds							
	Longitudinal welds are scheduled together with the intersecting circumferential welds. See B9.11 items.							Longitudinal seam welds composite 60% See B9.11

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Piping - Cont'd							( ) Construction Dwg. No.
B9.10	Nominal Pipe Size 4 Inch & Greater				Examine area meets or exceeds req'ts of Figure IWB-2500-8			
				(48)				
B9.11 B9.12	31 Inch Nom. Diameter	Line No. & ISI Dwg No.		(20)				RC pipe composite 25% (all sizes) 12 Sch'd.
	Reactor Coolant Pp Suct Loop 1 (7-30)	*5-31SPL [1.4-1]	PT & UT	5	1 Weld 360°	One	5	6 Sch'd WIB-RC-1-12 and one foot of upper and lower seam
	Reactor Coolant Pp Suct Loop 2 (7-31)	*6-31SPL [1.4-2]	PT & UT	5	1 Weld 360° 2 Welds 360°	One Two	10 20	WIB-RC-2-14 and one foot of upper and lower seams WIB-RC-2-9 and one foot of upper and lower seams WIB-RC-2-10 and one foot of upper and lower seams
								T=2.495

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10 B9.11 B9.12	Piping - Cont'd (4 Inch & Greater) Circ. and Long'l Welds								
	31 Inch Nom. Dia Cont'd	Line No. & ISI Dwg No.							
	Reactor Coolant Pp Suct Loop 3 (7-31A)	*7-31SPL [1.4-3]	PT & UT	5	1 Weld	360°	Three	25	WIB-RC-3-12 and one foot of upper & lower seams
	Reactor Coolant Pp Suct Loop 4 (7-30A)	*8-31SPL [1.4-4]	PT & UT	5	1 Weld	360°	Three	30	WIB-RC-4-12 and one foot of upper & lower seams
B9.11	Circumferential welds								RC Pipe Composite 25% (all sizes)
	29 Inch Nom. Diameter			(12)					1 Sch'd[1]
	Reactor Coolant Out Loop 1 (7-30)	*1-29 SPL [1.4-1]	-	3	-		-	-	(29" Dia welds are not considered to be highest stress loaded)
	Reactor Coolant Out Loop 2 (7-31)	*2-29 SPL [1.4-2]	PT & UT	3	1 Weld	360°	Two	8	WIB-RC-2-5
	Reactor Coolant Out Loop 3 (7-31A)	*3-29 SPL [1.4-3]	-	3	-		-	8	T=2.335
	Reactor Coolant Out Loop 4 (7-30A)	*4-29 SPL [1.4-4]	-	3	-		-	8	[1]Choice of listed welds will be made to equal scheduled percentage for each size throughout

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Piping - Circ'l - Cont'd								
B9.10	(4 Inch & greater)								
B9.11	27.5 Inch Nom. Diameter	Line No. & ISI Dwg No.		(16)					5 Sch'd[1]
	Reactor Coolant Pump Disch Loop 1 (7-30)	*9-27.5SPL [1.4-1]	PT & UT	4	1 Weld	360°	One	6	WIB-RC-1-13
	Reactor Coolant Pump Disch Loop 2 (7-31)	*10-27.5SPL [1.4-2]	PT & UT	4	2 Welds	360°	Two	18	
			UT		1 Weld	360°	Two[2]		WIB-RC-2-15
			UT		1 Weld	360°	Three[2]		WIB-RC-2-20
	Reactor Coolant Pump Disch Loop 3 (7-31A)	*11-27.5SPL [1.4-3]	PT & UT	4	1 Weld	360°	Three	25	WIB-RC-3-13
	Reactor Coolant Pump Disch Loop 4 (7-30A)	*12-27.5SPL [1.4-4]	PT & UT	4	1 Weld	360°	Three	31	WIB-RC-4-13
									T=2.215

[2]NOTE: UT of WIB-RC-2-20 rescheduled to period three to permit use of RPV tool and I.D. exam concurrent with safe-end weld exam. Complete exam of WIB-RC-2-15 and PT of WIB-RC-2-20 completed in period 2 as originally scheduled.

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 1

REV. 8

MAJOR ITEM: Piping Welds (B-J)
TABLE: 1.4

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10	Piping - Circ'l - Cont'd (4 In & Greater)	Specific weld identification numbers will be listed on ISI Examination Schedules to be developed prior to each Refueling Outage						For each pipe sys.	
B9.11	14 Inch Nom. Diameter	Line No. & ISI Dwg No.		(26)					14 In. Composite 27% 7 Sch'd[1]
	Pressurizer Surge Line (8-59A)	*16-14SPL [1.4-5]	PT & UT	8	1 Weld 1 Weld	360°	One Two	13 25	
	Hot Leg Recirc Before V-8702 (7-4)	S6-109-14SPL [1.4-6]	PT & UT	11	1 Weld 2 Welds	360°	One Two	9 27	
	Loop 4 Hot Leg Before V-8701 (10-11)	S6-1665-14SPL [1.4-7]	PT & UT	7	2 Welds	360°	Three	28	
	10 Inch Nom. Diameter			(34)					10 In. Composite 27% 9 Sch'd[1]
	Accumulator Injection Loop 1 (9-16,17)	S6-253-10SPL [1.4-8]	PT & UT	9	1 Weld 1 Weld	360°	One Two	11 22	
	Accumulator Injection Loop 2 (9-21)	S6-254-10SPL [1.4-9]	PT & UT	9	1 Weld 1 Weld	360°	One Two	11 22	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10 B9.11	Piping - Circ'l - Cont'd (4 Inch & Greater) 10 Inch Nom. Diameter	Line No. & ISI Dwg No.							
	Accumulator Injection Loop 3 (9-19)	S6-255-10SPL [1.4-10]	PT & UT	6	1 Weld 1 Weld	360°	One Two	17 33	
	Accumulator Injection Loop 4 (9-18)	S6-256-10SPL [1.4-11]	PT & UT	10	1 Weld 1 Weld 1 Weld	360°	One Two Three	10 20 30	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10	Piping - Circ'l - Cont'd (4 Inch & Greater)								
B9.11	8 Inch Nom. Diameter	Line No. & ISI Dwg No.		(11)					8 In. Composite 27% 3 Sch'd[1]
	SIS to RCS Loop 1 Hot Leg (10-16)	S6-2575-8 [1.4-12]	PT & UT	5	1 Weld	360°	One	20	
	SIS to RCS Loop 2 Hot Leg (10-16)	S6-2576-8 [1.4-12]	PT & UT	6	1 Weld 1 Weld	360°	Two Three	17 33	
	6 Inch Nom. Diameter			(121)					6 In. Composite 26% 31 Sch'd[1]
	Safety Inj. Loop 1 Hot Leg (10-17)	S6-235-6SPL+ [1.4-13]	PT & UT	14	1 Weld 1 Weld 1 Weld	360°	One Two Three	7 14 21	SI(to)*1-29SPL
	Safety Inj Loop 2 Hot Leg (10-18)	S6-236-6SPL+ [1.4-14]	PT & UT	11	1 Weld 1 Weld 1 Weld	360°	One Two Three	9 18 27	SI(to)*2-29SPL
	Safety Inj Loop 3 Hot Leg (9-33)	S-237-6 SPL+ [1.4-15]	PT & UT	10	1 Weld 1 Weld	360°	One Two	10 20	SI(to)*3-29SPL
	Safety Inj Loop 4 Hot Leg (7-4) (9-34)	S6-238-6SPL [1.4-6,1.4-16]	PT & UT	8	1 Weld 1 Weld	360°	One Three	13 25	SI(to) RHR S6-109-14SPL

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10 B9.11	Piping - Circ'l - Cont'd (4 Inch & Greater) 6 Inch Nom. Diameter, Cont'd	Line No. & ISI Dwg No.							
	RHR Pp 1-1 Inj Cold Leg 1 (9-16,17) (9-36,226)	S6-3844-6SPL [1.4-17]	PT & UT	8	1 Weld 1 Weld	360°	Two Three	13 25	
	RHR Pp 1-1 Inj Cold Leg 2(9-37,208)	S6-3845-6SPL [1.4-18]	PT & UT	12	1 Weld 1 Weld 1 Weld	360°	One Two Three	8 17 25	
	RHR Pp 1-2 Inj Cold Leg 3 (9-43)	S6-3846-6SPL [1.4-19]	PT & UT	8	1 Weld 1 Weld	360°	One Two	13 25	
	RHR Pp 1-2 Inj Cold Leg 4 (9-42)	S6-3847-6SPL [1.4-20]	PT & UT	11	1 Weld 1 Weld 1 Weld	360°	One Two Three	9 18 27	
	Pressurizer Inlet RV-8010A (7-27)	S6-729-6SPL+ [1.4-21]	PT & UT	9	1 Weld 1 Weld 1 Weld	360°	One Two Three	11 22 33	
	Pressurizer Inlet RV-8010B (7-28)	S6-728-6SPL+ [1.4-22]	PT & UT	9	1 Weld 1 Weld 1 Weld	360°	One Two Three	11 22 33	
	Pressurizer Inlet RV-8010C (7-29)	S6-727-6SPL [1.4-23]	PT & UT	9	1 Weld 1 Weld	360°	One Two	11 22	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.10 B9.11	Piping - Circ'l - Cont'd (4 Inch & Greater)								
	6 in. Nom. Dia Cont'd	Line No. & ISI Dwg No.							
	Pressurizer Power R.V. (7-25)	S6-730-6SPL [1.4-24]	PT & UT	12	1 Weld 1 Weld 1 Weld	360°	One Two Three	8 17 25	
	4 Inch Nom. Diameter			(90)					4 In. Composite 26% 23 Sch'd[1]
	Pressurizer RV PCV-455C (Inlet)(7-25)	S6-4081-4SPL [1.4-24]	PT & UT	4	1 Weld	360°	One	25	
	Loop 1 Spray Line (7-6,7,8)	S6-13-4SPL [1.4-25] [1.4-26] [1.4-27]	PT & UT	30	2 Welds 3 Welds 3 Welds	360°	One Two Three	6 16 26	Spray to PZR via S6-15-4 From *9-27.5 Loop 1
	Loop 2 Spray Line (7-5,6)	S6-14-4SPL [1.4-25] [1.4-28]	PT & UT	28	2 Welds 2 Welds 3 Welds	360°	One Two Three	7 14 25	Spray to PZR Via - S6-15-4 From *10-27.5 Loop 2
	Pressurizer Spray Line (7-9)	S6-15-4SPL [1.4-29]	PT & UT	28	2 Welds 2 Welds 3 Welds	360°	One Two Three	7 14 25	Spray to PZR From S6-13-4 And S6-14-4

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.20 B9.21	Piping - Circ'l - Cont'd (Less Than 4 Inch Dia)				Exam'n area meets or exceeds req'ts Figure IWB-2500-8				
	3 Inch Nom Diameter	Line No. & ISI Dwg. No.		(156)					3 In. Composite 25% 39 Sch'd[1]
	Loop 1 Hot Leg RTD Conn (7-23)	S6-3488-3SPL [1.4-30]	PT	6	1 Weld 1 Weld	360°	Two Three	17 33	@V-8073A To Junction S6-1141-3SPL
	Loop 1 Cold Leg RTD Conn (7-23)	S6-3798-3SPL [1.4-30]	PT	2	-	-	-	-	@V-8075A To Junction S6-1141-3SPL
	Loop 1 RTD Manifold Ret Hdr (7-23)	S6-1141-3SPL [1.4-30]	PT	11	1 Weld 1 Weld 1 Weld	360°	One Two Three	9 18 27	To Crossover From Junction 3488-3/3798-3
	Loop 2 Hot Leg RTD Conn (7-24)	S6-3489-3SPL [1.4-31]	PT	8	1 Weld 1 Weld	360°	Two Three	13 25	@V-8073B To Junction S6-1147-3SPL
	Loop 2 Cold Leg RTD Conn (7-24)	S6-3799-3SPL [1.4-31]	PT	2	-	-	-	-	@V-8075B To Junction S6-1147-3SPL
	Loop 2 RTD Manifold Ret Hdr (7-24)	S6-1147-3SPL [1.4-31]	PT	11	1 Weld 1 Weld 1 Weld	360°	One Two Three	9 18 27	To Crossover From Junction 3489-3/3799-3

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.20 B9.21	Piping - Circ'l - Cont'd (Less Than 4 Inch Diameter)								
	3 Inch Nom. Diameter- Cont'd	Line No. & ISI Dwg. No.							
	Loop 3 Hot Leg RTD Conn (7-21)	S6-3495-3SPL [1.4-32]	PT	11	1 Weld 1 Weld 1 Weld	360°	One Two Three	9 18 27	@V-8073C To Junction S6-1153-3SPL
	Loop 3 Cold Leg RTD Conn (7-21)	S6-3800-3SPL [1.4-32]	PT	5	1 Weld	360°	One	20	@V-8075C To Junction S6-1153-3SPL
	Loop 3 RTD Manifold Ret Hdr (7-21)	S6-1153-3SPL [1.4-32]	PT	8	1 Weld 1 Weld	360°	Two Three	13 25	To Crossover From Junction 3495-3/3800-3
	Loop 4 Hot Leg RTD Conn (7-22)	S6-3496-3SPL [1.4-33]	PT	6	1 Weld 1 Weld	360°	One Two	17 33	@V-8073D To Junction S6-1158-3SPL
	Loop 4 Cold Leg RTD Conn (8-22)	S6-3801-3SPL [1.4-33]	PT	2	1 Weld	360°	Two	50	@V-8075D To Junction S6-1158-3SPL
	Loop 4 RTD Manifold Ret Hdr (7-22)	S6-1158-3SPL [1.4-33]	PT	10	1 Weld 1 Weld	360°	One Two	10 20	To Crossover From Junction 3496-3/3801-3
	Charging Line Loop 4 (8-61)	S6-246-3SPL [1.4-34]	PT	8	1 Weld 1 Weld	360°	One Three	13 25	CVCS Normal Charging

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.20 B9.21	Piping - Circ'l - Cont'd (Less Than 4 Inch Dia)								
	3 Inch Nom. Diameter Cont'd	Line No. & ISI Dwg. No.							
	Charging Line Loop 3 (8-59)	S6-50-3SPL [1.4-35]	PT	7	1 Weld 1 Weld	360°	Two Three	14 29	CVCS Alternate Charging
	Boron Inj Cold Leg Hdr (9-35)	S6-1016-3SPL S6-1995-3SPL [1.4-36]	PT PT	4 9	1 Weld 1 Weld 1 Weld	360°	One Two Three	7 15 23	
	Letdown Line Loop 2 (7-14,15)	S6-24-3SPL[3] [1.4-37] [1.4-38]	PT	17	1 Weld 1 Weld 2 Welds	360°	One Two Three	5 11 23	See p. 30 for Socket welds @ LCV-459
	Pressurizer Pwr RV* PCV-474 (7-25)	S6-1171-3SPL [1.4-24]	PT	9	2 Welds	360°	One	22	*Combined PZR Pwr RV Lines.
	Pressurizer Pwr RV* PCV-455C (7-25)	S6-1172-3SPL [1.4-24]	PT	9	2 Welds	360°	Two	22	
	Pressurizer Pwr RV* PCV-456 (7-26)	S6-1195-3SPL [1.4-39]	PT	11	3 Welds	360°	Three	27	

See item B9.40, socket welds this section Table No. 1.4 pages 30-34 for small bore circumferential welds (1.5 in Dia)

[3] Additional weld added to line 24 due to valve replacement. Total 156 3" welds.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.20	Piping - Circ'l - Cont'd (Less Than 4 Inch Diameter)							
B9.22	Longitudinal Welds	-	-	-	-	-	-	B9.22 Not Applicable There are no seamed pipes or fittings NOTE: 2 Inch line fittings are forged type 304 Stainless

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.30	Piping - Cont'd Branch Pipe Connection Welds	Volumetric Exam'n to extent possible complies with the basic requirements of Appendix III and Supplement 7			Code figure IWB-2500-10 is essentailly the weld (Branch) design for all systems identified under this Code Category Sub-Item. Reference: WNES SPEC G676343				
B9.31	Nominal Pipe Size Greater Than 2 Inch								
	14 Inch Nom. Diameter	Line No. & Branch Weld		(2)					14 in. Composite 50% 1 Sch'd[1]
	Pressurizer Surge Line (7-31) [1.4-2] ([1.4-5]	*16-14SPL WIB-RC-2-3	PT UT	1	1 Branch	360°	Two	50	
	Hot Leg Recirc Before V-8702 (7-31)[1.4-4] [1.4-6]	S6-109-14SPL WIB-RC-4-3	PT UT	1	-	-	-	50	
	10 Inch Nom. Diameter			(4)					10 In. Composite 25%
	Accumulator Injection Loop 1 (9-16,17) [1.4-1] [1.4-8]	S6-253-10SPL WIB-RC-1-14	PT UT	1	-	-	-	-	1 Sch'd[1]
	Accumulator Injection Loop 2 (9-21) [1.4-2] [1.4-9]	S6-254-10SPL WIB-RC-2-16	PT UT	1	1	360°	One	25	
	Accumulator Injection Loop 3 (9-19) [1.4-3] [1.4-10]	S6-255-10SPL WIB-RC-3-14	PT UT	1	-	-	-	25	
	Accumulator Injection Loop 4 (9-18) [1.4-4] [1.4-11]	S6-256-10SPL WIB-RC-4-14	PT UT	1	-	-	-	25	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.30	Piping - Cont'd Branch Pipe Connection Weld							
B9.31	Nominal Pipe Size Greater Than 2 Inch							
	6 Inch Nom. Diameter	Line No. & Branch Weld		(3)				6 In. Composite 33% 1 Sch'd[1]
	Safety Inj. Loop 1 Hot Leg (10-17) [1.4-1] [1.4-13]	S6-235-6SPL WIB-RC-1-3	PT UT	1	-	-	-	-
	Safety Inj Loop 2 Hot Leg (10-18) [1.4-2] [1.4-14]	S6-236-6SPL WIB-RC-2-4	PT UT	1	1 Branch 360°	Two	33	
	Safety Inj. Loop 3 Hot Leg (9-33) [1.4-3] [1.4-15]	S6-237-6SPL WIB-RC-3-3	PT UT	1	- -	-	33	NOTE: Loop 4 Inj to RHR 14X14X6" Tee, No branch conn.
	4 Inch Nom. Diameter			(2)				4 In. Composite 50% 1 Sch'd[1]
	Loop 1 Spray Line (7-6,7,8) [1.4-1] [1.4-27]	S6-13-4SPL WIB-RC-1-15	PT UT	1	1 Branch 360°	One	50	
	Loop 2 Spray Line (7-5,6) [1.4-2] [1.4-28]	S6-14-4SPL WIB-RC-2-18	PT UT	1	- -	-	50	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.30	Piping - Cont'd Branch Pipe Connection Welds								
B9.31	Nominal Pipe Size Greater Than 2 Inch								
	3 Inch Nom. Diameter*	Line No. & Branch Weld		(7)					3 In. Composite 29% 2 Sch'd
	Loop 1 RTD Manifold Ret Hdr (7-30) [1.4-30] [1.4-1]	S6-1141-3SPL WIB-RC-1-10	PT	1	-	-	-	-	*See discussion page 1 of this table section for explanation of examination requirements.
	Loop 2 RTD Manifold Ret Hdr (7-30) [1.4-2] [1.4-31]	S6-1147-3SPL WIB-RC-2-11	PT	1	1 Branch	360°	Two	14	
	Loop 3 RTD Manifold Ret Hdr (7-31A) [1.4-3] [1.4-32]	S6-1153-3SPL WIB-RC-3-10	PT	1	-	-	-	14	
	Loop 4 RTD Manifold Ret Hdr (7-30A) [1.4-4] [1.4-33]	S6-1158-3SPL WIB-RC-4-10	PT	1	-	-	-	14	
	Charging Line Loop 4 (7-30A) [1.4-4][1.4-34]	S6-246-3SPL	PT WIB-RC-4-15	1	-	-	-	14	
	Charging Line Loop 3 (7-31A) [1.4-3][1.4-35]	S6-50-3SPL	PT WIB-RC-3-15	1	-	-	-	14	
	Letdown Line Loop 2 (7-31) [1.4-2][1.4-37]	S6-24-3SPL WIB-RC-2-12	PT	1	1 Branch	360°	Three	29	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.30	Piping - Cont'd Branch Pipe Connection Weld				Code figure IWB-2500-10 is essentially the weld (branch) design for all systems identified under this code category subitem. Reference: WNES SPEC G676343				
B9.32	Nominal Pipe Size 2 Inch & less Nom. Dia 2 Inch Nom. Diameter	Line No. & Branch Weld		(13)					2 In. Composite 30% 4 Sch'd[1]
	Loop 1 Cold Leg Drain RCDT (7-30) [1.4-1] [1.4-46]	S6-958-2SPL+ WIB-20A	PT	1	1 Branch	360°	One	8	
	Loop 3 Cold Leg Drain RCDT (7-31A) [1.4-3] [1.4-49]	S6-960-2SPL+ WIB-249A	PT	1	1 Branch	360°	Two	15	
	Loop 4 Cold Leg Drain RCDT (7-30A) [1.4-4] [1.4-49]	S6-961-2SPL+ WIB-338A	PT	1	1 Branch	360°	Three	23	NOTE: Loop 2 Drain is from letdown line, not cold leg.
	SI Pp1-1 Inj Hot Leg Loop 1 (9-278) [1.4-12] [1.4-50]	S6-3863-2 WIB-417A	PT	1	-	-	-	23	
	SI Pp1-1 Inj Hot Leg Loop 2 (9-279) [1.4-12] [1.4-51]	S6-3864-2 WIB-422A	PT	1	1 Branch	360°	Two	30	
	Loop 1 Cold Leg RTD Conn (7-30) [1.4-1] [1.4-60]	S6-1140-2SPL WIB-26A	PT	1	-	-	-	30	
	Loop 2 Cold Leg RTD Conn (7-31) [1.4-2] [1.4-61]	S6-1146-2SPL WIB-144A	PT	1	-	-	-	30	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.30	Piping - Cont'd Branch Pipe Connection Weld							
B9.32	Nominal Pipe Size 2 Inch & less Nom. Dia							
	2 Inch Nom. Dia (Cont'd)	Line No. & Branch Weld						
	Loop 3 Cold Leg RTD Conn (7-31A) [1.4-3] [1.4-62]	S6-1152-2SPL WIB-255A	PT	1	-	-	30	
	Loop 4 Cold Leg RTD Conn (7-30A) [1.4-4] [1.4-63]	S6-1159-2SPL WIB-349A	PT	1	-	-	30	
	SI Pps Cold Leg Loop 1 Recirc (9-36,226) [1.4-17]	S6-3855-2SPL WIB-444A	PT	1	-	-	30	
	SI Pps Cold Leg Loop 2 Recirc (9-37,208) [1.4-18]	S6-3856-2SPL WIB-450A	PT	1	-	-	30	
	SI Pps Cold Leg Loop 3 Recirc (9-215) [1.4-54]	S6-3857-2SPL WIB-455A	PT	1	-	-	30	
	SI Pps Cold Leg Loop 4 Recirc (9-216) [1.4-55]	S6-3858-2SPL WIB-464A	PT	1	-	-	30	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Piping - Cont'd							
B9.30	Branch Pipe Connection Welds							
B9.32	Nominal Pipe Size 2 Inch & less Nom. Dia							
	1.5 Inch Nom. Diameter	Line No. & Branch Weld		(4)				1.5 Inch Composite 25% 1 Sch'd[1]
	Boron Inj. Tk. Out. Loop 1 Cold Leg (7-30) [1.4-1] [1.4-66]	S6-1991-1.5SPL+ WIB-41A	PT	1	-	-	-	
	Born Inj. Tk. Out. Loop 2 Cold Leg (7-31) [1.4-2] [1.4-69]	S6-1992-1.5SPL+ WIB-159A	PT	1	-	-	-	
	Born Inj Tk Out Loop 3 Cold Leg (7-31A) [1.4-3] [1.4-71]	S6-1993-1.5SPL+ WIB-273A	PT	1	-	-	-	
	Boron Inj Tk Out Loop 4 Cold Leg (7-30A) [1.4-4] [1.4-65]	S6-1994-1.5SPL+ WIB-117A	PT	1	1 Branch 360°	Three	25	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.40	Piping - Cont'd Socket Welds	Specific weld identification numbers will be listed on ISI exam. schedules to be developed prior to each refueling outage Socket welds are identified by system.						Scheduled in accordance with discussion page 1 of 57 this Table Section. NOTE comment from Pg. 21, item B9.21
	2 Inch Nom. Diameter	Line No. & ISI Dwg. No.		(354)				2 In. Composite 25% 89 Sch'd[1]
	Letdown Line Loop 2 (7-14,15)	S6-24-3SPL [1.4-38]	PT	2	1 Socket 360°	One	50	3 in. reduces to 2 in. @ LCV-459
	Charging Line Aux Spray (8-350,354)	S6-51-2SPL S6-4532-2SPL [1.4-40]	PT PT	52 4	5 Sockets 360° 4 5	One Two Three	9 16 25	
	Reac Cool Pp 1 Seal Wtr In (8-736)	S6-54-2 and S6-54-1.5 [1.4-42]	PT	13	1 Socket 360° 1 1	One Two Three	8 15 23	Includes one B9.21 Item
	Reac Cool Pp 2 Seal Wtr In (8-713)	S6-55-2 and S6-55-1.5 [1.4-43]	PT	13	1 Socket 360° 1 1	One Two Three	8 15 23	Includes one B9.21 Item
	Reac Cool Pp 3 Seal Wtr In (8-376)	S6-56-2 and S6-56-1.5 [1.4-44]	PT	15	1 Socket 360° 1 2	One Two Three	7 13 26	Includes one B9.21 Item
	Reac Cool Pp 4 Seal Wtr In (8-741)	S6-57-2 and S6-57-1.5 [1.4-45]	PT	19	1 Socket 360° 2 2	One Two Three	5 16 26	Includes one B9.21 Item

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.40	Piping - Cont'd Socket Welds - Cont'd								
	2 Inch Nom. Diameter	Line No. & ISI Dwg. No.							
	Loop 1 Cold Leg Drain RCDT (7-218)	S6-958-2SPL+ [1.4-46]	PT	6	1 Socket	360°	One	17	
	Loop 2 Cold Leg Drain RCDT (7-219)	S6-959-2SPL+ [1.4-47]	PT	7	1 Socket 1	360°	Two Three	14 29	Drain Off Letdown Line S6-24-3
	Loop 3 Cold Leg Drain RCDT (7-214)	S6-960-2SPL+ [1.4-48]	PT	6	1 Socket	360°	One	17	
	Loop 4 Cold Leg Drain RCDT (7-215)	S6-961-2SPL+ [1.4-49]	PT	11	1 Socket 1 1	360°	One Two Three	9 18 27	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Piping - Cont'd							
B9.40	Socket Welds - Cont'd							
	2 Inch Nom. Diameter	Line No. & ISI Dwg. No.						
	SI Pp 1-1 Inj Hot Leg Loop 1 (9-278)	S6-3863-2 [1.4-50]	PT	5	1 Socket 60°	Two	20	
	SI Pp 1-1 Inj Hot Leg Loop 2 (9-279)	S6-3864-2 [1.4-51]	PT	5	1 Socket 360°	One	20	
	Safety Inj Hot Leg Loop 3 (9-218)	S6-1976-2 [1.4-52]	PT	8	1 Socket 360° 1	One Two	13 25	
	Safety Inj Hot Leg Loop 4 (9-217)	S6-1990-2 [1.4-53]	PT	10	1 Socket 360° 1	One Two	10 20	
	SI Pps Cold Leg Loop 1 Recirc (9-226)	S6-3855-2SPL [1.4-17]	PT	5	1 Socket 360°	Three	20	
	SI Pps Cold Leg Loop 2 Recirc (9-37,208)	S6-3856-2SPL [1.4-18]	PT	5	1 Socket 360°	Three	20	
	SI Pps Cold Leg Loop 3 Recirc (9-215)	S6-3857-2SPL [1.4-54]	PT	9	1 Socket 360° 1	One Two	11 22	
	SI Pps Cold Leg Loop 4 Recirc (9-216)	S6-3858-2SPL [1.4-55]	PT	15	1 Socket 360° 1 2	One Two Three	7 13 27	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J	Piping - Cont'd							
B9.40	Socket Welds - Cont'd							
	2 Inch Nom. Diameter	Line No. & ISI Dwg. No.						
	Loop 1 Hot Leg RTD Conn Hdr (7-221)	S6-1139-2SPL [1.4-56]	PT	19	1 Socket 360° 2 2	One Two Three	5 15 26	
	Loop 2 Hot Leg RTD Conn Hdr (7-224)	S6-1145-2SPL [1.4-57]	PT	19	1 Socket 360° 2 2	One Two Three	5 15 26	
	Loop 3 Hot Leg RTD Conn Hdr (7-231)	S6-1151-2SPL [1.4-58]	PT	19	1 Socket 360° 2 2	One Two Three	5 15 26	
	Loop 4 Hot Leg RTD Conn Hdr (7-230)	S6-1157-2SPL [1.4-59]	PT	21	2 Socket 360° 2 2	One Two Three	10 19 28	
	Loop 1 Cold Leg RTD Conn (7-220)	S6-1140-2SPL [1.4-60]	PT	15	1 Socket 360° 1 2	One Two Three	7 13 27	
	Loop 2 Cold Leg RTD Conn (7-222)	S6-1146-2SPL [1.4-61]	PT	15	1 Socket 360° 1 2	One Two Three	7 13 27	
	Loop 3 Cold Leg RTD Conn (7-236)	S6-1152-2SPL [1.4-62]	PT	19	1 Socket 360° 2 2	One Two Three	5 16 26	
	Loop 4 Cold Leg RTD Conn (7-234)	S6-1159-2SPL [1.4-63]	PT	17	2 Sockets 360° 2	One Two	12 24	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-J B9.40	Piping - Cont'd Socket Welds - Cont'd							
	1.5 Inch Nom. Diameter	Line No. & ISI Dwg. No.		(196)				1.5 In. Composite 26% 50 Sch'd[1]
	Boron Inj Tk Out Loop 1 Cold Leg (9-212,240,231)	S6-1991-1.5SPL+ [1.4-64] [1.4-65]	PT	42	3 Sockets 360° 4 4	One Two Three	7 17 26	Includes three B9.21 Items - Butt Welds[4]
	Boron Inj Tk Out Loop 2 Cold Leg (9-210,241,228)	S6-1992-1.5SPL+ [1.4-67] [1.4-68] [1.4-69]	PT	71	6 Sockets 360° 6 6	One Two Three	8 17 25	Includes two B9.21 Items - Butt Welds[4]
	Boron Inj Tk Out Loop 3 Cold Leg (9-209,239)	S6-1993-1.5SPL+ [1.4-70] [1.4-71]	PT	48	4 Sockets 360° 4 4	One Two Three	8 17 25	Includes three B9.21 Items - Butt Welds[4]
	Boron Inj Tk Out Loop 4 Cold Leg (9-212,240)	S6-1994-1.5SPL [1.4-64] [1.4-65]	PT	35	3 Sockets 360° 3 3	One Two Three	9 17 26	Includes two B9.21 Items - Butt Welds[4]

[4]NOTE: Total item counts on these lines includes the number of butt welds listed under REMARKS. The butt welds may randomly and arbitrarily be counted for socket welds to achieve the examination amounts listed, as examination requirement (PT) is the same.

Category B-K-1, welded support attachments to the pressure boundary (Items B10.10, B10.20 and B10.30), are scheduled for surface examination when the base metal thickness of the welded attachment is 5/8 inch (.625) and greater (Ref. IWB-2500-1 Footnote 3). Category B-K-2 includes all portions of all supports including welded support attachments to the pressure boundary regardless of size.

The total amount of B-K-1 applicable attachments to each system/component is noted adjacent to the line number and scheduled accordingly.

Supports for valves (B10.30 and B11.30) are scheduled together with the corresponding pipe (B10.10, B11.10) system. Supports for pumps (B10.20, B11.20) are scheduled in Table 1.5.

For clarification of the examination area of category B-K-2, see section IWF-1300 of the Winter 1980 Addenda of ASME Code Section XI.

NOTE: Numbers of hangers on each line, as shown here, are accurate at the time of this Program Plan revision, but will change with plant design requirements. Current status is maintained by the DCPP ISI Department. Snubbers (shown in "total snubr" column) are included in the support population (Total Hangr) for each line. In general, each snubber is examined every other refueling outage, exceeding the frequency required here.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K-1	Support Members				Exam'n area meets or exceeds req'ts of figures IWB-2500-13 and IWB-2500-15				
B-K-2	Component Supports								
B-K-1	Integrally Welded Attachments (To Pressure Boundary)								See discussion on page 35 of 57.
B10.10	Piping								
B10.20	Pumps(See Table 1.5)								
B10.30	Valves								
B-K-2	Component Supports				Reference IWF-1300 Winter '78 Add. For Clarification of B-K-2 exam. area				Valve Support Items B10.30 and B11.30 and attachment are included in this section and scheduled in conjunction with items B10.10 and Item B11.10 (Pipe Supports)
B11.10	Piping								
B11.20	Pumps (See Table 1.5)								
B11.30	Valves								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K-1 B-K-2	Support Members Component Supports				NOTE: The total number of hangers on each line appears under B-K-2.					
B10.10 B11.10	Integrally Welded Attach. Support Components 31 Inch Nom. Dia	Line No. & ISI Dwg No.								
	Reactor Coolant Pump Suction Loop 1 (07-30)	*5-31 [1.4-1]	VT-3	2	B-K-2 1 Support 1	100%	 One One	B-K-2 11 25	0	
	Reactor Coolant Pump Suction Loop 2 (07-31)	*6-31 [1.4-2]	VT-3	2	B-K-2 1 Support 1	100%	 One Two	 37 50	0	
	Reactor Coolant Pump Suction Loop 3 (07-31A)	*7-31 [1.4-3]	VT-3	2	B-K-2 1 Support 1	100%	 Two Three	 62 75	0	
	Reactor Coolant Pump Suction Loop 4 (07-30A)	*8-31 [1.4-4]	VT-3	2	B-K-2 1 Support 1	100%	 Three Three	 87 100	0	
	29,& 27.5 Inch Nom. Dia Reactor Coolant Out Loop 1 (7-30) [1.4-1]	*1-29SPL,and *9-27.5	-		-		-	-	- 0	No supports in boundary.
	Reactor Coolant Out Loop 2 (7-31) [1.4-2]	*2-29SPL, and *10-27.5	-		-		-	-	- 0	No supports in boundary.
	Reactor Coolant Out Loop 3 (7-31A) [1.4-3]	*3-29SPL, and *11-27.5	-		-		-	-	- 0	No supports in boundary.
	Reactor Coolant Out Loop 4 (7-30A) [1.4-4]	*4-29SPL, and *12-27.5	-		-		-	-	- 0	No supports in boundary.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd				B-K-2 requirements include a visual exam of welded attachments (VT-3) in addition to those exams required by category B-K-1					This column identifies support # when B-K-1 exam req'ts are applicable.
B10.10 B11.10	Support Attach't Support Components									
	14 Inch Nom. Diameter	Line No. & ISI DWG No.			Note: VT-4 Scheduled as applicable to individual components					B-K-1 Exam requirements applicable to: Mark No. / Weld No.
	Pressurizer Surge Line (Loop 2)(8-59A)	*16-14SPL [1.4-5]	VT-3 (VT-4)	5	B-K-2 3 Supports 2	100%	One Two	B-K-2 60 100	3	
	Hot Leg Recirc Before V-8702 (7-4)	S6-109-14SPL [1.4-6]	PT VT-3 (VT-4)	1 6	B-K-1 B-K-2 3 Supports 3	100% 100%	One One Two	100 B-K-2 50 100	 3	56N-6V/Param't
	Loop 4 Hot Leg Before V-8701 (10-11)	S6-1665-14SPL [1.4-7]	PT VT-3 (VT-4)	2 5	B-K-1 B-K-2 5 Supports	 100%	One One	100 B-K-2 100	 2	56N-4R/Param't 56N-5V/Param't

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports- Cont'd									B-K-1 Exam requirements applicable to: Mark No. / Weld No.
B10.10	Support Attach't									
B11.10	Support Components									
	10 Inch Nom. Diameter	Line No. & ISI Dwg. No.								
	Accumulator Injection Loop 1 (9-16,17)	S6-253-10SPL+ [1.4-8]	VT-3 (VT-4)	5	B-K-2 2 Supports 2 1	100%	 One Two Three	B-K-2 40 80 100	2	
	Accumulator Injection Loop 2 (9-21)	S6-254-10SPL+ [1.4-9]	PT VT-3 (VT-4)	1 3	B-K-1 B-K-2 1 Support 2	100%	Two One Two	100 B-K-2 33 100	 2	52-24V/Param't
NOTE: Welded Attachment 6-6 RR is not part of a support member										
	Accumulator Injection Loop 3 (9-19)	S6-255-10SPL+ [1.4-10]	PT VT-3 (VT-4)	1 2	B-K-1 B-K-2 2 Supports	100%	Three B-K-2 Three	100 B-K-2 100	 1	57N-4V/Param't
	Accumulator Injection Loop 4 (9-18)	S6-256-10SPL+ [1.4-11]	VT-3 (VT-4)	4	B-K-2 2 Supports 2	100%	 Two Three	B-K-2 50 100	 0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	8 Inch Nom. Diameter	Line No. & ISI Dwg No.								
	SIS To RCS Loop 1 Hot Leg (10-16)	S6-2575-8 [1.4-12]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%		B-K-2 100	1	
	SIS To RCS Loop 2 Hot Leg (10-16)	S6-2576-8 [1.4-12]	VT-3 (VT-4)	3	B-K-2 2 Supports 1	100%	Two Three	B-K-2 66 100	1	
	6 Inch Nom. Diameter									
	Safety Inj Loop 1 Hot Leg (10-17)	S6-235-6SPL+ [1.4-13]	VT-3 (VT-4)	5	B-K-2 2 Supports 2 1	100%	One Two Three	B-K-2 40 80 100	2	
	Safety Inj Loop 2 Hot Leg (10-18)	S6-236-6SPL+ [1.4-14]	VT-3 (VT-4)	5	B-K-2 2 Supports 3	100%	Two Three	B-K-2 40 100	2	
	Safety Inj Loop 3 Hot Leg (9-33)	S6-237-6SPL+ [1.4-15]	VT-3 (VT-4)	8	B-K-2 4 Supports 4	100%	Two Three	B-K-2 50 100	1	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									B-K-1 Exam requirements applicable to: Mark No. Weld No.
B10.10	Support Attach't									
B11.10	Support Components									
	6 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Safety Inj Loop 4 Hot Leg (9-34,7-4)	S6-238-6SPL+ [1.4-16] [1.4-6]	VT-3 (VT-4)	4	B-K-2 3 Supports 1	100%	 Two Three	B-K-2 75 100	0	
	RHR Pp 1-1 Inj Cold Leg 1 (9-16,17) (9-36,226)	S6-3844-6SPL+ [1.4-17]	PT VT-3 (VT-4)	1 5	B-K-1 B-K-2 1 Supports 2 2	100%	Two One Two Three	100 B-K-2 20 60 100	 0	42-41V/Param't
	RHR Pp 1-1 Inj Cold Leg 2 (9-37,208)	S6-3845-6SPL+ [1.4-18]	PT VT-3 (VT-4)	1 10	B-K-1 B-K-2 3 Supports 3 4	100%	Three One Two Three	100 B-K-2 30 60 100	 6	42-44V/Param't
	RHR Pp 1-2 Inj Cold Leg 3 (9-43)	S6-3846-6SPL+ [1.4-19]	VT-3 (VT-4)	8	B-K-2 5 Supports 3	100%	 Two Three	B-K-2 62 100	2	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									B-K-1 Exam requirements applicable to: Mark No. Weld No.
B10.10 B11.11	Support Attach't Support Components									
	6 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	RHR Pp 1-2 Inj Cold Leg 4 (9-42)	S6-3847-6SPL+ [1.4-20]	PT VT-3 (VT-4)	1 8	B-K-1 B-K-2 2 Supports 6	100%	Three Two Three	100 B-K-2 25 100	0	58N-60R/X309A-H
	Pressurizer RV-8010A Inlet (7-27)	S6-729-6SPL+ [1.4-21]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	One	B-K-2 100	1	(Vlv;B11.30 Item) (48-1R)
	Pressurizer RV-8010B Inlet (7-28)	S6-728-6SPL+ [1.4-22]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	Three	B-K-2 100	1	(Vlv;B11.30 Item) (48-12R)
	Pressurizer RV-8010C Inlet (07-29)	S6-727-6SPL+ [1.4-23]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	Two	B-K-2 100	1	(Vlv;B11.30 Item) (48-17R)
	Pressurizer Power RV Inlet (07-25)	S6-730-6SPL [1.4-24]	VT-3 (VT-4)	3	B-K-2 3 Supports	100%	One	B-K-2 100	2	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10 B11.10	Support Attach't Support Components									B-K-1 Exam requirements applicable to:
	4 Inch Nom. Diameter	Line No. & ISI Dwg No.	VT-3							Mark No. / Weld No.
	Pressurizer RV PCV-455C Inlet (7-25)	S6-4081-4SPL [1.4-24]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Two	B-K-2 100	1	
	Loop 1 Spray Line (7-6,7,8)	S6-13-4SPL [1.4-27] [1.4-26] [1.4-25]	PT VT-3 (VT-4)	2 19	B-K-1 B-K-2 8 Supports 5 6	100% 100%	Two One Two Three	B-K-1 100 B-K-2 42 68 100	2	52-33A X-408B (X 408 A,C not accessible) 42-71A X409B (X409A not accessible)
	Loop 2 Spray Line (8-5, 6)	S6-14-4SPL [1.4-28] [1.4-25]	VT-3 (VT-4)	19	B-K-2 6 Supports 7 6	100%	One Two Three	B-K-2 31 68 100	9	
	Pressurizer Spray Line (7-9)	S6-15-4SPL [1.4-29]	VT-3 (VT-4)	14	B-K-2 3 Supports 4 7	100%	One Two Three	B-K-2 21 50 100	2	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
										B-K-1 Exam requirements applicable to:
B-K	Supports - Cont'd									
B10.10	Support Attach't									Mark No.
B11.10	Support Components									Weld No.
	3 Inch Nom. Diameter	Line No. & ISI Dwg No.								
	Loop 1 Hot Leg RTD Conn (7-23)	S6-3488-3SPL [1.4-30]	PT	1	B-K-1		Three	100		46-11R/X356A1-D1
			VT-3	6	B-K-2			B-K-2		X407A-D
			(VT-4)		2 Supports	100%	One	33	3	
					2		Two	66		
					2		Three	100		
	Loop 1 Cold Leg RTD Conn (7-23)	S6-3798-3SPL [1.4-30]	PT	1	B-K-1		One	100		46-9V/X412A-D
			VT-3	2	B-K-2			B-K-2		
			(VT-4)		1 Support	100%	One	50	1	
					1		Three	100		
	Loop 1 RTD Manifold Ret Hdr. (7-23)	S6-1141-3SPL [1.4-30]	VT-3	7	B-K-2			B-K-2		
			(VT-4)		3 Supports	100%	One	42	0	
					1		Two	57		
					3		Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd								B-K-1 Exam requirements applicable to:
B10.10	Support Attach't								Mark No. / Weld No.
B11.10	Support Components								
	3 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.							
	Loop 2 Hot Leg RTD Conn (7-24)	S6-3489-3SPL [1.4-31]	PT VT-3 (VT-4)	1 5	B-K-1 B-K-2 2 Supports 100% 3	One One Two	100 B-K-2 40 100	 2	47-15V X 410A-D
	Loop 2 Cold Leg RTD Conn (7-24)	S6-3799-3SPL [1.4-31]	VT-3 (VT-4)	3	B-K-2 3 Supports 100%	 Two	B-K-2 100	 1	
	Loop 2 RTD Manifold Ret Hdr (7-24)	S6-1147-3SPL [1.4-31]	VT-3 (VT-4)	6	B-K-2 3 Supports 100% 2 1	 One Two Three	B-K-2 50 83 100	 1	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	3 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Loop 3 Hot Leg RTD Conn (7-21)	S6-3495-3SPL [1.4-32]	VT-3 (VT-4)	6	B-K-2 3 Supports 3	100%	One Three	B-K-2 50 100	3	
	Loop 3 Cold Leg RTD Conn (7-21)	S6-3800-3SPL [1.4-32]	VT-3 (VT-4)	5	B-K-2 5 Supports	100%	Three	B-K-2 100	1	
	Loop 3 RTD Manifold Ret Hdr (7-24)	S6-1153-3SPL [1.4-32]	VT-3 (VT-4)	6	B-K-2 3 Supports 3	100%	One Three	B-K-2 50 100	2	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	3 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Loop 4 Hot Leg RTD Conn (7-22)	S6-3496-3SPL [1.4-33]	VT-3 (VT-4)	7	B-K-2 3 Supports 2 2	100%	 One Two Three	B-K-2 42 71 100	3	
	Loop 4 Cold Leg RTD Conn (7-22)	S6-3801-3SPL [1.4-33]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	 Two	B-K-2 100	0	
	Loop 4 RTD Manifold Ret Hdr (7-22)	S6-1158-3SPL [1.4-33]	VT-3 (VT-4)	5	B-K-2 3 Supports 2	100%	 One Two	B-K-2 60 100	2	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Component									
	3 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Charging Line Loop 4 (8-61)	S6-246-3SPL [1.4-34]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Two	B-K-2 100	0	
	Charging Line Loop 3 (8-59)	S6-50-3SPL [1.4-35]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Three	B-K-2 100	0	
	Boron Inj Cold Leg Hdr (9-35)	S6-1995-3 S6-1016-3 [1.4-36]	VT-3 (VT-4)	7	B-K-2 3 Supports 2 2	100%	One Two Three	B-K-2 42 71 100	1	
	Letdown Line Loop 2 (7-14,15)	S6-24-3SPL [1.4-37] [1.4-38]	VT-3 (VT-4)	6	B-K-2 3 Supports 1 2	100%	One Two Three	B-K-2 50 66 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									B-K-1 Exam requirements applicable to:
B10.10	Support Attach't									
B11.10	Support Components									
										Mark No. / Weld No.
	3 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Pressurizer Pwr RV PCV-474 (7-25)	S6-1171-3SPL+ [1.4-24]	VT-3 (VT-4)	8	B-K-2 8 Supports	100%	Two	B-K-2 100	6	
	Pressurizer Pwr RV PCV-455C (7-25)	S6-1172-3SPL+ [1.4-24]	PT	1	B-K-1		Two	100		48-29A/FWX301A-C
			VT-3 (VT-4)	5	B-K-2 1 Support	100%	One	B-K-2 20	3	
					1		Two	40		
					3		Three	100		
	Pressurizer Pwr RV PCV-456 (7-26)	S6-1195-3SPL+ [1.4-39]	VT-3 (VT-4)	8	B-K-2 8 Supports	100%	Three	B-K-2 100	7	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	2 Inch Nom. Diameter	Line No. & ISI Dwg No.								
	Charging Line Aux Spray (8-350)	S6-51-2SPL+ S6-4532-2SPL [1.4-40] [1.4-41]	VT-3 (VT-4)	29	B-K-2 5 Supports 13 11	100%	 One Two Three	B-K-2 17 62 100	0	(V1v;B11.30 Items 22-70R & 22-351R)
	Reac Cool Pp 1 Seal Wtr In (8-736)	S6-54-2 (And) 1.5 [1.4-42]	VT-3 (VT-4)	3	B-K-2 3 Supports	100%	 Three	B-K-2 100	2	
	Reac Cool Pp 2 Seal Wtr In (8-713)	S6-55-2 (And) 1.5 [1.4-43]	VT-3 (VT-4)	3	B-K-2 3 Supports	100%	 Two	B-K-2 100	2	
	Reac Cool Pp 3 Seal Wtr In (8-376)	S6-56-2 (And) 1.5 [1.4-44]	VT-3 (VT-4)	3	B-K-2 2 Supports 1	100%	 Two Three	B-K-2 66 100	1	
	Reac Cool Pp 4 Seal Wtr In (8-741)	S6-57-2 (And) 1.5 [1.4-45]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	 One	B-K-2 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10 B11.10	Support Attach't Support Components									
	2 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Loop 1 Cold Leg Drain RCDT (7-218)	S6-958-2SPL+ [1.4-46]	-	-	-		-	-	0	No supports in boundary.
	Loop 2 Cold Leg Drain RCDT (7-219)	S6-959-2SPL+ [1.4-47]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Three	B-K-2 100	0	
	Loop 3 Cold Leg Drain RCDT (7-214)	S6-960-2SPL+ [1.4-48]	-	-	-		-	-	0	No supports in boundary.
	Loop 4 Cold Leg Drain RCDT (7-215)	S6-961-2SPL+ [1.4-49]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Three	B-K-2 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	2 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	SI Pp 1-1 Inj Hot Leg Loop 1 (9-278)	S6-3863-2 [1.4-50]	-	-	-		-	-	0	No supports in boundary.
	SI Pp 1-1 Inj Hot Leg Loop 2 (9-279)	S6-3864-2 [1.4-51]	-	-	-		-	-	0	No supports in boundary.
	Safety Inj Hot Leg Loop 3 (9-218)	S6-1976-2 [1.4-52]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	One	B-K-2 100		
	Safety Inj Hot Leg Loop 4 (9-217)	S6-1990-2 [1.4-53]	-	-	-		-		0	No supports in boundary.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd								
B10.10	Support Attach't								
B11.10	Support Components								
	2 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.							
	SI Pps Cold Leg Loop 1 Recirc (9-36,226)	S6-3855-2SPL+ [1.4-17]	-	-	-	-	-	0	No supports in boundary.
	SI Pps Cold Leg Loop 2 Recirc (9-37,208)	S6-3856-2SPL+ [1.4-18]	-	-	-	-	-	0	No supports in boundary.
	SI Pps Cold Leg Loop 3 Recirc (9-215)	S6-3857-2SPL+ [1.4-54]	VT-3 (VT-4)	4	B-K-2 1 Support(s) 100% 3	 One Two	B-K-2 25 100	0	
	SI Pps Cold Leg Loop 4 Recirc (9-216)	S6-3858-2SPL+ [1.4-55]	VT-3 (VT-4)	4	B-K-2 1 Supports 100% 1 2	 One Two Three	B-K-2 25 50 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	2 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.								
	Loop 1 Hot Leg RTD Conn Hdr (7-221)	S6-1139-2SPL [1.4-56]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	Three	B-K-2 100	1	
	Loop 2 Hot Leg RTD Conn Hdr (7-224)	S6-1145-2SPL [1.4-57]	VT-3 (VT-4)	4	B-K-2 2 Supports 2	100%	One Two	B-K-2 50 100	2	
	Loop 3 Hot Leg RTD Conn Hdr (7-231)	S6-1151-2SPL [1.4-58]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	One	B-K-2 100	1	
	Loop 4 Hot Leg RTD Conn Hdr (7-230)	S6-1157-2SPL [1.4-59]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	Three	B-K-2 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd								
B10.10	Support Attach't								
B11.10	Support Components								
	2 Inch Nom. Diameter (Cont'd)	Line No. & ISI Dwg No.							
	Loop 1 Cold Leg RTD Conn (7-220)	S6-1140-2SPL [1.4-60]	VT-3 (VT-4)	1	B-K-2 1 Support	100%	One	B-K-2 100	1
	Loop 2 Cold Leg RTD Conn (7-222)	S6-1146-2SPL [1.4-61]	VT-3 (VT-4)	4	B-K-2 4 Supports	100%	Two	B-K-2 100	4
	Loop 3 Cold Leg RTD Conn (7-236)	S6-1152-2SPL [1.4-62]	VT-3 (VT-4)	3	B-K-2 3 Supports	100%	Three	B-K-2 100	2
	Loop 4 Cold Leg RTD Conn (7-234)	S6-1159-2SPL [1.4-63]	VT-3 (VT-4)	2	B-K-2 2 Supports	100%	Three	B-K-2 100	2

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
B-K	Supports - Cont'd									
B10.10	Support Attach't									
B11.10	Support Components									
	1.5 Inch Nom. Diameter	Line No. & ISI Dwg No.								
	Boron Inj Tk Out Loop 1	S6-1991-1.5	VT-3	16	B-K-2			B-K-2		
	Cold Leg (9-240)	[1.4-64]	(VT-4)		5 Supports	100%	One	31	1	
	(9-212)	[1.4-65]			6		Two	68		
	(9-231)	[1.4-66]			5		Three	100		
	Boron Inj Tk Out Loop 2	S6-1992-1.5	VT-3	29	B-K-2			B-K-2		
	Cold Leg (9-210)	[1.4-67]	(VT-4)		7 Supports	100%	One	24	0	
	(9-241)	[1.4-68]			13		Two	68		
	(9-228)	[1.4-69]			9		Three	100		
	Boron Inj Tk Out Loop 3	S6-1993-1.5	VT-3	17	B-K-2			B-K-2		
	Cold Leg (9-209)	[1.4-70]	(VT-4)		5 Supports	100%	One	29	1	
	(9-239)	[1.4-71]			7		Two	70		
					5		Three	100		
	Boron Inj Tk Out Loop 4	S6-1994-1.5	VT-3	13	B-K-2			B-K-2		
	Cold Leg (9-212)	[1.4-64]	(VT-4)		5 Supports	100%	One	38	1	
	(9-240)	[1.4-65]			4		Two	69		
					4		Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pumps Reactor Coolant Pumps	Dwg. Ref. DC663207-34 *[1.5-1]			Exam'n area meets or exceeds req'ts of Fig.IWB-2500-12			[*] ISI Dwg Page No.
B-G-1	Pressure Retaining Bolting Larger than 2-Inch Dia Pump 1-1 Ser. No. 562 Pump 1-2 Ser. No. 507 Pump 1-3 Ser. No. 508 Pump 1-4 Ser. No. 509							Footnote 4 of Category B-G-1 Ref. B-L-1 which specifies one pump.
B6.180	Bolts and Studs, In Place, Pump 1-2	Pump Flange Bolts No. 1 Thru No. 24	UT	24	8 Bolts 100% 8 Bolts 8 Bolts	One Two Three	33 66 100	
B6.190	Bolts and Studs, When Removed, Pump 1-2 (typical, see Remarks)	Pump Flange Bolts No. 1 Thru No. 24	UT PT/MT	- 24	- 24 Bolts 100%	- Three	- 100	Pump chosen for examination will depend on maintenance schedule
B6.200	Bolting (Ligaments between bolt holes)		VT-1	24	Ligaments 100%	Three	100	(Threads, When Bolts are Removed)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pumps - Cont'd Reactor Coolant Pumps							
B-G-2	Pressure Retaining Bolting (2-Inch Dia and Less)	Seal House Bolting						Accessible Surfaces
B7.60	Bolts, Studs, & Nuts Pump 1-1	Bolts No. 1 Thru No. 12 [1.5-1]	VT-1	12	4 Bolts 100% 4 4	One Two Three	33 66 100	
B7.60	Bolts, Studs, & Nuts Pump 1-2	Bolts No. 1 Thru No. 12 [1.5-1]	VT-1	12	4 Bolts 100% 4 4	One Two Three	33 66 100	
B7.60	Bolts, Studs, & Nuts Pump 1-3	Bolts No. 1 Thru No. 12 [1.5-1]	VT-1	12	4 Bolts 100% 4 4	One Two Three	33 66 100	
B7.60	Bolts, Studs, & Nuts Pump 1-4	Bolts No. 1 Thru No. 12 [1.5-1]	VT-1	12	4 Bolts 100% 4 4	One Two Three	33 66 100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pumps - Cont'd Reactor Coolant Pumps				Exam'n Area meets or exceeds req'ts of IWB-2500-15 (Typical Design)			
B-K-1	Support Members							
	Integrally Welded Attachments (To Pressure Bound.)							
B10.20	Welded Attachments Pump 1-2	WELDS #1, #2, #3 [1.5-1]	PT	3	1 Lug 100% 1 Lug 100% 1 Lug 100%	One Two Three	33 66 100	Welded attachment required on one pump. Category B-K-1 Footnote 1 Ref. B-J which specifies 1 loop.
B-K-2	Support Components							
B11.20	Support Components Pump 1-1	Support Components	VT-3	(1)	Components 100%	One	25	(1) B11.20 Items include all pump support members (support lugs, bolts, columns, and lateral support members)
	Support Components Pump 1-2	Support Components	VT-3	(1)	Components 100%	Two	50	
	Support Components Pump 1-3	Support Components	VT-3	(1)	Components 100%	Three	75	
	Support Components Pump 1-4	Support Components	VT-3	(1)	Components 100%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Pumps - Cont'd Reactor Coolant Pumps				Exam'n area meets or exceeds req'ts of Figure IWB-2500-16 The exam'n method shown in IWB-2500-1 (S-78) was corrected by ERRATA (W-78) Deleting surface req't.			
B-L-1	Pressure Retaining Welds							
	Pump Casing Welds	Pump Casing Welds						
B12.10	Reactor Coolant Pump 1-2*.	Pump Body Girth Weld	VT-1, VT-2*	1	1 Pump Girth Weld	Three	100%	Code Case N-481; *VT-2, of all pump casings will also be performed during a system hydrostatic test in accordance with Code Case N-498.
B-L-2	Pump Casing Interior							
B12.20	Reactor Coolant Pump 1-1, 1-2, 1-3 and 1-4, dependent on maintenance schedule.*	Interior Surfaces	VT-3*	1	1 Interior 100% Pump Surface*	Three*	100%	Code Case N-481 *VT-3 will be performed every time any pump is disassembled, but ONLY IF disassembly is required for other maintenance.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
Augmt'd RG. 1.14	Reactor Coolant Pump Flywheels	RCP 1-3	MT	1	100%	One	100	Proc N-MT-1
		RCP 1-3	UT	1	100%	One	100	Proc N-UT-6
		RCP 1-1,1-2,1-4	UT	3	Keyway Only	One	100	Proc N-UT-6
		RCP 1-1,1-2	MT	2	100%	Two	100	Proc N-MT-1
		RCP 1-1,1-2	UT	2	100%	Two	100	Proc N-UT-6
		RCP 1-3,1-4	UT	2	Keyway Only	Two	100	Proc N-UT-6
		RCP 1-4	MT	1	100%	Three	100	Proc N-MT-1
		RCP 1-4	UT	1	100%	Three	100	Proc N-UT-6
		RCP 1-1,1-2,1-3	UT	3	Keyway Only	Three	100	Proc N-UT-6

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Valves								[*] ISI Dwg. Page No.
B-G-1	Pressure Retaining Bolting (Larger Than 2 Inch Dia)								
B6.210	Bolts and Studs, in Place								B6.210, B6.220 And B6.230 Items Not Applicable
B6.220 And B6.230	Bolts and Studs, When Removed Bolting								
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less)								Percentage by System and Size
B7.70	Bolts, Studs, and Nuts 14 Inch Nom. Dia	Line No. & Valve No.			Bonnet Bolting				Manufacturer & Style
	Hot Leg Recirc Before V-8702 (7-4) [1.4-6]*	S6-109-14SPL V-8702	VT-1	1	16 Studs and Nuts	100%	One	50	Copes-Vulcan GM-48SEZ
	Loop 4 Hot Leg Before V-8701 (10-11) [1.4-7]	S6-1665-14SPL V-8701	VT-1	1	16 Studs and Nuts	100%	Two	100	Copes-Vulcan GM-48SEZ (Note B12.40)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Valves - Cont'd							
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
B7.70	10 Inch Nom. Dia	Line No. & Valve No.			Bonnet Bolting			Manufacturer & Style
	Accumulator Injection Loop 1 (9-16,17) [1.4-8]	S6-253-10SPL+						Darling
		V-8956A	VT-1	1	16 Studs 100%	One	13	10C48Z
		V-8948A	VT-1	1	16 Studs 100% and Nuts	Two	38	10C48Z
	Accumulator Injection Loop 2 (9-21) [1.4-9]	S6-254-10SPL+						Darling
		V-8956B	VT-1	1	16 Studs 100%	Two	50	10C48Z
		V-8948B	VT-1	1	16 Studs 100% and Nuts	Three	75	10C48Z
	Accumulator Injection Loop 3 (9-19) [1.4-10]	S6-255-10SPL+						Darling
		V-8956C	VT-1	1	16 Studs 100%	One	25	10C48Z
		V-8948C	VT-1	1	16 Studs 100% and Nuts	Three	88	10C48Z
	Accumulator Injection Loop 4 (9-18) [1.4-11]	S6-256-10SPL+						Darling
		V-8956D	VT-1	1	16 Studs 100%	Two	63	10C48Z
		V-8948D	VT-1	1	16 Studs 100% and Nuts	Three	100	10C48Z

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Valves - Cont'd								
B-G-2	Pressure Retaining Bolting(2 Inch Dia and Less) Bolts, Studs, and Nuts								
		Line No. Valve No.			Bonnet Bolting				Manufacturer & Style
B7.70	8 Inch Nom. Dia								
	SIS to RCS Loop 1 Hot Leg (10-16) [1.4-12]	S6-2575-8 V-8740A	VT-1	1	16 Studs and Nuts	100%	One	50	Darling 8C48Z
	SIS to RCS Loop 2 Hot Leg (10-16) [1.4-12]	S6-2576-8 V-8740B	VT-1	1	16 Studs and Nuts	100%	Three	100	Darling 8C48Z
B7.70	6 Inch Nom. Dia								
	Safety Inj Loop 1 Hot Leg (10-17) [1.4-13]	S6-235-6SPL+ V-8949A	VT-1	1	12 Studs and Nuts	100%	Two	25	Velan 6C58 (see below)
	Safety Inj Loop 2 Hot Leg (10-18) [1.4-14]	S6-236-6SPL+ V-8949B	VT-1	1	12 Studs and Nuts	100%	Two	50	Velan 6C58
	Safety Inj Loop 3 Hot Leg (9-33) [1.4-15]	S6-237-6SPL+ V-8949C	VT-1	1	12 Studs and Nuts	100%	Three	75	Velan 6C58

NOTE: Valve 8949A studs and nuts replaced during Period One. ISI exam rescheduled to Period 2 for the first inspection interval.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G-2	VALVES - Cont'd Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
B7.70	6 Inch Nom. Dia - Cont'd	Line No. Valve No.			Bonnet Bolting			Manufacturer & Style
	Safety Inj Loop 4 Hot Leg (9-34) [1.4-6]	S6-238-6SPL+ V-8949D	VT-1	1	12 Studs and Nuts 100%	Three	100	Velan 6C58
	RHR Pp1-1 Inj Cold Leg 1 (9-16,17) [1.4-17]	S6-3844-6SPL+ V-8818A	VT-1	1	12 Studs and Nuts 100%	Two	25	Velan 6C58 (see below)
	RHR Pp1-1 Inj Cold Leg 2 (9-37,208) [1.4-18]	S6-3845-6SPL+ V-8818B	VT-1	1	12 Studs and Nuts 100%	Two	50	Velan 6C58
	RHR Pp1-2 Inj Cold Leg 3 (9-43) [1.4-19]	S6-3846-6SPL+ V-8818C	VT-1	1	12 Studs and Nuts 100%	Three	75	Velan 6C58
	RHR Pp1-2 Inj Cold Leg 4 (9-42) [1.4-20]	S6-3847-6SPL+ V-8818D	VT-1	1	12 Studs and Nuts 100%	Three	100	Velan 6C58

NOTE: Valve 8818A studs and nuts replaced during Period One. ISI exam rescheduled to Period Two.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	VALVES - Cont'd							
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
		Line No. Valve No.			Bonnet Bolting			Manufacturer & Style
B7.70	6 Inch Nom. Dia - Cont'd							
	Pressurizer RV-8010A Inlet (7-27) [1.4-21]	S6-729-6 RV-8010A	VT-1	1	8 Studs 100% and Nuts	One	33	Crosby 6RV58MSB
	Pressurizer RV-8010B Inlet (7-28) [1.4-22]	S6-728-6 RV-8010B	VT-1	1	8 Studs 100% and Nuts	Two	66	Crosby 6RV58MSB
	Pressurizer RV-8010C Inlet (7-29) [1.4-23]	S6-727-6 RV-8010C	VT-1	1	8 Studs 100% and Nuts	Three	100	Crosby 6RV58MSB
B7.70	4 Inch Nom. Dia							
	Loop 1 Spray Line (7-6, 7-7, 7-8) [1.4-26]	S6-13-4SPL+						Velan
		V-8033C	VT-1	1	12 Studs 100%	One	33	4G58
		V-8033D	VT-1	1	12 Studs 100%	Two	66	4G58
		1-PCV-455B	VT-1	1	8 Studs 100 and Nuts	Three	100	Fisher Controls SS-84
	Loop 2 Spray Line (7-5, 7-6) [1.4-28] [1.4-25]	S6-14-4SPL+						Velan
		V-8033A	VT-1	1	12 Studs 100%	One	33	4G58
		V-8033B	VT-1	1	12 Studs 100%	Two	66	4G58
		1-PCV-455A	VT-1	1	8 Studs 100% and Nuts	Three	100	Fisher Controls SS-84

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G-2	VALVES - Cont'd Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
B7.70	3 Inch Nom. Dia -	Line No. Valve No.			Bonnet Bolting			Manufacturer & Style
	Loop 1 Hot Leg RTD Conn (7-23) [1.4-30]	S6-3488-3SPL+ V-8073A	VT-1	1	12 Studs and Nuts 100%	One	25	Velan 3G58
	Loop 2 Hot Leg RTD Conn (7-24) [1.4-31]	S6-3489-3SPL+ V-8073B	VT-1	1	12 Studs and Nuts 100%	Two	50	Velan 3G58
	Loop 3 Hot Leg RTD Conn (7-21) [1.4-32]	S6-3495-3SPL+ V-8073C	VT-1	1	12 Studs and Nuts 100%	Three	75	Velan 3G58
	Loop 4 Hot Leg RTD Conn (7-22) [1.4-33]	S6-3496-3SPL+ V-8073D	VT-1	1	12 Studs and Nuts 100%	Three	100	Velan 3G58
	Loop 1 RTD Manifold Ret Hdr (7-24) [1.4-30]	S6-1141-3SPL+ V-8074A	VT-1	1	12 Studs and Nuts 100%	One	25	Velan 3G58

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
B-G-2	VALVES - Cont'd Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
B7.70	3 Inch Nom. Dia Cont'd	Line No. Valve No.			Bonnet Bolting			Manufacturer & Style
	Loop 2 RTD Manifold Ret Hdr (7-24) [1.4-31]	S6-1147-3SPL+ V-8074B	VT-1	1	12 Studs and Nuts 100%	Two	50	Velan 3G58
	Loop 3 RTD Manifold Ret Hdr (7-21) [1.4-32]	S6-1153-3SPL+ V-8074C	VT-1	1	12 Studs and Nuts 100%	Three	75	Velan 3G58
	Loop 4 RTD Manifold Ret Hdr (7-22) [1.4-33]	S6-1158-3SPL+ V-8074D	VT-1	1	12 Studs and Nuts 100%	Three	100	Velan 3G58
	Charging Line Loop 4 (8-61) [1.4-34]	S6-246-3SPL+ V-8378B V-8379B	VT-1 VT-1	1 1	12 Studs 100% 12 Studs and Nuts	Two Two	50 100	Velan 3C58 3C58
	Charging Line Loop 3 (8-59) [1.4-35] (CVCS Alternate)	S6-50-3SPL+ V-8379A V-8378A	VT-1 VT-1	1 1	12 Studs 100% 12 Studs and Nuts 100%	Two Three	50 100	Velan 3C58 3C58

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Valves - Cont'd							
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts							
B7.70	3 Inch Nom. Dia - Cont'd	Line No. Valve No.			Bonnet Bolting			Manufacturer & Style
	Boron Inj Cold Leg Hdrs (9-35) [1.4-36]	S6-1016-3 V-8820	VT-1	1	12 Studs 100% and Nuts	One	100	Velan 3C58
	Letdown Line Loop 2 (7-14, 7-5) [1.4-37] [1.4-38]	S6-24-3SPL+ 1-LCV-459(2")	VT-1	1	6 Studs 100%	Two	66	Copes-Vulcan(2")
		1-LCV-460	VT-1	1	8 Studs 100% and Nuts	Three	100	Masoneilan 3IA58RGP
	Pressurizer Power RV PCV-474 (7-25) [1.4-24]	S6-1171-3SPL+ V-8000A	VT-1	1	12 Studs 100%	Two	50	Velan 3GM58FN
		1-PCV-474	VT-1	1	8 Studs 100% and Nuts	Three	100	Masoneilan 3IA58RGP
	Pressurizer Power RV PCV-455C (7-24) [1.4-24]	S6-1172-3SPL+ V-8000B	VT-1	1	12 Studs 100%	Two	50	Velan 3GM58FN
		1-PCV-455C	VT-1	1	8 Studs 100% and Nuts	Three	100	Masoneilan 3IA58RGP
	Pressurizer Power RV PCV-456 (7-26) [1.4-39]	S6-1195-3SPL+ V-8000C	VT-1	1	12 Studs 100%	Two	50	Velan 3GM58FN
		1-PCV-456	VT-1	1	8 Studs 100% and Nuts	Three	100	Masoneilan 3IA58RGP

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Valves - Cont'd								
B-G-2	Pressure Retaining Bolting (2 Inch Dia and Less) Bolts, Studs, and Nuts								
B7.70	2 Inch Nom. Dia	Line No. Valve No.			Bonnet Bolting				Manufacturer & Style
	Charging Line Aux Spray (8-350,354) [1.4-40]	S6-51-2SPL+ V-8145	VT-1	1	6 Studs and Nuts	100%	One	50	Copes-Vulcan 2IA58RE
	Charging Line Aux Spray (8-350,354) [1.4-40]	S6-4532-2SPL+ V-8148	VT-1	1	6 Studs and Nuts	100%	Two	100	Copes-Vulcan 2IA58RE

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 1

REV. 8

MAJOR ITEM: VALVE SUPPORTS (B-K-1)(B-K-2)(B-M-1)
TABLE: 1.6

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	VALVES - Cont'd							
B-K-1	Support Members							
B10.30	Integrally Welded Attachments (To Pressure Boundary	Attach't Welds						B10.30 Not Applicable - No Welded Attachments to Valves
B-K-2	Support Components							
B11.30	Component Supports	Support Components						Included in Table 1.4, Scheduled with Pipe Supports.
B-M-1	Pressure Retaining Welds							
B12.30	Valve Body Welds (4 Inch or Less Nom. Dia)							B12.30 Items not applicable. Reference fig. IWB-2500-17

Note Comments on Discussion Page 35 of 57 in Table 1.4

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	VALVES - Cont'd							
B-M-2	Pressure Retaining Welds		B12.40 Items are listed to indicate the amount and type that require inspection under category B-M-2. However, the valve selection within a series of valves performing similar function is optional and dependent on maintenance schedule. Refer to Code Item B7.70, Table 1.6, for complete inventory of applicable components.					B12.40 Items are selected in accordance with IWB-2500-1, footnote 3, exam'n period optional (1)
B12.40	Valve Body Welds Greater than 4 Inch Nom. Dia. (Internal Surfaces)	Line No. & Valve No.			Valve Interior	(1)		Manufacturer & Style
	Loop 4 Hot Leg Before V-8701 (10-11) [1.4-7]	S6-1665-14SPL+ V-8701	VT-1	1	1 Valve (surface)	Three	100	Copes-Vulcan GM-48SEZ (Containment Isol)
	Accumulator Injection (9-16,17)Loop1[1.4-8]	S6-253-10SPL+ V-8956A	VT-1	1	1 Valve (surface)	Three	100	Darling 10C48Z Check Valve
	Safety Inj Loop 1 Hotleg (10-16) [1.4-13]	S6-235-6SPL+ V-8949A	VT-1	1	1 Valve (Surface)	Three	100	Velan 6C58 Check Valve
	Pressurizer RV-8010B (7-28) Inlet [1.4-22]	S6-728-6SPL+ RV-8010B	VT-1	1	1 Valve (Surface)	Three	100	Crosby 6RV58 Relief Valve

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
C-A	STEAM GENERATORS Pressure Retaining Welds	*[2.1-1] Dwg. Ref. DC-663206-37						[*] ISI Dwg. Page No.
					Exam'n Area meets or exceeds req'ts of Fig. IWC-2520-1 (C1.10/C1.20) and IWC-2520-2 (C1.30)			Welds 1-3,2-4,3-5,and 4-7 have removable insulation windows to expose 20% of weld as required by S-75 Section XI, see relief request #007.
C1.10 C1.20 C1.30	WELDS Shell Circumferential Head Circumferential Tube Sheet to Shell							Girth Weld W1-2 is examined concurrently with channel head to tube sheet weld.
		GIRTH WELDS						
C1.30	Steam Generator 1-1 (Serial No. 1041)	Girth W1-2	UT	1	Tube Sheet 100% (to) Stub Barrel (36')	One Two Three	6 13 20	T=3.25/5.16" C=36' (circ.)
C1.10	Steam Generator 1-1 (Serial No. 1041)	Girth W1-3 Loop 1	UT	1	Stub Barrel 20% (to) Lower Shell (7.2')	One	40	T=3.25"/2.82" C=36' (circ.)
C1.10	Steam Generator 1-2 (Serial No. 1042)	Girth W2-4 Loop 2	UT	1	Shell Barrel 20% (to) Transition (7.2') cone	Two	60	T=2.82"/3.68" C=36' (circ.)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	STEAM GENERATORS (continued)							
C-A	Pressure Retaining Welds - Cont'd	GIRTH WELDS						
C1.10	Steam Generator 1-3 (Serial No. 1043)	Girth W3-5 Loop 3	UT	1	Transition 20% Cone (to) (9.2') Upper Barrel	Three	80	T=3.68"/3.62" C=46' (circ.)
C1.20	Steam Generator 1-4 (Serial No. 1044)	Girth W4-7 Loop 4	UT	1	Upper Barrel 20% (to) Upper Head (9.2')	Three	100	T=3.62"/3.62" C=46' (circ.)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	STEAM GENERATORS (continued)				Exam'n area meets or exceeds req'ts of fig. IWC-2520-3 (and) IWC-2520-4 as applicable.			
C-B	Pressure Retaining Nozzle Welds (pipe diameter over 4")							
C2.10	Nozzles in vessels <_1/2" nominal thickness							C2.10 Items not applicable, note C2.20
C2.20	Nozzles in vessels >1/2" nominal thickness	Steam Gen. (to) Nozzles [2.1-1]			IWC-2500-1 footnote 2 requires (C-B) schedule according to selection of category C-F, (Note Remark) Category C-F (S-78) corresponds to category C-G (S-75) for main steam and feedwater systems.			Schedule in accordance with discussion page 1 of 33, in Table 2.2.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	STEAM GENERATORS (continued)	[2.1-1]						
C-B	Pressure Retaining Nozzle Welds							NOTE: SUR/VOL performed on weld joint when scheduled - VOL performed on inner radius section (Fig. IWC-2520-4) to extent possible.
C2.20	Nozzles in vessels ≥1/2" nominal thickness							
C2.21	Nozzle to Shell (Head)							
C2.22	Inner Radius							
	STEAM GENERATOR 1-3	Nozzle Weld	PT or MT	1	1 (see note)	Two	25	T=3.6"/D=16"
C2.21	Feedwater Lead 3	(to) Shell at	UT					Weld 3-10
C2.22	Nozzle Weld and	K16-557-16IV						Shell-Nozzle
	Inner Radius [2-2-27]	Inner Radius	UT	1	1 (see note)	Two	25	
	STEAM GENERATOR 1-4	Nozzle Weld	PT or MT	1	1 (see note)	Three	25	T=3.6"/D-28"
C2.21	Main Steam Lead 4	(to) Shell at	UT					Weld 4-8
C2.22	Nozzle Weld and	K15-225-28V						Upper Head-
	Inner Radius [2.2-24]	Inner Radius	UT	1	1 (see note)	Three	25	Nozzle
C-C	Integrally Welded Support Attachments (To Pressure Vessel)							
C3.10	Integrally Welded Supports	-	-	-	-	-	-	C3.10 Items not Applicable

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	STEAM GENERATORS - Cont'd	[2.1-1]						
C-E	Support Members			(16)				
C3.20	Support Components Steam Gen. 1-1	Snubber and Attachments	VT-3, VT-4	4	1 Snubber, Mount and Attachment Areas 100%	One Two Three	25 50 100	
	Support Components Steam Gen. 1-2	Snubber and Attachments	VT-3, VT-4	4	1 Snubber, Mount and Attachment Areas 100%	One Two Three	25 50 100	
	Support Components Steam Gen. 1-3	Snubber and Attachments	VT-3, VT-4	4	1 Snubber, Mount and Attachment Areas 100%	One Two Three	25 50 100	
	Support Components Steam Gen. 1-4	Snubber and Attachments	VT-3, VT-4	4	1 Snubber, Mount and Attachment Areas 100%	One Two Three	25 50 100	
C-D	Pressure Retaining Bolting Greater Than 2 Inch Dia							
C4.10	Bolts, Studs, and Nuts -	-	-	-		-	- -	C4.10 Item
	End of Steam Generators							Not applicable

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE		EXAM RELIEF'S & REMARKS
	SEAL INJECTION FILTERS	Dwg. Ref. DC-663200-42							[*] ISI Dwg. Page No.
C-A	Press. Retaining Welds	DC-663210-19 *[2.1-3]							Commercial Filters Corp
	WELDS								
C1.10	Shell Circumferential								
C1.20	Head Circumferential								
C1.30	Tube Sheet To Shell								C1.30 Item not applicable
		Girth Welds							
C1.10	Seal Injection Filter 1-1 (Ser. # 17392-1548)	Girth W-A Shell-Flange	-	1	Flange (to) Shell	-	-	-	Relief No. 006
C1.20	Seal Injection Filter 1-2 (Ser. # 17392-1549)	Girth W-B (Bot Head)	-	1	Bot Head (to) Shell	-	-	-	Relief No. 006
C-B	NOZZLES IN VESSELS								
C2.10	≤1/2" Nom. Thickness	-	-	-	-	-	-	-	C2.10 & C2.20
C2.20	>1/2" Nom. Thickness	-	-	-	-	-	-	-	Items not Applicable
C-C	SUPPORT MEMBERS								
C3.10	Integrally Welded Support Attachments (To Pressure Vessels)	-	-	-	-	-	-	-	C3.10 Item Not Applicable IWC-2500-1,C-C footnote (1)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	SEAL INJECTION FILTERS - Cont'd							
C-E	Support Members							
C3.20	Support Components							C3.20 Not Req'd IWC-2500-1(4)
C-D	PRESSURE RETAINING BOLTING (Larger than 2-Inch Dia)							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

End of Seal Injection Filters

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 2

REV. 8

MAJOR ITEM: PRESSURE VESSELS (C-A, C-B, C-C)
TABLE: 2.1 (EX.LTD.EXC)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	EXCESS LETDOWN HEAT EXCHANGER	Dwg. Ref. DC-663200-60 *[2.1-4]							[*] ISI Dwg. Page No.
C-A	Pressure Retaining Welds in Vessels								
	WELDS								Atlas S/N 853
C1.10	Shell Circumferential								
C1.20	Head Circumferential								
C1.30	Tube Sheet To Shell								C1.30 Item Not Applicable
		GIRTH WELDS							
C1.10	Excess Letdown Heat Exchanger 1-1	Girth Weld GA (Flange)	UT & PT	1	Bot Flg (to) Shell	As Access	One	50	Relief No. 006
C1.20	Excess Letdown Heat Exchanger 1-1	Girth Weld GB (Bot Head)	UT & PT	1	Bot Head (to) Shell	As Access	Two	100	Relief No. 006
C-B	NOZZLES IN VESSELS								
C2.10	≤1/2" Nom. Thickness								C2.10 & C2.20 Items Not Applicable IWC-1220(c)
C2.20	>1/2" Nom. Thickness								
C-C	Support Members	Attach't Welds							
C3.10	Integrally Welded Support Attachments (To Pressure Vessels)	Leg A	PT	1	Attach't (to) Shell	100%	Two	50	
		Leg B	PT	1		100%	Three	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	EXCESS LETDOWN HEAT EXCHANGER - Cont'd							
C-E	SUPPORT COMPONENTS							
C3.20	Component Supports	-	-	-	-	-	-	C3.20 Item Not Req'd; IWC-2500-1 Footnote (4)
C-C	SUPPORT MEMBERS							
C3.30	Mechanical and Hydraulic Snubbers	-	-	-	-	-	-	C3.30 Item Not Applicable
C-D	PRESSURE RETAINING BOLTING (Larger than 2-Inch Dia)							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

End of Excess Letdown Heat Exchangers

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	REGENERATIVE HEAT EXCHANGERS	Dwg. Ref. DC-663200-60 *[2.1-5]						[*] ISI Dwg. Page No. Serial #1831-3I, 1831-3II, 1831-3III Joseph Oat & Sons
C-A	Pressure Retaining Welds in Vessels							
	WELDS							
C1.10	Shell Circumferential							Item C1.10 Not Applicable Regenerative Heat Exch's
C1.20	Head Circumferential							
C1.30	Tube Sheet to Shell							
C1.10	Regenerative Heat Exchanger Shell No.3 Circumferential							C1.10 Item Not Applicable
		GIRTH WELDS						
C1.20	Shell No. 3 Head-To-Shell Welds	Girth Weld GA (9)	PT	1	Head (to) Shell As Access.	One	25	T=.756"/.900" 2.5' (circ.) Relief No. 006
		Girth Weld GD (12)	PT	1	Head (to) Shell As Access.	Two	50	T=.756"/.938" 2.5' (circ.) Relief No. 006
C1.30	Shell No. 3 Tube Sheet To Shell Welds	Girth Weld GB (10)(6)(2)	PT	1	Shell (to) Sheet As Access.	Three	75	T=.900"/.938" 2.5' (circ.) Relief No. 006
		Composite ~45% each to equal 100% of one weld						
		Girth Weld GC (11)(7)(3)	PT	1	Sheet (to) Shell As Access.	Three	100	T=.938"/.756" 2.5' (circ) Relief No. 006
		Composite ~45% each to equal 100% of one weld						

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	REGENERATIVE HEAT EXCHANGER - (Cont'd)							
C-B	NOZZLES IN VESSELS							
C2.10 C2.20	≤1/2" Nom. Thickness >1/2" Nom. Thickness	-	-	-	-	-	-	C2.10 and C2.20 Items Not Applicable IWC-1220(c)
C-C	SUPPORT MEMBERS							
C3-10	Integrally welded Support Attachments (To Pressure Vessels)	-	-	-	-	-	-	C3-10 Item Not Req'd IWC-2500-1 Footnote (1)
C-E	SUPPORT COMPONENTS							
C3.20	Support Components	-	-	-	-	-	-	C3.20 Item Not Req'd IWC-2500-1 Footnote (4)
C-D	PRESSURE RETAINING BOLTING >2-Inch Dia							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

End of Regenerative Heat Exchanger

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	RESIDUAL HEAT REMOVAL HEAT EXCHANGER	Dwg. Ref. DC-663200-60 *[2.1-6]						[*] ISI Dwg. Page No. Engineers & Fabricators Company 1-1 (Ser. #15588-A) 1-2 (Ser. #15588-B)
C-A	Pressure Retaining Welds In Vessels							
	WELDS							
C1.10	Shell Circumferential							
C1.20	Head Circumferential							
C1.30	Tube Sheet To Shell							C1.30 Items not Applicable
		GIRTH WELDS						
C1.10	RHR Exchanger 1-1	Girth W-GA Weld #1	UT PT	1	Flg (to) Shell As Access.	Two	50	Relief No. 006
C1.20	RHR Exchanger 1-2	Girth W-GD Weld #4	UT PT	1	Bot Head (to) Shell As Access.	Three	100	Relief No. 006
C-B	NOZZLES IN VESSELS							
C2.10	≤1/2" Nominal Thickness	-	-	-	-	-	-	C2.10 Items Not Applicable
C2.20	>1/2" Nom. Thickness RHR Ht Exchanger 1-1 [2.2-3]	Nozzle Weld #1	UT & PT	1	1	Two	50	At S1-112-8 (Inlet) (Relief No. 006)
	RHR Ht Exchanger 1-2 [1.2-14]	Nozzle Weld #2	UT & PT	1	1	Three	100	At S1-119-8 (Outlet) (Relief No. 006)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	RHR HEAT EXCHANGERS - Cont'd	[2.1-6]						
C-C	Support Members							
C3.10	Integrally Welded Support Attachments (To Pressure Vessels)	Welded Attach't						Support Legs
	RHR Ht Exchanger 1-1	Leg - A	PT	1 (and)	1 Leg 100%	Two	50	
C-E	Support Components							
C3.20	RHR Ht Exchanger 1-1	Leg - A+B	VT-3	2	2 Supports 100%	Two	50	(Exposed Areas)
C-C								
C3.10	RHR Ht Exchanger 1-2	Leg - B	PT	1	1 Leg 100% (and)	Three	100	
C-E	Support Components							
C3.20	RHR Ht Exchanger 1-2	Leg - A+B	VT-3	2	2 Supports 100%	Three	100	(Exposed Areas)
C-D	Pressure Retaining Bolting (Larger than 2-Inch Dia)							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 2

REV. 8

MAJOR ITEM: PRESSURE VESSELS (C-A, C-B, C-C)
TABLE: 2.1 (SUCT. PLS. DMPR)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	SUCTION PULSATION DAMPENER @ Recip. Chg. Pp. 1-3	Dwg Ref CEP-128001						Commercial Energy Products S/N 0001
C-A	Pressure Retaining Welds in Vessels							
C1.10	Shell Circumferential							C1.10 Item Not Applicable
C1.20	Head Circumferential	Welds						
	Top Head-To-Shell	Weld 21	UT	1	360° As Accessible	Two	50	Relief No. 013*
	Bottom Head-To-Shell	Weld 22	UT	1	360° As Accessible	Three	100	Relief No. 013*
C1.30	Tube Sheet-To-Shell	-	-	-	-	-	-	C1.30 Item Not Applicable
C-B	Nozzle-To-Vessel-Welds							
C2.10	≤1/2" Nom. Thickness	-	-	-	- -	-	-	Not Req'd (IWC-1220-C)
C2.20	>1/2" Nom. Thickness	-	-	-	- -	-	-	Not Applicable
C-C/C-E	Support Members							
C3.10	Integrally Welded Supports	-	-	-	- -	-	-	Not Req'd IWC-2500-1 Footnote 1
C3.20	Component Supports	Support Skirt	VT-3	1	Support Skirt 100%	Three	100	
C-D	Pressure Retaining Bolting (>2-Inch Dia)							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

* Relief request NDE-013 pending submittal to and approval by NRC.

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 2

REV. 8

MAJOR ITEM: PRESSURE VESSELS (C-A, C-B, C-C)
TABLE: 2.1 (DISCH. PULS. DMPR)

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	DISCHARGE PULSATION DAMPENER @ Recip. Chg. Pp 1-3	Dwg Ref CEP-128000						Commercial Energy Products S/N 0001
C-A	Pressure Retaining Welds in Vessels							
C1.10	Shell Circumferential	-	-	-	-	-	-	C1.10 Item Not Applicable
C1.20	Head Circumferential	Welds						
		Weld 19	UT	1	360° As Accessible	One	50	Relief No. 013*
		Weld 20	UT	1	360° As Accessible	Two	100	Relief No. 013*
C1.30	Tube Sheet-To-Shell	-	-	-	-	-	-	C1.30 Item Not Applicable
C-B	Nozzle-To-Vessel Welds							
C2.10	≤1/2 Nom. Thickness	-	-	-	-	-	-	C2.10 Item Not Applicable
C2.20	>1/2 Nom. Thickness							C2.20 Not Req'd (IWC-1220-C)
C-C/C-E	Support Members							
C3.10	Integrally welded Supports	-	-	-	-	-	-	Not Req'd (IWC-2500-1 (Footnote 1)
C3.20	Component Supports	Support Legs A&B	VT-3	2	Two Supports 100%	One	100	
C-D	Pressure Retaining Bolting (Larger than 2-Inch Dia)							
C4.10	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.10 Item Not Applicable

* Relief request NDE-013 pending submittal to and approval by NRC.

The extent and frequency of examination for pipe welds scheduled in the following table conforms to Paragraph IWC-2411 and Table IWC-2520, Category C-F and C-G in the 1974 Edition of Section XI through Summer 1975 Addenda.[1] The extent of examination per Table IWC-2520 includes the "Areas Subject To Examination" in the table. All other requirements, including "Parts Examined", conform to Table IWC-2500-1, Category C-F of the 1977 Edition through Summer 1978 Addenda of Section XI. The exemption criteria conforms to the Summer 1978 Addenda as referenced in relief request 005.

NOTE: Code Category C-F or C-G appearing in the General Identification column reference 1974 edition, Summer 1975, Section XI Code Categories. 1974 Code Category C-F lines circulate reactor coolant while Category C-G lines circulate other than reactor coolant. All pipe welds are Category C-F in the 1977 Edition, Summer 1978 Addenda.

Occasional portions of certain pipe welds are inaccessible for examination. Welds encapsulated or completely enclosed in penetrations are itemized in the remarks column. See request for relief # NDE-008. Any inaccessible portions will be fully documented and the remaining weld area examined to the fullest extent possible. An estimate of the percentage of the code-required examination that can be completed for welds having limited accessibility is provided in Appendix B, as discussed in NDE-008.

[1] Ref. 10 CFR 50.55a(b)(2)(iv)(B)

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 2

REV. 8

MAJOR ITEM: PIPING-CIRCUM. WELDS (C-F)
TABLE: 2.2

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping								
	Table IWC-2500-1 Sub-Item Out Of Sequence Intentionally. Items Are Listed By Wall Thickness, Category (C-F) or (C-G) Single or Multiple Stream and Line Size.				Exam'n area meets or exceeds req'ts of fig. IWC-2520-7				Scheduled in Accordance With Discussion Page (1) of 32, This Table Section [*] ISI Dwg. Page No.
C-F C5.20	PRESSURE RETAINING Welds in Piping Piping Welds Over 1/2" Nom. Wall Thickness				[1]Addenda S-75 Req'd Percent Over 40 Year Service Life [2]S-75 Addenda Percent To Date Over 10 Year Interval				(**) Construction Dwg. Page No.
C5.21	Circumferential Welds Single Stream Systems	Butt Welds Category C-F							100% req'd in 40 years.
	RHR Injection To Hot Leg 1 & 2 (10-16)**	S6-120-12 *[2.2-4]	PT & UT	1	1	0		0[2]	
	Cent. Chg. Pps Disch. Hdr (8-1)	S6-1454-6 [2.2-10]	PT & UT	4	4	1	Two	25	
	END SINGLE STREAM, C-F.								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds in Piping - Cont'd								
C5.20 C5.21	Piping Welds >½"Wall Multiple Stream Systems	Butt Welds Category C-F							100% of One stream, avg req'd in 40 yrs ( ) = avg per stream
				(2)	2	1			
	SIS To RCS Hot Leg Loop 1 (10-16)	S6-2575-8 [2.2-4]	PT & UT	1	1	-	-	-	
	SIS to RCS Hot Leg Loop 2 (10-16)	S6-2576-8 [2.2-4]	PT & UT	3	1	1	Three	50	
	End M/S Systems C-F								
C-F	Pressure Retaining Welds in Piping								
C5.21	Single Stream System	Butt Welds Category C-G							50% req'd in 40 yrs.
	Charging Pumps Disch. Emérg. (8-1) (9-6)	S6-1973-6 [2.2-10]	PT & UT	6	3	1	Three	16	
	Charging Injection Boron Inlet (9-6)	S6-2032-6III [2.2-19]	PT & UT	6	3	1	(1)One	12	
	RC PPS Barrier CCW Ret Hdr. (Penetration)	K17-1357-6 [2-2-37]	MT & UT	11	6	2	(1)One (1)Three	8 16	
	END SINGLE STREAM, C-G								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds in Piping - Cont'd								
C5.20 C5.21	Piping Welds >½" thick Multiple Stream Systems	Butt Welds Category C-G							50% of one stream, avg. req'd in 40 yrs. ( ) = avg per stream
				(11*)	6	2			
	Steam Gen Steam Outlet 1-1 (500136)	K15-228-28V [2.2-21] Lead 1	PT/MT & UT	12	1	1	One	8	*2 Welds Encap.
	Steam Gen Steam Outlet 1-2 (500137)	K15-227-28V [2.2-22] Lead 2	PT/MT & UT	12	1	-	-	8	*2 Welds Encap.
	Steam Gen Steam Outlet 1-3 (500138)	K15-226-28V [2.2-23] Lead 3	PT/MT & UT	12	2	-	-	8	
	Steam Gen Steam Outlet 1-4 (500139)	K15-225-28V [2.2-24] Lead 4	PT/MT & UT	12	2	1	Three	17	
				(4*)	2	1			
C5.21	Main Steam Relief Vlv. Hdr. (500138) (4-59)	K15-1065-24V [2.2-23] Lead 3	PT/MT & UT	4	1	-	-	17	
	Main Steam Relief Vlv. Hdr. (500139) (4-60)	K15-1066-24V [2.2-24] Lead 4	PT/MT & UT	5	1	1	Three	25	*2 Welds Encap.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds in Piping - Cont'd								
C5.20 C5.21	Piping Welds >½" thick Multiple Streams, Cont'd	Butt Welds Category C-G							( ) = avg per stream T=.843"
				(16*)	8	2			
	Stm Gen Feed Wtr Supply Gen 1-1 (500146)	K16-554-16V Lead 1 [2.2-25]	PT/MT & UT	17	2	1	One	6	*2 Welds Encap.
	Steam Gen Feed Wtr Supply Gen 1-2 (500146)	K16-555-16V Lead 2 [2.2-26]	PT/MT & UT	17	2	-	-	6	*2 Welds Encap.
	Steam Gen Feed Wtr Supply Gen 1-3 (500146)	K16-557-16V Lead 3 [2.2-27]	PT/MT & UT	18	2	-	-	6	*2 Welds Encap.
	Steam Gen Feed Wtr Supply Gen 1-4 (500146)	K16-556-16V Lead 4 [2.2-28]	PT/MT & UT	18	2	1	Three	12	*2 Welds Encap.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds in Piping								
C5.20	Piping Welds >½" Thick Multiple Streams, Cont'd	Butt Welds Category C-G							50% of one stream, avg. req'd in 40 yrs ( ) = avg. per stream
				(10)	5	1			
C5.21	RHR Pp Inj Cold Leg Pp 1-1 (9-38) (9-39) (9-40)	S6-508-8III [2.2-30] [2.2-31] [2.2-32]	PT & UT	11	3	1	One	10	
	RHR Pp Inj Cold Leg Pp 1-2 (9-41)	S6-509-8III [2.2-33]	PT & UT	9	2	-	-	10	
				(3)	3	1			
	RHR Pp 1-1 Inj Cold Leg Loop 1 (9-36)	S6-3844-6III [2.2-34]	PT & UT	4	1	-	-	-	
	RHR Pp 1-1 Inj Cold Leg Loop 2 (9-37)	S6-3845-6III [2.2-35]	PT & UT	4	1	-	-	-	
	RHR Pp 1-2 Inj Cold Leg Loop 3 (9-43)	S6-3846-6III [2.2-33]		1	-	-	-	-	
	RHR Pp 1-2 Inj Cold Leg Loop 4 (9-42)	S6-3847-6III [2.2-36]	PT & UT	3	1	1	One	17	
	END OF ITEM C5.21								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd				Exam'n area meets or exceeds req'ts of figure IWC-2520-7				
C-F	Pressure Retaining Welds In Piping								
C5.22	Longitudinal Welds Over 1/2 Inch Wall Single Stream Systems	Long'l Seams Category C-F	-	-	-	-	-	-	C5.22 Item Cat'y C-F S/S Not Applicable
	Multiple Stream Systems	Long'l Seams Category C-F	-	-	-	-	-	-	C5.22 Item Cat'y C-F M/S Not Applicable
	Single Stream Systems	Long'l Seams Category C-G	-	-	-	-	-	-	C5.22 Item Cat'y C-G S/S Not Applicable
	Multiple Stream Systems	Long'l Seams Category C-G							50% of one stream, avg. req'd in 40 yrs ( ) = avg. per stream
				(8*)	4	1			
	Steam Gen Steam Outlet 1-1 (500136)	K15-228-28V [2.2-21] Lead 1	PT/MT & UT	10	-	-	-	-	*2 Welds Encap.
	Steam Gen Steam Outlet 1-2 (500137)	K15-227-28V [2.2-22] Lead 2	PT/MT & UT	10	2	-	-	-	*2 Welds Encap.
	Steam Gen Steam Outlet 1-3 (500138)	K15-226-28V [2.2-23] Lead 3	PT/MT & UT	8	-	-	-	-	
	Steam Gen Steam Outlet 1-4 (500139)	K15-225-28V [2.2-24] Lead 4	PT/MT & UT	8	2	1	Three	12	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
C-F	Piping - Cont'd Pressure Retaining Welds in Piping (Cont'd)								
C5.30	Pipe Branch Connection	Branch Welds							
C5.31	Circumferential Welds	Category C-F							
C5.32	Longitudinal Welds	Category C-G							
	Single and Multiple Stream Sys.								C5.31 or C5.32 Items Cat'y C-F or C-G, SS or MS, not applicable. No branch connection welds

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping (Cont'd)				Exam'n area meets or exceeds req'ts of fig. IWC-2520-7				
C5.10	Piping Welds 1/2" or Less Nominal Wall Thickness								
C5.11	Circumferential Welds Single Stream Systems	Butt Welds Category C-F							100% required in 40 years.
C5.11	Loop 4 Hot Leg To RHR Pps (10-10) (10-11)	S1-927-14III [2.2-1] [2.2-2]	PT	10	10	3	(1)One (1)Two (1)Three	10 20 30	
	Res Ht Exchanger 2 Outlet (9-2)	S1-3551-14III [2.2-3]	PT	2	2	1	(1)Three	50	
	RHR Injection TO Hot Leg 1 & 2 (10-16) (10-15) (10-14) (10-19)	S1-985-12IIIP [2.2-4] [2.2-5] [2.2-6] [2.2-7]	PT	20	20	5	(2)One (2)Two (1)Three	10 20 25	
	Cent Chg Pps Suct Header (8-20)	S2-1456-8 [2.2-8]	PT	2	2	1	(1)One	50	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping (Cont'd)								
C5.10	Piping Welds ≤ ½" Thick								
C5.11	Circumferential Welds Single Stream Systems (Cont'd)	Butt Welds Category C-F							
	RHR Exchs Bypass Crosstie (10-2)	S1-1663-8III [2.2-9]	PT	18	14*	4	(2)One (1)Two (1)Three	14 21 28	*4 Welds Not Accessible - Wall Penetration
	Residual Ht Exchs Bypass Hdr (10-2)	S1-1661-8III [2.2-9]	PT	20	20	5	(1)One (2)Two (2)Three	05 15 25	
	RHR Exchs Outlet Crosstie Hx 1-2 (10-19)	S1-1669-8 [2.2-7]	PT	11	11	3	(1)One (1)Two (1)Three	09 18 27	
	RHR Exchs Outlet Crosstie Hx 1-1 (10-13)	S1-2458-8 [2.2-13]	PT	5	5	2	(1)One (1)Two	20 40	
	END S/S SYSTEM - C-F								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping								
C5.10	Piping Welds ≤ ½" Thick								
C5.11	Circumferential Welds								
	Multiple Stream Systems	Butt Welds Category C-F							100% of one stream avg. req'd in 40 years.
				(16)	16	4			( ) = avg. per stream.
	Residual Ht Rem Pp 1-1 Suction (10-10) (10-9)	S1-110-14III [2.2-2] [2.2-11]	PT	14	8	2	(1)One (1)Two	06 12	
	Residual Ht Rem Pp 1-2 Suction (10-10) (10-8)	S1-111-14IIIP [2.2-2] [2.2-12]	PT	18	8	2	(1)One (1)Two	18 24	
				(16)	16	4			
	Residual Ht Rem Pp 1-1 Disch (10-2)	S1-112-8III [2.2-9]	PT	16	8	2	(1)One (1)Three	06 19	
	Residual Ht Rem Pp 1-2 Disch (10-2)	S1-113-8III [2.2-9]	PT	16	8	2	(1)Two (1)Three	13 25	
				(24)	24	6			
	Residual Ht Exchanger 1-1 Outlet (9-2) (10-13) Hx to Line 2458	S1-118-8III[3] [2.2-3] [2.2-13]	PT	24	12	3	(1)One (2)Three	08 25	
	Residual Ht Exchanger 1-2 Outlet (10-4) Hx to Line 1669	S1-119-8III[3] [2.2-14]	PT	24	12	3	(1)Two (2)Three	18 25	[3]See Category C-G, page 15 of 32 for balance of lines 118 and 119.

TEN YEAR EXAMINATION PROGRAM
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REV. 8

MAJOR ITEM: PIPING-CIRCUM. WELDS (C-F)
TABLE: 2.2

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping (Cont'd)								
C5.10	Piping Welds ≤ ½" Thick								100% of one stream, avg. req'd in 40 yrs. ( ) - avg. per stream.
C5.11	Circumferential Welds Multiple Streams (Cont'd)	Butt Welds Category C-F							
				(15)	15	4			
	Cent Chg Pump Suct Pump 1-1 (8-21)	S2-42-6 [2.2-15]	PT	15	8	2	(1)One (1)Three	07 21	
	Cent Chg Pump Suct Pump 1-2 (8-20)	S2-43-6 [2.2-8]	PT	14	7	2	(1)Two (1)Three	14 29	
	Single Stream Systems	Category C-G							
	RWST To Res Ht Rem Pps Suct (10-10)	S1-223-12IIIP [2.2-2]	PT	1	1	-	-	-	50% req'd in 40 yrs.
	Res Ht Rem To Chg Pps Suct (9-2)	S2-734-8III [2.2-3]	PT	5	3	1	One	33	
	RHR Hdr to Chg Pps Suct (9-2)	S1-1971-8III [2.2-3]	PT	7	3	1	Two	33	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping (Cont'd)								
C5.10	Piping Welds ≤ ½" Thick								
C5.11	Circumferential Welds Single Streams, Cont'd	Butt Welds Category C-G							
	RHR To SIS Pp1-2 (and) Cont Spr (10-5)	S1-735-8IIIP [2.2-16]	PT	9	4	1	One	[1]50% 25	
	RHR To Safety Injec Pump 1-2 (9-28)	S2-1984-8III [2.2-17]	PT	20	10	3	(1)One (1)Two (1)Three	10 20 30	
	Safety Inj Pumps Suct Hdr (9-5)	S2-1986-8 [2.2-18]	PT	5	3	1	Two	33	
	Chg Pps Suction From RWST Vlv B (9-11)	S2-1988-8 [2.2-29]	PT	5*	2	-	-	- -	*Ref. Mult. Str.P.2.2-13 for balance of line 1988
	Residual Heat Rem To RWST (10-19)	S1-2212-8III [2.2-7]	PT	3	2	-	-	- -	
	Crosstie Chg Pp & SI Pp Suction (9-3)	S2-4296-6 [2.2-20]	PT	9	4	1	One	25	
	RHR To Safety Injec Pump 1-1 (9-3)	S2-5848-6 [2.2-20]	PT	6	3	1	One	33	
	END S/S SYSTEMS C-G								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping - (Cont'd)								
C5.10	Piping Welds ≤ ½" Thick								
C5.11	Circumferential Welds Multiple Stream Systems	Butt Welds Category C-G		(6)	3				50% of one stream, avg. req'd in 40 yrs. ( ) = avg. per stream.
	Steam Gen MSRV Riser 1-1 (500136)	K15-228-8V [2.2-21]	PT or MT	6	0	-	-	-	28" Lead 1
	Steam Gen MSRV Riser 1-2 (500137)	K15-227-8V [2.2-22]	PT or MT	6	1	-	-	-	28" Lead 2
	Steam Gen 10% Atmos Dump 1-3 (500138)	K15-226-8V [2.2-23]	PT or MT	6	1	1	Two	17%	24" Lead 3 Riser
	Steam Gen MSRV Riser 1-4 (500139)	K15-225-8V [2.2-24]	PT or MT	6	1	-	-	-	24" Lead 4 Riser
				(10)	5				
	Cont Sump To RHR Pps Pump 1-1 Suct (10-9) (PDM) (500190)	S1-512-14IIIP *2749-14 [2.2-11]	PT	10	2	1	Two	10	
	Cont Sump To RHR Pps Pump 1-2 Suct (10-8) (500190)	S1-513-14IIIP *2750-14 [2.2-12]	PT	10	3	-	-	10	
				(3)	2				
	Chg Pps Suction From RWST Vlv A 9-11	S2-1987-8 [2.2-29]	PT	3	1	-	-	-	
	Chg Pps Suct From RWST Vlv B (9-11)	S2-1988-8 [2.2-29]	PT	2	1	1	Two	25	Ref. Single Str. P.2.2-13

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping - (Cont'd)								50% of one stream, avg. req'd in 40 yrs. ( ) = avg. per stream.
C5.10	Piping Welds ≤ ¼" Thick								
C5.11	Multiple Streams, (Cont'd)	Butt Welds Category C-G							
				(8)	4				
	RHR Sup To Spray Hdrs 1 & 3 (9-2)	S1-279-8III [2.2-3]	PT	8	2	1	One	12	
	RHR Sup To Spray Hdrs 2 & 4 (10-5)	S1-280-8III [2.2-16]	PT	8	2	-	-	12	
				(5)	3				
C5.11	Residual Heat Exchr 1 Outlet (10-13) Line 2458 to V-8809A	S1-118-8III [2.2-13]	PT	4	1	-	-	-	
	Residual Heat Exchr 2 Outlet (9-41,42) Line 1669 to V-8809B	S1-119-8III [2.2-14]	PT	6	2	1	Two	16	See category C-F, p.11 of 32 for balance of lines 118 & 119
				(8)	4				
C5.11	Safety Inj Pump Suct Pump 1-1 (9-5)	S2-1982-6 [2.2-18]	PT	8	2	1	Two	12	
	Safety Inj Pump Suct Pump 1-2 (9-5)	S2-1983-6 [2.2-18]	PT	8	2	-	-	12	
AUGMT'D	Containment Spray Pump 1-1 Discharge Before V-9001 A	S2-264-8	UT*	-		1	One	33	*Required by NRC letter of October 26, 1986 - 7.5% representative sample
						1	Two	66	
	Containment Spray Pump 1-2 Discharge Before V-9001 B	S2-265-8	UT*	-		1	Three	100	
	END OF ITEM C5.11								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd				Exam'n area meets or exceeds req'ts of fig. IWC-2520-7				Note discussion page 1 of 32 this table
C-F	Pressure Retaining Welds In Piping (Cont'd)								
C5.12	Longitudinal Welds <1/2" W.T. Single Stream Systems	Long'l Welds Category C-F							C5.12 Item Cat'y C-F S/S Not Applicable 100% of one stream, avg. req'd in 40 yrs.
	Multiple StreamSystems	Category C-F							
	Residual Ht Rem Pp 1-1 Suction (10-9)	S1-110-14III [2.2-11]	PT	6	2	-	-	-	
	Residual Ht Rem Pp 1-2 Suction (10-8)	S1-111-14III [2.2-12]	PT	6	4	2	One	33	
	Residual Ht Rem Pp 1-1 Discharge (10-2)	S1-112-8III [2.2-9]	PT	2	2	-	-	-	
	Residual Ht Rem Pp 1-2 Discharge (10-2)	S1-113-8III [2.2-9]	PT	2	-	-	-	-	
	Residual Ht Exchanger 1-1 Outlet (9-2)	S1-118-8III [2.2-3]	-	2	-	-	-	-	
	Residual Ht Exchanger 1-2 Outlet (10-4)	S1-119-8III [2.2-14]	PT	2	2	-	-	-	
	(End Mult. Steam - C-F)								

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAM EXTENT & REQUIRED AMOUNT 40 YR	10 YR	EXAM'N PERIOD (10 YR)	% 40 YR TO DATE	EXAM RELIEF'S & REMARKS
	Piping - Cont'd								
C-F	Pressure Retaining Welds In Piping								
C5.10	Piping Welds ≤ ½" Thick	Long'l Welds							
C5.12	Single Stream Systems	Category C-G							C5.12 Item Cat'y C-G S/S Not Applicable
C5.12	Multiple Stream Systems	Category C-G							50% of one stream, avg. req'd in 40 yrs.
				(6)	3				
C5.12	Cont Sump To RHR Pps Pump 1-1 Suct (10-9)	S1-512-14III [2.2-11]	PT	6	2	2	Two	50	
	Cont Sump to RHR Pps Pump 1-2 Suct (10-8)	S1-513-14III [2.2-12]	PT	6	1	-	-	50	
	(End of Mult Stream C-G)								
C-D	Pressure Retaining Bolting (Larger Than 2-Inch Dia)								
C4.20	Bolts, Studs and Nuts								Category C-D Item C4.20 Not Applicable (Welded Piping)

Category C-C welded support attachments to the pressure boundary (Items C3.40, C3.70, C3.100) are scheduled for surface examination when the base metal design thickness of the welded attachment is greater than 3/4" (Table IWC-2500-1, Footnote 1). Category C-E includes all portions of all supports including welded support attachments to the pressure boundary regardless of size.

The total number of (C-C) applicable attachments to each system/component, if any, is noted adjacent to the line number and scheduled accordingly.

Supports for valves (C3.100 and C3.110) are scheduled together with the corresponding pipe (C3.40 and C3.50) system. Supports for pumps (C3.70 and C3.80) are scheduled in Table 2.3.

For clarification of the examination area for category C-E, see section IWF-1300 of the Winter 1980 Addenda of ASME Section XI.

Numbers of hangers on each line, as shown here, are accurate at the time of this Program Plan Plan revision, but will change with plant design requirements. Correct status is maintained by the DCPP ISI Group. Total number of hangers includes the total number of snubbers. Snubbers are examined more frequently than described here as required by Technical Specifications.

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	SUPPORTS				Exam'n Area meets or exceeds req'ts of fig. IWC-2520-5				
C-C	INTEGRALLY WELDED ATTACHMENTS (TO PRESSURE BOUNDARY)								
C3.40	Piping	(Attach't)							1Valve Items C3.100 and C3.110 are scheduled with piping items.
C3.70	Pumps (See table 2.3)								
C3.100	Valves1								
C-E	SUPPORT COMPONENTS								
C3.50	Piping	(Supports)							See discussion on page 18 of 32.
C3.80	Pumps (See Table 2.3)								
C3.110	Valves1 component supports								NOTE: VT-4 scheduled as applicable to individual components

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	SUPPORTS - Cont'd								This column identifies
C-C,C-E	Support Members								attach't number
C3.40	Support Attach't								when applicable
C3.50	Support Components								to footnote 1 of
									IWC-2500-1
	SINGLE STREAM (C-F)[2]		[2]System reference						category C-C
			to S-75 only, no						
		Line No. &	bearing on						Seismic Constr
		ISI Dwg. No.	scheduled req'ts						Mark No. Weld No.
C3.40	Loop 4 Hot Leg to RHR	S1-927-14III	PT	1	C-C Attach. Welds	One	100		57S-20V:Param't
C3.50	Pps (10-11)	[2.2-1]			C-E		C-E		
	(10-10)	[2.2-2]	VT-3	6	3 Supports 100%	One	50	2	
			(VT-4)		3	Two	100		
C3.40	RHR Heat Exchs 1	SI-3551-14III			C-E		C-E		
C3.50	Outlet (09-2)	[2.2-3]	VT-3	1	1 Support 100%	Three	100	0	
			(VT-4)						
C3.40	RHR Injection to	S1-985-12IIIP	PT	1	C-C Attach Welds	One	100		40-46A:X219
C3.50	Hot Leg 1 & 2	[2.2-7]			C-E		C-E		
	(10-19)	[2.2-6]	VT-3	22	7 Supports 100%	One	31	8	
	(10-14)	[2.2-5]	(VT-4)		7	Two	63		
	(10-15)	[2.2-4]			8	Three	100		
	(10-16)	(S6-120-12)							
C3.40	Cent Chg Pps	S1-1456-8	-	-	- -		0		No supports
C3.50	Suct Header (8-20)	[2.2-8]							in boundary.
C3.40	RHR Exchs Bypass	S1-1663-8III	PT	1	C-C Attach. Welds	Two	100		72-1A:X190A-B
C3.50	Crosstie (10-2)	[2.2-9]			C-E		C-E		
			VT-3	8	2 Supports 100%	One	25	2	
			(VT-4)		2	Two	50		
					4	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members (Cont'd)								
C3.40	Support Attach't								Applicable to:
C3.50	Support Components								Mark No. / Weld No.
	Single Stream (C-F) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	Residual Ht Exchs	S1-1661-8III	PT	2	C-C Attach. Welds	Two	100		74-32R:X13A-H;
C3.50	Bypass Hdr (10-2)	[2.2-9]			C-E		C-E		74-29A:X217A,B
			VT-3	14	5 Supports 100%	One	35	0	
			(VT-4)		5	Two	71		
					4	Three	100		
C3.40	Cent Chg Pps	S6-1454-6	PT	1	C-C Attach Welds	One	100		73-36R:LUGS
C3.50	Disch Hdr (8-1)	[2.2-10]			C-E		C-E		
			VT-3	5	1 Support 100%	One	20	1	
			(VT-4)		2	Two	60		
					2	Three	100		
	Multiple Stream (C-F)								
C3.40	Residual Ht Rem								
C3.50	Pp 1-1 Suction	S1-110-14IIIP			C-E		C-E		
	(10-10) (10-9)	[2.2-2]	VT-3	7	2 Supports 100%	One	28	2	
			(VT-4)		2	Two	57		
					3	Three	100		
	Residual Ht Rem								
	Pp 1-2 Suction	S1-111-14IIIP			C-E		C-E		
	(10-10) (10-8)	[2.2-2]	VT-3	6	3 Supports 100%	One	50	1	
		[2.2-12]	(VT-4)		1	Two	66		
					2	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C, C-E	Support Members (Cont'd)								
C3.40	Support Attach't								
C3.50	Support Components								
	Multiple Stream (C-F) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	Residual Ht Rem Pp 1-1	S1-112-8III			C-E		C-E		
C3.50	Discharge	[2.2-9]	VT-3	5	2 Supports 100%	One	40	0	
	(10-2)		(VT-4)		3	Three	100		
	Residual Ht Rem Pp 1-2	S1-113-8III			C-E		C-E		
	Discharge (10-2)	[2.2-9]	VT-3	3	1 Support 100%	One	33	0	
			(VT-4)		1	Two	66		
					1	Three	100		
C3.40	Residual Ht Exchanger	S1-118-8III			C-E		C-E		
C3.50	1-1 Outlet	[2.2-3]	VT-3	13	4 Supports 100%	One	30	3	
	(9-2)	[2.2-13]	(VT-4)		5	Two	69		
	(10-13)				4	Three	100		
	Residual Ht Exchanger	S1-119-8III			C-E		C-E		
	1-2 Outlet	[2.2-14]	VT-3	11	5 Supports 100%	One	45	1	
	(10-4)		(VT-4)		4	Two	81		
					2	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members Cont'd								
C3.40	Support Attach't								
C3.50	Support Component								
	Multiple Stream (C-F) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	RHR Exchs Outlet	S1-2458-8III			C-E		C-E		
C3.50	HX 1-1 Crosstie (10-13)	[2.2-13]	VT-3 (VT-4)	2	2 Supports	100%	Three	100	1
	RHR Exchs Outlet	S1-1669-8III			C-E		C-E		
	HX 1-2 Crosstie (10-19)	[2.2-7]	VT-3 (VT-4)	2	1 Support 1	100%	Two Three	50 100	1
C3.40	SIS to RCS Hot Leg	S6-2575-8			C-E		C-E		
C3.50	Loop 1 (10-16)	[2.2-4]	VT-3 (VT-4)	1	1 Support	100%	One	100	0
	SIS to RCS Hot Leg	S6-2576-8			C-E		C-E		
	Loop 2 (10-16)	[2.2-4]	VT-3 (VT-4)	2	2 Supports	100%	Three	100	2

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS-CLASS 2

REV. 8

MAJOR ITEM: PIPE - SUPPORTS (C-C) (C-E)
TABLE: 2.2

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component								
	Multiple Stream (C-F) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	Cent Charge Pump Suct	S2-42-6			C-E		C-E		
C3.50	Pump 1-1 (08-21)	[2.2-15]	VT-3 (VT-4)	6	2 Supports 3 1	100%	One 33 Two 83 Three 100	0	
	Cent Chg Pump Suct	S2-43-6			C-E		C-E		
	Pump 1-2 (08-20)	[2.2-8]	VT-3 (VT-4)	3	2 Supports 1	100%	One 66 Two 100	0	
C3.40	RWST to Res Ht Rem	S1-223-12IIIP	-	-	-	-	- -	0	No supports
C3.50	Pps Suct (10-10)	[2.2-2]							in boundary.
C3.40	Res Ht Rem to Chg	S2-734-8IIIP			C-E		C-E		
C3.50	Pps Suct (09-2)	[2.2-3]	VT-3 (VT-4)	2	2 Supports	100%	Two 100	0	
C3.40	RHR to Chg Pps	S1-1971-8III			C-E		C-E		
C3.50	Suct (09-2)	[2.2-3]	VT-3 (VT-4)	2	2 Supports	100%	One 100	0	
C3.40	RHR to SIS Pp 1-2 and	S1-735-8III			C-E		C-E		
C3.50	Cont Spray (10-5)	[2.2-16]	VT-3 (VT-4)	2	2 Supports	100%	Three 100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Components Single Stream (C-G)	Line No. & ISI DWG. No.							
C3.40 C3.50	RHR to Safety Injection Pump 1-2 (09-28)	S1-1984-8III [2.2-17]	VT-3 (VT-4)	8	C-E 3 Supports 3 2	100%	One Two Three	C-E 37 75 100	0
C3.40 C3.50	Safety Inj Pumps Suction Hdr (09-5)	S2-1986-8 [2.2-18]	VT-3 (VT-4)	4	C-E 2 Supports 2	100%	One Three	C-E 50 100	0
C3.40 C3.50	Residual Heat Rem to RWST (10-19)	S1-2212-8 [2.2-7]	VT-3 (VT-4)	2	C-E 2 Supports	100%	One	C-E 100	0
C3.40 C3.50	Charging Pumps Disch Emerg (08-1)	S6-1973-6 [2.2-10]	VT-3 (VT-4)	1	C-E 1 Support	100%	Two	C-E 100	0
C3.40 C3.50	Charging Injection Inlet (09-6)	S6-2032-6III [2.2-19]	VT-3 (VT-4)	1	C-E 1 Support	100%	Two	C-E 100	0
C3.40 C3.50	RC PPS Barrier CCW Ret HDR (Penetration)	K17-1357-6 [2.2-36]	VT-3 (VT-4)	4	C-E 2 Supports 2	100%	Two Three	C-E 50 100	0

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd									
C-C,C-E	Support Members - Cont'd									
C3.40	Support Attach't									
C3.50	Support Component									Applicable to: Mark No. / Weld No.
	(C-G) Single Stream (Cont'd)	Line No. & ISI DWG. No.								
C3.40	Crosstie Chg Pp & SI	S2-4296-6			C-E			C-E		
C3.50	Pp Suction (09-3)	[2.2-20]	VT-3	2	1 Support	100%	Two	50	0	
			(VT-4)		1		Three	100		
C3.40	RHR to Safety Injec-	S2-5848-6			C-E			C-E		
C3.50	ion Pump 1-1 (09-3)	[2.2-20]	VT-3	1	1 Support	100%	Three	100	0	
			(VT-4)							
	(C-G) Multiple Stream									
								C-C		
C3.40	Steam Gen Steam	K15-228-28V	PT or MT	1	C-C Attach. Welds		One	100		1020-1V:LUGS
C3.50	Outlet 1-1 (500136)	[2.2-21]			C-E			C-E		
		Lead 1	VT-3	8	3 Supports	100%	One	37	2	
			(VT-4)		3		Two	75		
					2		Three	100		
								C-C		
C3.40	Steam Gen Steam	K15-227-28V	PT or MT	1	C-C Attach. Welds		Two	100		1022-1V:LUGS
C3.50	Outlet 1-2 (500137)	[2.2-22]			C-E			C-E		
		Lead 2	VT-3	9	4 Supports	100%	One	44	3	
			(VT-4)		2		Two	66		
					3		Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component								Applicable to: Mark No. / Weld No.
	Multiple Stream (C-G) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	Steam Gen Steam	K15-226-28V	PT or MT	1	C-C Attach Welds	Three	100		1026-1V:LUGS
C3.50	Outlet 1-3 (500138)	Lead 3			C-E		C-E		
		[2.2-23]	VT-3	8	4 Supports 100%	One	50	4	
			(VT-4)		4	Three	100		
	Steam Gen Steam	K15-225-28V	PT or MT	1	C-C Attach Welds	Three	100		1028-1V:LUGS
	Outlet 1-4 (500139)	Lead 4			C-E		C-E		
		[2.2-24]	VT-3	10	3 Supports 100%	One	30	4	
			(VT-4)		4	Two	70		
					3	Three	100		
C3.40	Main Stm Relief Vlv.	K15-1065-24V			C-E		C-E		
C3.50	Hdr 1-3 (500138)	Lead 3	VT-3	5	3 Supports 100%	One	60	1	
		[2.2-23]	(VT-4)		2	Two	100		
	Main Stm Relief Vlv.	K15-1066-24V			C-E		C-E		
	Hdr 1-4 (500139)	Lead 4	VT-3	5	3 Supports 100%	One	60	2	
		[2.2-24]	(VT-4)		2	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component Multiple Stream (C-G) (Cont'd)	Line No. & ISI DWG. No.							Applicable to: Mark No. / Weld No.
C3.40	Stm Gen Feed Wtr	K16-554-16V	PT or MT	1	C-C Attach Welds	One	100		1037-7V:Param't
C3.50	Supply Gen 1-1	Lead 1			C-E		C-E		
	(500146)(03-23)	[2.2-25]	VT-3	8	3 Supports 100%	One	37	1	
	(Page 1)		(VT-4)		3	Two	75		
					2	Three	100		
	Steam Gen Feed Wtr	K16-555-16V	PT or MT	1	C-C Attach. Welds	Three	100		1039-9V:Param't
	Supply Gen 1-2	Lead 2			C-E		C-E		
	(500146) (03-24)	[2.2-26]	VT-3	9	4 Supports 100%	One	44	1	
	(Page 2)		(VT-4)		3	Two	77		
					2	Three	100		
	Steam Gen Feed Wtr	K-16-557-16V	PT or MT	1	C-C Attach. Welds	Three	100		1042-9V:Param't
	Supply Gen 1-3	Lead 3			C-E		C-E		
	(500146) (03-212)	[2.2-27]	VT-3	7	3 Supports 100%	One	42	3	
	(Page 3)		(VT-4)		2	Two	71		
					2	Three	100		
	Steam Gen Feed Wtr	K16-556-16V	PT or MT	1	C-C Attach. Welds	Two	100		1044-7V:Param't
	Supply Gen 1-4	Lead 4			C-E		C-E		
	(500146) (03-209)	[2.2-28]	VT-3	9	4 Supports 100%	One	44	4	
	(Page 4)		(VT-4)		2	Two	66		
					3	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component Multiple Stream (C-G) (Cont'd)	Line No. & ISI DWG. No.							
C3.40 C3.50	Cont Sump to RHR Pps Pump 1-1 Suct (10-9) (PDM) (500190)	S1-512-14III [2.2-11]	VT-3 (VT-4)	5	C-E 2 Supports 2 1	100%	One Two Three	C-E 40 80 100	0
	Cont Sump to RHR Pps Pump 1-2 Suct (10-18) (PDM) (500190)	S1-513-14III [2.2-12]	VT-3 (VT-4)	5	C-E 2 Supports 2 1	100%	One Two Three	C-E 40 80 100	0
C3.40 C3.50	Chg Pps Suction From RWST Vlv A (09-11)	S2-1987-8 [2.2-29]	VT-3 (VT-4)	5	C-E 3 Supports 2	100%	Two Three	C-E 60 100	0
	Charge Pps Suction from RWST Vlv B (09-11)	S2-1988-8 [2.2-29]	VT-3 (VT-4)	3	C-E 3 Supports	100%	One	C-E 100	0

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports - Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component								Applicable to: Mark No. / Weld No.
	Multiple Stream (C-G) (Cont'd)	Line No. & ISI DWG. No.							
C3.40	RHR Sup to Spray	S1-279-8IIIP	PT	1	C-C Attach Welds	One	100		57S-70V/Param't
C3.50	Hdrs 1 & 3 (09-2)	[2.2-3]			C-E		C-E		Valve C3.110
			VT-3	12	5 Supports 100%	One	41	1	Item
			(VT-4)		4	Two	75		
					3	Three	100		
	RHR Sup to Spray	S1-280-8IIIP			C-E		C-E		
	Hdrs 2 & 4 (10-5)	[2.2-16]	VT-3	5	2 Supports 100%	One	33	0	
			(VT-4)		1	Two	66		
					2	Three	100		
C3.40	RHR Pp Inj Cold Leg	S6-508-8III	PT	2	C-C Attach. Welds	Three	100		58N-49R:X370A,B;
C3.50	Pp 1-1 (09-38)	[2.2-30]			C-E		C-E		58N-52A:X426A-C
	(09-39)	[2.2-31]	VT-3	27	8 Supports 100%	One	29	5	
	(09-40)	[2.2-32]	(VT-4)		9	Two	62		
					10	Three	100		
	RHR Pp Inj Cold Leg	S6-509-8III	PT	1	C-C Attach. Welds	One	100		57N-5R:Param't
	Pp 1-2 (09-41)	[2.2-33]			C-E		C-E		
	(09-43)		VT-3	9	3 Supports 100%	One	33	2	
			(VT-4)		5	Two	88		
					1	Three	100		

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports _ Cont'd									
C-C,C-E	Support Members - Cont'd									
C3.40	Support Attach't									
C3.50	Support Component									Applicable to: Mark No. / Weld No.
	(C-G) Multiple Stream (Cont'd)	Line No. & ISI DWG. No.								
C3.40 C3.50	RHR Pp 1-1 Inj Cold Leg Loop 1 (09-36)	S6-3844-6III [2.2-34]	PT	1	C-C		Two	100		42-37A:X394A-E
					C-E			C-E		
			VT-3 (VT-4)	7	3 Supports 4	100%	One Two	42 100	0	
	RHR Pp 1-1 Inj Cold Leg Loop 2 (09-37)	S6-3845-6III [2.2-35]			C-E			C-E		
			VT-3 (VT-4)	9	2 Supports 4 3	100%	One Two Three	22 66 100	0	
	RHR Pp 1-1 Inj Cold Leg Loop 3 (09-43)	S6-3846-6III [2.2-33]	-	-	-		-	-	0	No supports in boundary.
	RHR Pp 1-1 Inj Cold Leg Loop 4 (09-42)	S6-3847-6III [2.2-37]			C-E			C-E		
			VT-3 (VT-4)	1	1 Support	100%	One	100	0	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL ID	NDE METH	TOTAL HANGR	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	TOTAL SNUBR	EXAM RELIEF'S & REMARKS
	Supports _ Cont'd								
C-C,C-E	Support Members - Cont'd								
C3.40	Support Attach't								
C3.50	Support Component Multiple Stream (C-G) (Cont'd)	Line No. & ISI DWG. No.							Applicable to: Mark No. / Weld No.
C3.40	Safety Inj Pump	S2-1982-6	PT	1	C-C Attach. Welds	One	100		98-14R:LUGS
C3.50	Suction Pump 1-1	[2.2-18]			C-E		C-E		
	(09-5)		VT-3 (VT-4)	2	2 Supports 100%	One	100	0	
C3.40	Safety Inj Pump	S2-1983-6			C-E		C-E		
C3.50	Suction Pump 1-2	[2.2-18]	VT-3	3	2 Supports 100%	One	66	0	
	(09-5)		(VT-4)		1	Two	100		

End of Items C3.40 and C3.50

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MAJOR ITEM: PUMPS (RHR PUMPS)
TABLE: 2.3

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
Table IWC-2500-1	Sub Items are out of sequence intentionally. Each pump is described completely before the next pump is described.							[*] ISI DWG Page No.
	Residual Heat Removal Pumps	DWG. REF. DC-663217-26 * [2.3-1]						RHR Pumps Ingersoll Rand Serial No. 1-1 037050 1-2 A69-36
C-G	Pressure Retaining Welds							
C6.10	Pump Casing Welds	-	-	-	-	-	-	C6.10 Items Not Applicable
C-D	Pressure Retaining Bolting (Larger than 2 inch Dia)							
C4.30	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.30 Item Not Applicable
C-C	Support Members							
C3.70	Integrally Welded Support Attachments	-	-	-	-	-	-	C3.70 Item Not Applicable
C-E	Support Members							
C3.80	Support Plates							The RHR Pumps rest on plate imbedded in the deck
	RHR Pump 1-1	Plate 1-1	VT-3	1	Exposed Areas	One	100	
	RHR Pump 1-2	Plate 1-2	VT-3	1	Exposed Areas	Two	100	
C3.90	Supports, Mech & Hydr RHR Pump 1-1	Snubbers	VT-3 (VT-4)	2	Snubbers 100%	Two	100	RHR Pump motor Snubbers were previously itemized with piping.
	RHR Pump 1-2	Snubbers	VT-3 (VT-4)	2	Snubbers 100%	Two	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT		EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
									[*] ISI DWG. Page No.
	Safety Injection Pumps	DWG. REF. * [2.3-2]							Pacific Pump Serial Nos. 1-1 45497 1-2 45498
C-G	Pressure Retaining Welds								
C6.10	Pump Casing Welds	-	-	-	-		-	-	C6.10 Item Not Applicable
C-D	Pressure Retaining Bolting (Larger Than 2 Inch Dia)								
C4.30	Bolts, Studs & Nuts SI Pump 1-1 OR[1] SI Pump 1-2	Casing Bolts	UT	8	All Bolts (Number 5 on Dwg. 2.3-2)	100%	[1]Dependent on Maintenance Schedule	100	Relief No. 009 Dia = 2.12"
C-C	Support Members								
C3.70	Integrally Welded Support Attachments	-	-	-	-		-	-	C3.70 Item Not Applicable
C-E	Support Members								
C3.80	Support Components	Support Base							
	SI Pump 1-1	Base 1-1	VT-3	1	Exposed Area		One	100	The SI Pumps rest on concrete foundations
	SI Pump 1-2	Base 1-2	VT-3	1	Exposed Area		Two	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
								[*] ISI DWG. Page No.
C-G	Centrifugal Charging Pumps Pressure Retaining Welds	DWG. Ref. DC-663210-146 * [2.3-3]						Pacific Pumps Serial Nos. 1-1 45611 1-2 45612
C6.10	Pump Casing Welds Cent'l Pump 1-1	Branch Weld to Upper Case Weld N-A	PT	1	One Weld 360°	Two	100	Suction Side Six inch 150# Flange Pump 1-1 selected
C6.10	Cent'l Pump 1-1 OR[1] Cent'l Pump 1-2	Machined Weld Drive end of Pump Casing	PT	1	One Weld 100%	Three	100	Relief No. 010 [1]Pump selected dependent on maintenance schedule
C-D	Pressure Retaining Bolting (Larger than 2 inch Dia)							
C4.30	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.30 Item Not Applicable

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Cent'l Chg. Pumps Cont'd	* [2.2-3]						[*] ISI DWG. Page No.
C-C C3.70	Support Members Integrally Welded Support Attachments (To Pressure Boundary)	Welded Attach't					100%	
	Cent'l Pump 1-1	Weld A-D	PT or MT	4	4 Attach'ts 100%	One	50	
	Cent'l Pump 1-2	Weld A-D	PT or MT	4	4 Attach'ts 100%	Three	100	
C-E C3.80	Support Members Support Components	Support Base						
	Cent'l Pump 1-1	Base 1-1	VT-3	1	Exposed Areas	One	50	The Cent'l Chg. Pumps Rest on concrete foundations
	Cent'l Pump 1-2	Base 1-2	VT-3	1	Exposed Areas	Two	100	

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Reciprocating Charging Pump	DWG. Ref. DC-663210-143 * [2.3-4]						[*] ISI DWG. Page No. Union Pump #1-3 SN 274173
C-G	Pressure Retaining Welds In Pumps and Valves							
C6.10	Pump Casing Welds	-	-	-	-	-	-	C6.10 Item Not Applicable
C-D	Pressure Retaining Bolting (Larger than 2 Inch dia)							
C4.30	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.30 Item Not Applicable
C-C	Support Members							
C3.70	Integrally Welded Support Attachments (To Pressure Boundary)	-	-	-	-	-	-	C3.70 Item Not Applicable
C-E	Support Members							
C3.80	Support Components	Support Base						
	Recip'g Pump #1-3	Base 1-3	VT-3	1	Exposed Areas	Two	100	The Recip'g Pump rests on a concrete foundation

CATEGORY ITEM	COMPONENT OR SYSTEM	GENERAL IDENTIFICATION	NDE METH	TOTAL ITEMS	EXAMINATION AMOUNT & EXTENT	EXAM'N PERIOD	% TO DATE	EXAM RELIEF'S & REMARKS
	Table IWC-2500-1 Sub Item Out Of Sequence Intentionally					Note: ISI DWG's Contain Data relating to Valve Support Components, Valve Bolting Dimensions, and Identification		
C-G	Pressure Retaining Welds In Pumps and Valves							
C6.20	Valve Body Welds	-	-	-	-	-	-	C6.20 Item Not Applicable
C-D	Pressure Retaining Bolting (Larger than 2 Inch Dia)							
C4.40	Bolts, Studs, and Nuts	-	-	-	-	-	-	C4.40 Item Not Applicable
C-C	Support Members							
C3.100	Integrally Welded Support Attachments (To Pressure Boundary)				C3.100 and C3.110 Code Items are summarized under Table 2.2 and included with their respective Piping Systems under Code Items C3.40 and C3.50. Table 2.2 itemizes the supports by line number and nomenclature. All supports are scheduled per Code requirements.			
C3.110	Component Supports							

Category D-A, D-B, and D-C component support members are itemized by line number and number of supports on the line according to system in descending size order. Support totals for all applicable Class 3 lines over 4 inch nominal diameter are given. A visual examination, VT-3 (and VT-4 as applicable) will be given each support once each inspection period (3 1/3 years) per Table IWD-2500-1 of Section XI. The total number of hangers ("Total Hangr") on each line includes the total number of snubbers ("Total Snubr")

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ASME SECTION XI SYSTEMS-CLASS 2

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CODE ITEM D-A, D-B, D-C: COMPONENT SUPPORTS (ALL TYPES)
TABLE: 3.1

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Auxiliary Feedwater Pump				
1-1	33C	DC-663056	VT-3	Pumps rest on 4 integral legs to base pad.
1-2	33B	24,25	VT-3	
1-3	33A		VT-3	
Letdown Heat Exchanger				
1-1	313C	DC-663210-11	VT-3	Vessel has 2 supports to base.
Seal Water Heat Exchanger				
1-1	311C	DC-663210-7	VT-3	Vessel has 2 supports to base.

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Residual Heat Remover Pump Seal Water Cooler				
1-1	211D, 325C	DC-663217-9,16	VT-3	Coolers have bracket to RHR Pp.
1-2	211D, 271C		VT-3	
Spent Fuel Pit Heat Exchanger				
1-1	316C	DC-663211-7	VT-3	Vessel has 2 supports to base.
Component Cooling Water Surge Tank				
1-1	257B	DC-663225-2	VT-3	Tank has 2 braced supports to base.

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Component Cooling Water Pump				
1-1	262C	DC-663213-1	VT-3	Pumps have 4 integral legs to base.
1-2	264C		VT-3	
1-3	266C		VT-3	
Component Cooling Water Heat Exchanger				
1-1	257E, 356C	DC-663212-1, 2	VT-3	Vessels have 2 supports to base.
1-2	257D, 357C		VT-3	
Component Cooling Water Pump Lube Oil Cooler				
1-1	263C	DC-663213-4	VT-3	Coolers mounted to pumps.
1-2	265C		VT-3	
1-3	267C		VT-3	

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Centrifugal Charging Pump Lube Oil, Gear Oil and Seal Coolers				
1-1	321C	DC-663210-40,47,50	VT-3	Cooler brackets mount to pumps.
1-2	273C		VT-3	
Saftey Injection Pump Lube Oil and Seal Coolers				
1-1	275C	DC-663216-26,32	VT-3	Cooler brackets mount to pumps.
1-2	326C		VT-3	

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Reciprocating Charging Pump Fluid Drive & Lube Oil Coolers				
1-3	288C	DC-663210-25	VT-3	Coolers are mounted to pump.
Reactor Coolant Pump Upper Bearing Oil Coolers				
1-1	294D	DC-663207-4,6	VT-3	Cooler mount To brackets At Top of R.C. Pumps.
1-2	290D		VT-3	
1-3	292D		VT-3	
1-4	293D		VT-3	
Condensate Storage Tank				
1-1	332D	DC-663071-27	VT-3	Base of tank rests on concrete foundation.
Firewater Transfer Tank				
0-1	338D	438038	VT-3	Base of tank rests on concrete foundation.

COMPONENT OR SYSTEM	P&ID 102028 COORD.	PG&E REF.DWG. NO.	NDE METHOD	EXAM RELIEFS AND REMARKS
Makeup Water Transfer Pumps				
0-1	333B	DC-663062-3	VT-3	Pump mount on bed plate.
0-2	335B		VT-3	
Auxiliary Salt Water Pumps				
1-1	354C	DC-663030-1	VT-3	Pump mount to deck.
1-2	354C		VT-3	
Spent Fuel Pool Cooling Pump				
1-1	316C	DC-663211-12	VT-3	Pump has 2 supports to base plates
1-2	316C		VT-3	Pump has 2 supports to base plates

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
FEEDWATER SYSTEM - SYS 03						
Aux FW Pp 1-1 Suction	K-558-8	31C	447118	VT-3	2	0
Aux FW Pp 1-1 Raw Wtr Suct	K-561-8	30B	447118	VT-3	1	0
Aux FW Pps 2 + 3 Cnds Suct Hdr	K-562-8	30B	447118	VT-3	4	0
Aux FW Pp 1-2 Suction	K-559-6	31B	447118	VT-3	2	0
Aux FW Pp 1-3 Suction	K-560-6	30A	447118	VT-3	2	0
Aux FW Pp 1 Disch Hdr	K16-568-6	33C	445878	VT-3	7	0
Aux FW Pp 1-2 Raw Wtr Suct	K-488-6	31B	447118		0	0
Aux FW Pp 1-3 Raw Wtr Suct	K-489-6	31A	447118	VT-3	1	0
Aux FW Pps Raw Wtr Suct Hdr	K-638-8	31A	447118	VT-3	3	0
TURBINE STEAM SUPPLY SYSTEM - SYS 04						
Aux Feed Pp 1-1 Turb Exh	K-1045-10	63C	447119	VT-3,VT-4	6	0
SPENT FUEL STORAGE SYSTEM - SYS 13						
Spent Fuel Pit Pp 1-1 Suction	S2-154-10	245D	470583	VT-3,VT-4	7	1
Spent Fuel Pit Pp 1-2 Suction	S2-5634-10	246D	G-128-01	VT-3,VT-4	1	0
Spent Fuel Pit Pp 1-1 Disch	S2-155-8	244D	470471	VT-3,VT-4	6	0
SFP Heat Exchr Outlet	S2-159-8	245E	470472	VT-3,VT-4	17	1
Spent Fuel Pit Pp 1-2 Disch	S2-5635-8	244D	H-088-01	VT-3,VT-4	1	0

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14						
CCW Ht Exch 1 CCW Inlet	K-95-30	253-E	449316	VT-3,VT-4	20	5
CCW Ht Exch 2 CCW Inlet	K-96-30	253-D	449316	VT-3,VT-4	20	4
CCW Ht Exch 1 CCW Outlet	K-101-30	258-E	449316	VT-3,VT-4	2	1
CCW Ht Exch 2 CCW Outlet	K-102-30	258-D	449316	VT-3,VT-4	2	1
CCW Ht Exch Outlet Crosstie	K-98-24	258-E	449316		0	0
CCW Return Header A	K-81-20	254A,262A,277A, 281A, 291A,304A, 311A,322A	449316 449314	VT-3,VT-4	7	3
CCW Return Header B	K-82-20	254A,262B,270B	449316 449314	VT-3,VT-4	14	2
Comp Clg Pp 1 Disch	K-89-20	251-E	449316	VT-3	1	0
Comp Clg Pp 2 Disch	K-90-20	252-E	449316	VT-3	1	0
Comp Clg Pp 3 Disch	K-91-20	254-E	449316	VT-3	1	0
CCW Pp's 1-2 & 1-3 Suct Crosstie	K-97-20	252-C	449316		0	0
CCW Supply Header A	K-103-20	259E,263E,272E, 281E,291E,304E, 311E,322E	449316 449314	VT-3,VT-4	9	3

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
CCW Supply Hdr B	K-104-20	259D,263D,270D	449316 449314	VT-3,VT-4	11	2
CCW Supply Hdr C	K-2277-20	259D,273E,270E, 281E,291E	449315 449316	VT-3,VT-4	11	1
CCW Return Hdr C	K-2282-20	254A,263B,277B, 280B,291A	449315 449316	VT-3,VT-4	14	2
CCW Pp's 1-1 & 1-2 Suct Crosstie	K-2285-20	251C	449316		0	0
Comp Clg Pp 1 Disch Hdrs A & B	K-2994-20	251E	449316	VT-3,VT-4	8	3
Comp Clg PP 2 Disch Hdrs A & B	K-3036-20	253E	449316		0	0
Cont Fan Clr CCW Sup Hdr B	K-105-18	272D	449314	VT-3,VT-4	15	6
Cont Fan Clr CCW Ret Hdr B	K-106-18	271B	449314	VT-3,VT-4	12	4
CCW Supply Hdr C	K-2278-18	296E,304E,311E	449315	VT-3	3	0
CCW Return Hdr C	K-2281-18	293A,304A,311A	449315	VT-3,VT-4	5	2
CCW Return Header B Bypass	K-2369-18	276B	449314	VT-3,VT-4	2	1

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
Cont Fan Clr Supply Hdr A	K-146-16	324E	449314	VT-3,VT-4	11	5
Cont Fan Clr Return Hdr A	K-147-16	324A	449314	VT-3,VT-4	8	1
CCW Return Header A Bypass	K-2399-16	326B	449314	VT-3	2	0
RHR Ht Exch 2 CCW Supply	K-94-12	270D,203C	449314	VT-3	2	0
RHR Ht Exch 2 CCW Return	K-99-12	270B,203C	449314	VT-3,VT-4	3	1
RHR Ht Exch 1 CCW Supply	K-124-12	324D,203E	449314	VT-3	3	0
RHR Ht Exch 1 CCW Return	K-127-12	324B,204E	449315	VT-3,VT-4	3	1
Spent Fuel Ht Exch CCW Sup	K-152-12	316D	449315	VT-3	4	0
Spent Fuel Ht Exch CCW Ret	K-153-12	316C	449315	VT-3,VT-4	6	0
CCW Supply Hdr C	K-2279-12	316E	449315	VT-3	2	0
CCW Return Hdr C	K-2280-12	316B	449315	VT-3	1	0
Cont Fan Clr 5 CCW Supply	K-3279-12	277D	446503	VT-3,VT-4	3	1

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
Cont Fan Clr 4 CCW Supply	K-3280-12	327E	446503	VT-3	1	0
Cont Fan Clr 3 CCW Supply	K-3281-12	328E	446503	VT-3,VT-4	3	1
Cont Fan Clr 2 CCW Supply	K-3282-12	278D	446503	VT-3	3	0
Cont Fan Clr 1 CCW Supply	K-3283-12	279D	446503	VT-3	1	0
Cont Fan Clr 5 CCW Rtn	K-3284-12	277B	446503	VT-3,VT-4	2	1
Cont Fan Clr 4 CCW Rtn	K-3285-12	327A	446503	VT-3	1	0
Cont Fan Clr 3 CCW Rtn	K-3286-12	328A	446503	VT-3	3	0
Cont Fan Clr 2 CCW Rtn	K2-3287-12	278B	446503	VT-3,VT-4	2	1
Cont Fan Clr 1 CCW Rtn	K2-3288-12	279B	446503	VT-3	2	0
Reac Cool Pps CCW Sup Hdr	K-133-10	312E	445876 449315	VT-3,VT-4	2	0
BA & Waste Conc CCW Sup Hdr	K-148-10	322D	451411	VT-3	4	0
BA & Waste Conc CCW Ret Hdr	K-149-10	322B	451411	VT-3,VT-4	6	0

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
Reac Cool Pps CCW Sup Hdr	K-180-10	312E	446495	VT-3	1	0
Ltdn Ht Exch CCW Supply	K-125-8	333D	449315	VT-3,VT-4	4	1
Ltdn Ht Exch CCW Rtn	K-126-8	333C	449315	VT-3,VT-4	5	0
RC Pumps CCW Sup Hdr	K-2296-8	312E	446495	VT-3,VT-4	9	0
BA Conc CCW Sup Hdr	K-2312-8	321D	451411	VT-3	3	0
BA Conc CCW Rtn Hdr	K-2341-8	321B	451411	VT-3	4	0
Comp Clg Wtr Pp 1 Recirc	K-116-6	271D	449316	VT-3	1	0

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
Comp Clg Wtr Pp 2 Recirc	K-117-6	252D	449316	VT-3	2	0
CCW Surge Tk Conn Hdr B	K-121-6	257B	445881	VT-3,VT-4	11	1
CCW Surge Tk Conn Hdr A	K-123-6	256A	445881	VT-3,VT-4	10	0
RCP Oil Clr CCW Rtn Hdr	K-142-6	291A	445880	VT-3,VT-4	2	0
RCP Barrier CCW Rtn Hdr	K-143-6	293A	445880	VT-3,VT-4	2	0
Comp Clg Wtr Pp 3 Recirc	K-157-6	254D	449316	VT-3	1	0
RC Pps Barrier CCW Ret Hdr	K17-1357-6	293B	446490 445880	VT-3,VT-4	2	1
BA Conc Evap Cond CCW Sup	K-1759-6	301D	451411	VT-3	2	0
BA Conc Evap Cond CCW Ret	K-1760-6	301B	451411	VT-3,VT-4	2	0
RCP 4 CCW Sup Hdr	K-1968-6	292D	446495	VT-3	5	0

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
COMPONENT COOLING WATER SYSTEM SYS 14 - Cont'd						
RCP 3 CCW Sup Hdr	K-2211-6	292D	446495	VT-3	2	0
RCP 1 CCW Sup Hdr	K-2297-6	294D	446495	VT-3	14	0
RCP 2 CCW Sup Hdr	K-2298-6	291D	446495	VT-3,VT-4	18	0
RC Pumps Oil Clr CCW Ret Hdr	K-2311-6	292C	446498	VT-3,VT-4	14	4
RCP Thermal Bar CCW Ret Hdr	K17-2340-6	292C	446490	VT-3,VT-4	13	3
RC Pps Oil Clr CCW Ret Hdr	K-3179-6	292C	445498	VT-3,VT-4	1	0
MAKEUP WATER - SYS 16						
Aux FW Pps Condensate Suct	K-380-10	30C, 332C	447118	VT-3	14	0
Raw Wtr Stor Resv Disch Hdr*	K-1862-8	388C	449298	VT-3	22	0

* Shared line with Unit 2. This portion (including run through LHUT room) allocated to Unit 1.

COMPONENT OR SYSTEM	LINE NO.	P & ID 102028 COORDINATE(S)	SEISMIC DWG. NO.	NDE METH	TOTAL HANGR	TOTAL SNUBR
SALTWATER SYSTEMS - SYS 17						
Aux Saltwtr Pps Units 1 + 2 Crosstie	G1-933-24	374C	57744 57750 57753	VT-3	1	0
Comp Clg Ht Exch 1 Outlet	G1-713-24	377C	500032 500034		0	0
Comp Clg Ht Exch 2 Outlet	G1-714-24	377C	500032 500034		0	0
Aux Saltwtr Pp 1 Disch	G1-687-24	374C	57744 57750 57753 57743 57745 500031 500034	VT-3	3	0
Aux Saltwtr Pps Disch Crosstie	G1-676-24	374C	57750 57753 57745	VT-3	4	0
Aux Saltwtr Pp 2 Disch	G1-680-24	375C	57744 57750 57753 57743 57745 500031 500034	VT-3	3	0
MUS Demin Drain A to Ocean	G1-3681-6	378C	500031 500034		0	0
MUS Demin Drain B to Ocean	G1-3682-6	377C	500031 500034		0	0

REQUEST #	REQUEST FOR RELIEF DESCRIPTION	NRC SER DATE
NDE-001	Reactor Vessel Shell-To-Bottom Head Weld.	12/14/88
NDE-002	Reactor Vessel Closure Head and Bottom Head Circumferential and Meridional Welds.	12/14/88
NDE-003	Reactor Vessel Head-To-Flange Weld.	12/14/88
NDE-004	Reactor Vessel Nozzle-To-Vessel Welds	12/14/88
NDE-005	ASME Code Class 2 Exemption Criteria (IWC-1220).	12/14/88
NDE-006	Class 2 Pressure Vessel Nozzle and Shell Welds.	12/14/88, 10/25/89
NDE-006A	Feedwater Nozzle to Shell Weld	09/21/92
NDE-007	Class 2 Vessel Insulation Design.	12/14/88, 10/25/89
NDE-008	Class 1 and 2 Pipe Weld Accessibility.	See Appendix B
NDE-008A	Steam Generator and Pressurizer Safe End to Nozzle Welds.	09/21/92
NDE-008B	Class 1 Pipe Weld Accessibility	09/21/92
NDE-008C	Pipe Welds Class 2.	09/21/92
NDE-009	Bolt Design For Safety Injection Pumps.	12/14/88
NDE-010	Centrifugal Charging Pump End Plate Weld Schedule.	12/14/88
NDE-011	Withdrawn	
NDE-012	Steam Generator and Pressurizer Nozzle Inner Radius.	12/14/88, 10/25/89
REP-001	Withdrawn	

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
REACTOR VESSEL - SHELL TO BOTTOM HEAD WELD				(B1.10)
Item: Circumferential Weld #10-442 @ Elevation -342.66"	1	1.1	B-A	B1.11

CODE REQUIREMENT

Volumetric Examination (by Ultrasonic Shear and Longitudinal Beam) from both directions at right angles to welds where feasible. Essentially 100% of the weld length is required for examination at or near end of inspection interval.

BASIS FOR REQUEST

Vessel design of Bottom Head-to-Shell Circumferential weld (10-442) allows only partial examination. Core Support Lugs (12) interfere with remote tool accessibility. Approximately 75% of the weld is accessible for Code volumetric examination from the shell side. 100% of the weld is completely accessible from the head side.

PROPOSED EXAMINATION

Volumetric Examination to extent possible, Visual Examination as required by Code Category B-N-1 (and B-N-3), in addition to Pressure Test as required by Code Category B-P.

SCHEDULED IMPLEMENTATION

Commercial startup to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
REACTOR VESSEL - HEAD WELDS				(B1.20)
Item: (a) Bottom Head (#4-443) Circ'l Weld	1	1.1	B-A	B1.21
(b) Closure Head (#6-446B) Circ'l Weld	1	1.1	B-A	B1.21
Item: (c) Bottom Head Meridional Welds (#1-443A, through #1-443F)	1	1.1	B-A	B1.22
Item: (d) Closure Head Meridional Welds (#1-446A, through #1-446F)	1	1.1	B-A	B1.22

CODE REQUIREMENT

Volumetric Examination (by Ultrasonic Shear and Longitudinal Beam) from both directions at right angles to the weld where feasible. Essentially 100% examination of each weld length is required for welds 6-446B and 1-446A to F during the interval; welds 4-443 and 1-443A to F may be deferred to the end of the inspection interval.

BASIS FOR REQUEST

The Bottom Head Circumferential Weld (4-443) is completely inaccessible for Code volumetric examination due to the bottom head instrument penetrations. Bottom Head Meridional Welds (1-443 A to F) are approximately 50% inaccessible due to the bottom head instrument penetrations. The Closure Head Circumferential Weld (6-446B) is completely inaccessible due to the CRDM Penetrations and vessel head cooling duct shroud. The Closure Head Meridional Welds are inaccessible except for 38 inches (approximately 55%) due to the cooling duct shroud and CRDM penetrations.

PROPOSED EXAMINATION

The accessible length of each Closure Head and Bottom Head Meridional Weld will be ultrasonically examined as scheduled. Bottom Head Welds will be visually examined as required by Category B-N-1 (and B-N-3). All items will be pressure tested as required by Category B-P.

SCHEDULED IMPLEMENTATION

Commercial start to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
REACTOR VESSEL				
Item: Head-To-Flange Weld No. 6-446A	1	1.1	B-A	B1.40

CODE REQUIREMENT

Volumetric Examination (by Ultrasonic Angle and Longitudinal Beam) from both sides at right angles to the weld where feasible.

BASIS FOR REQUEST

Flange design prohibits head-to-flange weld examination from the flange side. Additionally three top head lifting lugs limit full scan from the head. Approximately 95% of the weld is accessible from the head side.

PROPOSED EXAMINATION

The Head-to-Flange Weld will be examined as accessible. Additionally, the welds will be visually examined during pressure test per Category B-P.

SCHEDULED IMPLEMENTATION

Commercial start to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
REACTOR VESSEL - NOZZLE WELDS				
Item: Primary Nozzle to Vessel Welds (a) 29 Inch Outlet Nozzles (Total 4) (Pipe Nominal Diameter) (b) 27.5 Inch Inlet Nozzles (Total 4) (Pipe Nominal Diameter)	1	1.1	B-D	B3.90

CODE REQUIREMENT

Volumetric Examination (by Ultrasonic Shear and Longitudinal Beam) at right angles to the weld from the vessel shell. Volumetric Examination (by Ultrasonic Longitudinal Beam) from inside the vessel nozzle. Welds will be examined from inside the nozzle as scheduled, and from the shell at the end of the inspection interval per Code Case 1647 (N-73).

BASIS FOR REQUEST

Nozzle Reinforcement precludes part of the examination for all outlet nozzles as it prevents the transducers from moving completely across the weld. It prevents full scan from the near side of adjacent nozzles by obstructing full transducer movement back from the nozzle. Inlet nozzle openings similarly obstruct full coverage at the near side of all adjacent nozzles. Approximately 60% of each nozzle is accessible from the shell side. All nozzles are completely accessible from the nozzle I.D.

PROPOSED EXAMINATION

Volumetric examination of all nozzles as accessible. Visual examination per category B-N-1 and pressure test per category B-P.

SCHEDULED IMPLEMENTATION

Commercial start up to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
PIPING WELDS				(C5.10) C5.11, C5.12 (C5.20) C5.21, C5.22 (C5.30) C5.31, C5.32
Item: Class 2 Piping Systems	2	2.2	C-F	

CODE REQUIREMENT

The NDE Exemption Criteria established by IWC-1220 1974 Edition, Summer 75 Addenda is to be used to develop the DCPP Unit 1 Code Class 2 pipe weld ISI Program as indicated by 10 CFR 50.55a(b)(2)(iv)(B).

BASIS FOR REQUEST

PG&E does not concur with the basis for many of the Summer 75 Exemption Criteria. IWC-1220(a) uses design parameters while neglecting the possibility of using conservative design specifications and does not take the actual operating conditions of systems into account. It also fails to recognize the safety significance of some systems over others. IWC-1220(c) uses system chemistry control to allow exempting components from inspections. Chemistry control, however, eliminates only one possible failure mode and should not be the sole justification for eliminating inspections. The requirements of IWC-1220 in the 1977 Edition, Summer 1978 Addenda are more realistic than those of the 1975 Edition, and are in keeping with the philosophy of PG&E and ASME.

PROPOSED CRITERIA

The Class 2 NDE Exemption Criteria established by IWC-1220 1977 Edition, Summer 78 Addenda will be used to develop the DCPP Unit 1 Code Class 2 Pipe Weld ISI Program.

SCHEDULED IMPLEMENTATION

Commercial startup to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
Seal Inj Filter 1-1 Girth Welds G-A, G-B	2	2.1	C-A	C1.10, C1.20
Excess Letdown Ht Exchr Girth Welds G-A, G-B	2	2.1	C-A	C1.10, C1.20
RHR Ht Exchr 1-1, 1-2 Girth Welds G-A, G-D	2	2.1	C-A	C1.10, C1.20
RHR Ht Exchr 1-1, 1-2 Nozzle Welds N-1, N-2	2	2.1	C-B	C2.20
Stabilizer Separator - Vessel deleted, Relief void				
Regenerative Ht Exchr Shell Welds (9,10,11,12)	2	2.1	C-A	C1.20, C1.30

CODE REQUIREMENTS

Volumetric Examination by Ultrasonic Angle Beam and Longitudinal Beam from both sides of the weld where possible.

BASIS FOR REQUEST

Seal Injection Filter 1-1 Girth Welds G-A, G-B

The Seal Injection Filters are located in a filter bank with interconnected concrete vaults for shielding. The filters are approximately 61" long with a 22" max. diameter. They are set into vaults that are approximately 63" tall by 36" on each side. Access to each vault is through a 21 1/2" diameter removable hatch at the top which exposes the top of the filter for cartridge replacement. However, access to the applicable welds from this side is restricted by the filter cover plate assembly and cover plate lifting fixtures. Alternate access is provided by an unshielded crawl-space behind the filter bank. This crawl space is obstructed by remote valve operators and instrument cables. Radiation levels are expected to exceed 10 rads per hour in this area, and a liquid penetrant examination takes 45 minutes, not counting the time required to negotiate the obstructed crawl space. The combined factors of limited accessibility, high radiation levels, and small size (2") of the line to/from the filters pose an unjustified risk to the examination personnel.

BASIS FOR REQUEST (Cont'd)

Excess Letdown Heat Exchanger Girth Welds G-A, G-B
This is a vertical vessel supported by steel 'feet' on concrete piers with pads welded to the shell closely abutting and restricting access to each subject weld. On the vessel shell, at 90 degrees to each support pad, the nozzle penetrations further limit access to these welds. The shell to flange weld cannot be scanned from the flange side due to flange configuration, and the head to shell weld is limited from the head side due to head curvature. Approximately 15% of weld G-A is accessible from the shell side. Approximately 10% of weld G-B is accessible from the shell side.

RHR Heat Exchanger 1-1, 1-2 Girth Welds G-A, G-D and Nozzle Welds N-1, N-2
This is a vertical vessel supported in the same manner as the excess letdown heat exchanger. The head to shell and shell to flange welds (G-A and G-D) are restricted to approximately 15% and 10% due to the support pads, nozzles, flange and head curvature. The nozzle welds are restricted by the adjacent support pads, by the flange, and by the curvature of the head underneath. Approximately 10% of each nozzle weld is accessible from the shell side. They are not accessible from the nozzle side due to the nozzle geometry.

Regenerative Heat Exchanger Shell No. III, Welds 9, 10, 11, and 12
The regenerative heat exchanger (RHE) consists of 3 shells arranged vertically (shell no. I, no. II, and no. III). ASME Section XI requires 100% volumetric examination of all four welds in any one shell. PG&E has selected shell no. III as the typical shell for examination.

Volumetric examination by radiography is not practicable for the following reasons: (1) high background radiation levels, (2) complex geometry of the tubesheet to shell weld, including the tubes themselves, (3) the vessel is filled with water.

Material Considerations:
Volumetric examination by ultrasonics is of limited reliability due to the shell material and product form, ATSM A351 GR. CF8 centrifugally cast stainless steel. This material has a large grain structure which disperses the ultrasonic beam, requiring use of large low frequency transducers which are not sensitive to small flaws. PG&E believes that this impaired examination sensitivity, combined with the physical access limitations described below, make the ultrasonic method ineffective for this application. This conclusion is supported by EPRI report NP-5173 (April, 1987).

Regenerative Heat Exchanger Shell No. III, Welds 9, 10, 11, and 12 (Cont'd)
Physical Access Limitations:
Head to Shell Welds (Welds 9, 12): Welds 9 and 12 are partly accessible (approximately 80 and 60 percent, respectively) from the shell side due to nozzle obstructions. Examinations from the head side are not practicable because the head curvature geometry is not conducive to effective volumetric examination techniques.

Tubesheet to Shell Welds (Welds 10, 11): Welds 10 and 11 are partly accessible (approximately 45 and 30 percent, respectively) from the shell side due to vessel support and nozzle obstructions. Welds 10 and 11 are not accessible from the tubesheet side due to vessel support obstructions. Even if these welds were accessible, examination is not practicable because the complex tubesheet geometry is not conducive to effective volumetric techniques.

PROPOSED AND ALTERNATE EXAMINATION
Seal Injection Filter Girth Welds - Scheduled pressure test.

Excess Letdown Heat Exchr. Girth Welds - Surface examination approximately 80% each (limited by vessel supports). Volumetric examination to the extent practical (approximately 10% of weld G-B and 15% of weld G-A).

RHR Heat Exchanger Shell and Nozzle Welds - Surface examination approximately 80% each (limited by vessel supports). Volumetric examination to the extent practical (approximately 10% of welds G-D, N-1, and N-2 and 15% of weld G-A).

Regenerative Heat Exchanger Shell Welds - Visual examination (VT-2) during system operational pressure test. Liquid penetrant surface examination (PT) of 100% of head to shell welds 9 and 12.
Due to support and nozzle obstructions, tubesheet to shell welds 10 and 11 are each approximately 45 percent accessible for an alternate PT examination. Therefore, to provide an acceptable alternative, PG&E will perform a PT "composite" examination equal to 100% of the accessible portions of tubesheet to shell welds 10 and 11 (shell No. III), 6 and 7 (shell No. II), and 2 and 3 (shell No. I).

In the unlikely event of RHE shell weld degradation not being detected by these alternate ISI examination methods, potential RHE tube leakage through a shell weld would be detected by pressurizer level indications and would be isolable.

SCHEDULED IMPLEMENTATION
Commercial startup to 120 months of operation
NOTE: Refer to Inservice Examination Isometric Drawings for details.

System/Component for Which Relief is Requested

Main feedwater system (FW). Portion of ASME Code Class 2 steam generator 1-3 feedwater nozzle to shell weld. Examination Category C-B, Item Number C2.20 (nozzle > 1/2" thickness).

LINE	SIZE	WELD NUMBER	%ACCESS	BASIS CATEGORY	LIMITATION	CODE ITEM	EXAMINATION OUTAGE	EXAMINATION DATE
557	16"	Nozzle-Shell	70	4	Nozzle Configuration	C2.20	1R4	4/91

Code Requirement

Section XI, Table IWC-2500-1, Examination Category C-B, Item C2.20, requires a surface examination and volumetric examination of 100% of the weld and adjacent base metal as defined by Figure IWC-2500-4, using acceptance criteria of IWC-3000 (reference IWB-3512).

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the Code-required volumetric examination.

Basis for Relief

During examinations conducted during the indicated refueling outage, the surface configuration limited a portion of the ultrasonic angle beam scan normal to the weld. The percentage of weld that was accessible for volumetric examination is listed above.

The specific limitation is due to the nozzle configuration, as noted above. The nozzle weld is not accessible from the bore due to a welded thermal sleeve and support structure inside the vessel. The nature of the limitation is generally categorized as:

Category 4 - Surface obstructions, including flanges or the bevels at valve bodies or thick wall fittings. These conditions when present, may obstruct a portion of the test surface, especially from volumetric examination due to transducer lift-off.

Alternate Examination

There are no alternate examinations proposed in lieu of the requirements of Section XI. Due to the surface configuration there are no other known alternate examination methods practical for these portions of the weld volume.

Partial examinations were performed on accessible portions of the weld in accordance with Section XI requirements and consisted of surface examination on 100% of the weld surface and volumetric examination to the extent practical.

Justification for Granting of Relief

This relief request is justified in accordance with 10CFR50.55a(a)(3) because compliance with the specified requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety.

The partial examinations provide a reasonable assurance of the continued structural integrity of the welds. All of the accessible surface was scanned in full compliance with Section XI. The major portion of the weld was fully examined. Surface examination was performed on 100% of the weld surface, as required by Section XI.

Should the relief be denied, plant modifications would be required to allow access to the currently inaccessible portions of the weld, which places an unnecessary burden upon PG&E.

The health and safety of the public is not compromised by this relief because there is reasonable assurance that any existing flaw would have been detected by the partial examination conducted.

Implementation Schedule

No alternate examinations are proposed. The partial examination was conducted during the refueling outage indicated above. The weld is required to be inspected once every 10 years.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
STEAM GENERATORS				
Item: Circumferential Welds	2	2.1	C-A	C1.10

BORON INJECTION TANK - Vessel abandoned, relief withdrawn -

CODE REQUIREMENT

Volumetric Examination of Circumferential Welds (by Ultrasonic Shear and Longitudinal Beam) from both directions at right angles to welds at structural discontinuities (as defined by NB-3213.2 and Table IWC-2500-1 Footnote 2) where feasible. The Volumetric Examination may be performed on one vessel, or a series of vessels (if multiple vessels), so that the examinations total 100% of one vessel using vessels in composite. Examination techniques are required to be performed in accordance with ASME Code Section V, Article 4 and divided in accordance with ASME Code Section XI Table IWC-2412-1 over the inspection interval.

BASIS FOR REQUEST

Removable insulation panels were designed and constructed for weld accessibility to conform to the 1974 ASME Code Edition, Summer 1975 Addenda, for girth welds 1-3, 2-4, 3-5, and 4-7, one in each steam generator. This design consists of removable insulation panels that allow access to 20% of the weld lengths. The panels are spaces approximately 120 degrees apart on the selected circumferential welds (generator 1-4 has one panel offset from 120 degrees). This meets the Summer 1975 Code Addenda and 10 CFR 50.55a in effect at the time that the preservice inspection was performed. To impose a design change for insulation accessibility modifications would create a significant burden on plant personnel with no compensating gain in plant or public safety.

PROPOSED EXAMINATION

Volumetric Examination of 100% of the accessible areas to total 20% over the inspection interval as outlined above and the required Code Category C-H pressure test.

SCHEDULED IMPLEMENTATION

Commercial startup to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
PIPE WELDS	1 & 2	1.4, 2.2	B-F, B-J, C-C, C-F	B5.5, B9.X, C3.X, C5.X

CODE REQUIREMENTS

Volumetric examination per Appendix III for applicable Class 1 pipe welds 4 inch and greater nominal diameter and for applicable Class 2 pipe welds over 1/2 inch nominal wall thickness. Surface examination for all applicable pipe welds.

*NOTE 1: Code Case N-460 allows a 10% reduction in coverage for weld exams. Therefore relief is not required for at least 90% coverage. (Reference PG&E letter DCL-92-178)

*NOTE 2: The Code requires, as a first choice, that 1/2 V weld scans be performed in all four directions. The Code also permits using full or 1-1/2 V scan from one side of the weld if it is not possible to use the 1/2 V scan in both directions normal to the weld. For welds where PG&E cannot perform 1/2 V scans in both normal directions, PG&E performs the 1-1/2 V scan if possible and relief is not required. (Reference PG&E letter DCL-92-178)

BASIS FOR REQUEST

Many welds are not 100% accessible for examination*. The specific reasons are dependent on each weld's configuration, but in general the limiting features could include the following:

1. Lugs or other welded attachments.
2. Wall or floor penetrations, hangers or components closely adjacent to the examination surface.
3. Surface configuration, such as local roughness or compound curvature, especially at the intrados of elbows or tees.
4. Surface obstructions, including flanges or the bevels at valve bodies or thick wall fittings. These conditions, when present, may obstruct a portion of the test surface, especially from volumetric examination due to transducer liftoff.

A list of specific limited welds with an estimate of the accessible percentage of each and the reason for limitation are listed in the following pages of this relief request NDE-008..

PROPOSED EXAMINATION

PG&E proposes to examine each and every scheduled weld to the fullest extent possible. If, during the course of examination, some obstruction or limitation is encountered, that limitation will be fully documented including location, percentage of total examination surface obstructed and the nature of the limitation. (Recording these limitations is required by all present PG&E nondestructive examination procedures.) At that time, the examination result will be subject to approval of the Authorized Nuclear Inservice Inspector, and a list and description of all limitations requiring NRC approval will be forwarded to the NRC with the Report of Inservice Inspection following each refueling outage.

SCHEDULE IMPLEMENTATION

Commercial startup to 120 months of operation.

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS

REV. 8
UNIT 1 RELIEF REQUEST NDE-008
WELDS HAVING LIMITED ACCESSIBILITY TO NDE

REQUEST FOR RELIEF NDE-008
TABLE: 3.4

LINE	WELD NUMBER (Note 1)	% ACCESS (Note 2)	BASIS (Note 3)	LIMITATION	CODE ITEM (Note 4)	EXAM (Note 5) OUTAGE	EXAM (Note 5) DATE	SER DATE (Note 6)
CLASS 1								
5	WIB-RC-1-12	40	2	Best effort on downstream scan: pump body configuration. No scans 4 and 5 due to geometry.	B9.11	1R2	7/88	12/14/88
5	WIB-RC-1-6SE	65	4	Best effort on scan 5: steam generator configuration	B5.30/ B5.50		PSI	12/14/88
6	WIB-RC-2-7SE	40	4	Best effort on scans 2,3,4 and 5: steam generator/elbow	B5.30/ B5.50	1R3	12/89	12/14/88
9	WIB-RC-1-13	25	4	Best effort scan 3. No scans 2, 4, 5: pump body and weld configuration	B9.11	1R3	12/89	12/14/88
10	WIB-RC-2-15	25	4	Best effort scan 3. No scans 2, 4, 5: pump body and weld configuration	B9.11	1R3	12/89	12/14/88
15	WIB-400	75	3	Partial scan 2 and 3: fitting	B9.11	1R2	7/88	12/14/88
16	WIB-67	60	2	Scans 2, 3, 4, 5, limited 3-11" and 3-19". Scan 2 limited 25-32" and 35-45" by rupture restraint crush box.	B9.11	1R1	12/86	12/14/88
254	WIB-RC-2-16	70	4	No scan on downstream side-branch connection	B9.31	1R1	12/86	12/14/88
255	WIB-210	65	3	No scan: valve, partial scan 2: tee	B9.11	1R1	12/86	12/14/88

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS

REV. 8
UNIT 1 RELIEF REQUEST NDE-008
WELDS HAVING LIMITED ACCESSIBILITY TO NDE

REQUEST FOR RELIEF NDE-008
TABLE: 3.4

LINE	WELD NUMBER (Note 1)	% ACCESS (Note 2)	BASIS (Note 3)	LIMITATION	CODE ITEM (Note 4)	EXAM (Note 5) OUTAGE	EXAM (Note 5) DATE	SER DATE (Note 6)
727	WIB-334	50 65 Surface	1	Scans and PT limited to 1/2 of width on upstream side by Code nameplate	B9.11	1R1	12/86	12/14/88
728	WIB-322SE	50	4	No scan upstream side: Nozzle configuration: Crown and downstream side scans limited by surface curvature	B5.20/ B5.50	1R1	12/86	12/14/88
729	WIB-313SE	60	4	All scans limited to 1" from SE	B5.20/ B5.50	1R2	7/88	10/25/89
CLASS 2								
1661	74-29A	75 Surface	2	Surface exam of hangar attachment weld limited by support structure and proximity to wall	C3.40	1R4	4/91	12/14/88

NOTES:

1. All welds that meet the Code requirement for (a) 90% coverage and (b) full vee scan from at least one side normal to the weld, have been deleted from this table.

2. % ACCESS: Percentage accessible estimates are based on results from examinations conducted during either a refueling outage or perservice inspection, as noted in the "EXAM" column. Percentage accessible estimates are only applicable for volumetric examinations, except where surface estimates are provided. Surface examination accessibility is 100% except where so noted.

3. BASIS: The basis for each weld inaccessibility is classified as follows:

   1. Lugs or other welded attachments.

   2. Wall or floor penetrations, hangars or components closely adjacent to the examination surface.

   3. Surface configuration, such as local roughness or compound curvature, especially at the intrados of elbows or tees.

   4. Surface obstructions, including flanges or the bevels at valve bodies or thick wall fittings. These conditions when present, may obstruct a portion of the test surface, especially from volumetric examinations due to transducer lift-off.

4. CODE ITEM: The ASME Section XI code item provides the specific weld examination requirements, e.g., volumetric and/or surface examination.

5. EXAM: The examination column identifies the refueling outage (and restart date) when the weld was last inspected, and provides the basis for the percentage accessibility. If the weld has not been inspected during commercial operation, preservice inspection (PSI) results provide the basis for percentage accessibility.

6. SER DATE: Indicates the NRC safety evaluation report (SER) date when the weld inspection relief was granted by the NRC. (Note: NRC SER dated 12/14/88 was based on PSI estimates for a majority of the welds. Some of these PSI estimates may have changed based on revised estimates from subsequent refueling outage examinations.)

System/Component for Which Relief is Requested

Reactor coolant system. Portion of one ASME Code Class 1 safe-end-to-nozzle (pipe to nozzle) weld. Examination Category B-F, Item Numbers B5.20 (B5.50).

LINE	SIZE	WELD NUMBER	%ACCESS	BASIS CATEGORY	LIMITATION	CODE ITEM	EXAMINATION OUTAGE	EXAMINATION DATE
730	6"	WIB-340SE	75	4	Best effort scans 2 and 3 nozzle connection	B5.20 B5.50	1R3	12/89

Code Requirement

Section XI, Table IWB-2500-1, Examination Category B-F, Items B5.20 (pressurizer nozzle-to-safe-end weld) and B5.50 (piping safe-end weld), require a surface examination and volumetric examination of 100% of the weld and adjacent base metal as defined by Figure IWB-2500-8, using acceptance criteria of IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the Code-required volumetric examination.

Basis for Relief

During examinations conducted during the indicated refueling outage, the surface contour and configuration limited a portion of the ultrasonic angle beam scan normal to the weld. The percentage of weld that was accessible for volumetric examination is listed above.

The specific limitations are noted above, and are generally categorized as:

Category 4 - Surface obstructions, including flanges or the bevels at valve bodies or thick wall fittings. These conditions when present, may obstruct a portion of the test surface, especially from volumetric examination due to transducer lift-off.

Specifically, the surface contour of the pressurizer nozzle and safe end involve compound curvatures and abrupt contours which occasionally cause transducer lift-off, preventing full contact for examination.

Alternate Examination

There are no alternate examinations proposed in lieu of the requirements of Section XI. Due to the surface configuration, there are no other known alternate examination methods practical for these portions of the weld volume.

Partial examinations were performed on the accessible areas of the weld in accordance with Section XI requirements and consisted of surface examination on 100% of the weld surface and volumetric examination to the extent practical.

Justification for Granting of Relief

This relief request is justified in accordance with 10CFR50.55a(a)(3) because compliance with the specified requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety.

The partial examinations provide a reasonable assurance of the continued structural integrity of the weld. All of the accessible surface was scanned in full compliance with Section XI, and the major portion of the weld was fully examined. Surface examinations were performed on 100% of the weld surface, as required by Section XI.

Should the relief be denied, plant modifications would be required to allow access to the currently inaccessible portions of the weld, which places an unnecessary burden upon PG&E.

The health and safety of the public is not compromised by this relief because there is reasonable assurance that any existing flaw would have been detected by the partial examination conducted.

Implementation Schedule

No alternate examinations are proposed. The partial examination was conducted during the refueling outage indicated above. The weld is required to be inspected once every 10 years.

System/Component for Which Relief is Requested

Reactor coolant system. Portions of 4 ASME Code Class 1 pipe welds. Examination Category B-J, Item Numbers B9.11 (circumferential weld), B9.31 (branch connection > 4"), and B9.40 (socket weld).

LINE	SIZE	WELD NUMBER	%ACCESS CATEGORY	BASIS	LIMITATION	CODE ITEM	EXAMINATION OUTAGE	EXAMINATION DATE
16	14"	WIB-RC-2-3	25	4	No scan 3, 4, 5: Branch connection configuration	B9.31	1R3	12/89
255	10"	WIB-207	60	2	Limited scans 3, 4, and 5: proximity of welded restraint	B9.11	1R3	12/89
256	10"	WIB-271	50	4	No scan downstream side: due to valve body configuration	B9.11	1R4	04/91
1993	1.5"	WIB-302D	75 Surface	1	Exam limited due to welded support	B9.40	1R4	04/91

Code Requirement

Section XI, Table IWB-2500-1, Examination Category B-J, Items B9.11 and B9.31, require surface examination and volumetric examination of 100% of the weld and adjacent base metal as defined by Figure IWB-2500-8 (for B9.11) and Figure IWB-2500-9, 10, 11 (for B9.31), using acceptance criteria of IWB-3514. Item B9.40 requires a surface examination of 100% of the weld surface and adjacent base metal using acceptance criteria of IWB-3514.

Code Requirement from Which Relief is Requested

For Items B9.11 and B9.31, relief is requested from performing a portion of the Code-required volumetric examination. For Item B9.40, relief is requested from performing a portion of the Code-required surface examination.

Basis for Relief

During examination of Items B9.11 and B9.31 conducted during the indicated refueling outage, the surface configuration limited a portion of the ultrasonic angle beam scan normal to the weld. The percentage of weld that was accessible for volumetric examination is listed above.

During examination of Item B9.40 conducted during the indicated refueling outage, a permanent structural impediment obstructed a small surface of the weld. The percentage of weld that was accessible for surface examination is listed above.

The specific limitations are noted above, and are generally categorized as:

Category 1 - Lugs or other welded attachments.

Category 2 - Wall or floor penetrations, hangers or components closely adjacent to the examination surface.

Category 4 - Surface obstructions, including flanges or the bevels at valve bodies or thick wall fittings. These conditions when present, may obstruct a portion of the test surface, especially from volumetric examination due to transducer lift-off.

Alternate Examination

There are no alternate examinations proposed in lieu of the requirements of Section XI. Due to the surface configuration and permanent structural impediments, there are no other known alternate examination methods practical for these portions of the weld.

Partial examinations were performed on the accessible areas of the welds in accordance with Section XI requirements. For Items B9.11 and B9.31, this consisted of surface examination on 100% of the weld surface and volumetric examination to the extent practical. For Item B9.40, this consisted of surface examination to the extent practical.

Justification for Granting of Relief

This relief request is justified in accordance with 10CFR50.55a(a)(3) because compliance with the specified requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety.

The partial examinations provide a reasonable assurance of the continued structural integrity of the welds. All of the accessible surface was examined in full compliance with Section XI.

Justification for Granting of Relief (Continued)

Should the relief be denied, plant modifications would be required to allow access to the currently inaccessible portions of the welds, which places an unnecessary burden upon the licensee.

The health and safety of the public is not compromised by this relief because there is reasonable assurance that any existing flaw would have been detected by the partial examination conducted.

Implementation Schedule

No alternate examinations are proposed. The partial examinations were conducted during the refueling outage indicated above. The welds are required to be inspected once every 10-year interval.

System/Component for Which Relief is Requested

Containment spray system (CSS). Portions of 1 ASME Code Class 2 pipe weld. No examination category. Weld is examined as required by NRC letter dated October 16, 1986.

LINE	SIZE	WELD NUMBER	%ACCESS	BASIS CATEGORY	LIMITATION	CODE ITEM	EXAMINATION OUTAGE	EXAMINATION DATE
264	8"	WIC-264-2	75	3	Best effort scans 4 and 5: weld configuration	required by NRC letter of 10/16/86	1R3	12/89

Code Requirement

NRC letter dated October 16, 1986 requires volumetric examination of a representative sample of containment spray system welds, even though the welds meet the exclusion criteria in Section XI (reference IWC-1220(b) and Table IWC-2500-1, Category C-F, Item C5.20).

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the NRC required volumetric examination.

Basis for Relief

During examinations conducted during the indicated refueling outage, the surface configuration limited a portion of the ultrasonic angle beam scan normal to the weld. The percentage of weld that was accessible for volumetric examination is listed above. The limitation exists on the circumferential scans only.

The specific limitations are noted above, and are generally categorized as:

Category 3 - Surface configuration, such as local roughness or compound curvature, especially at the intrados of elbows or tees.

Alternate Examination

There are no alternate examinations proposed in lieu of the requirements of Section XI. Due to the surface configuration, there are no other known alternate examination methods practical for these portions of the weld.

Partial examinations were performed in accordance with Section XI requirements, consisting of volumetric examination to the extent practical.

Justification for Granting of Relief

This relief request is justified in accordance with 10CFR50.55a(s)(3) because compliance with the specified requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety.

The partial examinations provide a reasonable assurance of the continued structural integrity of the weld. All of the accessible surface was examined in full compliance with Section XI. The major portion of the weld was examined.

Should the relief be denied, plant modifications would be required to allow access to the currently inaccessible portions of the weld, which places and unnecessary burden upon the licensee.

The health and safety of the public is not compromised by this relief because there is reasonable assurance that any existing flaw would have been detected by the partial examination conducted.

Implementation Schedule

No alternate examinations are proposed. The partial examinations were conducted during the refueling outage indicated above. The weld is required to be inspected once every 10-year interval.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
SAFETY INJECTION PUMPS				
Item: Pump Casing Bolts (Exceeding 2 inch diameter)	2	2.3	C-D	C4.30

CODE REQUIREMENT

Volumetric Examination (when in place) by Ultrasonic Longitudinal Beam to comply with Section XI, Code Figure IWC-2520-6. The bolt examinations are distributed over the inspection interval to comply with IWC-2412-1.

BASIS FOR REQUEST

Bolting Ultrasonic Examination is restricted by the design utilizing outside "acorn nuts" which preclude any ultrasonic transmission through the bolts while the pump is assembled. Because of the pump design and availability, no specific inspection period is specified. Instead, the examinations will be scheduled in accordance with the plant maintenance schedule, and will be done once during the inspection interval.

ALTERNATE SCHEDULE

Volumetric Examination of all bolts (as required by Table IWC-2500-1) on one pump selected for maintenance and pressure test as required by Code Category C-H.

SCHEDULED IMPLEMENTATION

Commercial startup to 120 months of operation.

COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
CENTRIFUGAL CHARGING PUMP				
Item: Suction End Plate Weld	2	2.3	C-G	C6.10

CODE REQUIREMENT

Surface Examination from inside or outside of pump casing. The Surface Examination may be performed on one pump. The examination is required (when practical) to be distributed over the inspection interval to comply with Table IWC-2412-1.

BASIS FOR RELIEF

The Suction End Plate Weld, is a machined weld that is essentially inaccessible (by design of the pump) for an examination according to a specific inspection period schedule. Because of the pump design, no specific inspection period schedule is appropriate. Instead, examination will be scheduled in accordance with the plant maintenance schedule, and will be done once during the inspection interval.

ALTERNATE SCHEDULE

Surface Examination of all machined weld areas on the Suction End Plate as required on one pump selected for maintenance as schedule allows, and Pressure Test as required by Code Category C-H.

SCHEDULED IMPLEMENTATION

Commercial startup to 120 months of operation.

	COMPONENT OR ITEM	ASME XI CODE CLASS	PROGRAM TABLE	CODE CATEGORY	CODE ITEM
PRESSURIZER VESSEL - NOZZLE INNER RADIUS STEAM GENERATORS - NOZZLE INNER RADIUS					
Item:	Pressurizer Safety Nozzle, Spray Nozzle, Relief Nozzles (3), Surge Nozzle, Inner Radius Areas.	1	1.2	B-D	B3.120
	Steam Generator Primary Inlet and Outlet Nozzle Inner Radius Areas.	1	1.3	B-D	B3.120

CODE REQUIREMENT

Volumetric Examination to include nozzle inner radius area. NOTE: These vessels have integrally cast nozzles. There are no nozzle to vessel welds.

BASIS FOR REQUEST

Pressurizer compound curvature of vessel heads combined with short radii of nozzles and surface geometry makes meaningful inner radius examination impossible. Access to surge nozzle is extremely limited due to heater penetrations. Compound curvature of steam generator channel heads and constantly variable orientation of inner radius makes meaningful examination impossible.

PROPOSED EXAMINATION

Visual examination (VT-2) of nozzle areas during each vessel pressure test per category B-P.

SCHEDULE IMPLEMENTATION

Commercial start up to 120 months of operation.

APPENDIX A

CLASS 1 LINES, S 1978 ASME XI

Line	Size	Spec.	Std.	Nominal Wall	Material	Thickness
5	31	*	22 A, B	2.5	SS	2.5
6	31	*	22 A, B	2.5	SS	2.5
7	31	*	22 A, B	2.5	SS	2.5
8	31	*	22 A, B	2.5	SS	2.5
1	29	*	22 A, B	2.5	SS	2.5
2	29	*	22 A, B	2.5	SS	2.5
3	29	*	22 A, B	2.5	SS	2.5
4	29	*	22 A, B	2.5	SS	2.5
9	27.5	*	22 A, B	2.5	SS	2.5
10	27.5	*	22 A, B	2.5	SS	2.5
11	27.5	*	22 A, B	2.5	SS	2.5
12	27.5	*	22 A, B	2.5	SS	2.5
16	14	*	12	Sch 160	SS	1.406
109	14	S6	12	Sch 160	Tp 316	1.406
1665	14	S6	12	Sch 160	Tp 316	1.406
253	10	S6	9	Sch 140	Tp 316	1.000
254	10	S6	9	Sch 140	Tp 316	1.000
255	10	S6	9	Sch 140	Tp 316	1.000
256	10	S6	9	Sch 140	Tp 316	1.000
2575**	8	S6	8	Sch 140	Tp 316	.812
2576**	8	S6	8	Sch 140	Tp 316	.812
235	6	S6	6	Sch 160	Tp 316	.719
236	6	S6	6	Sch 160	Tp 316	.719
237	6	S6	6	Sch 160	Tp 316	.719
238	6	S6	6	Sch 160	Tp 316	.719
727	6	S6	6	Sch 160	Tp 316	.719
728	6	S6	6	Sch 160	Tp 316	.719
729	6	S6	6	Sch 160	Tp 316	.719
730	6	S6	6	Sch 160	Tp 316	.719
3844**	6	S6	6	Sch 160	Tp 316	.719
3845**	6	S6	6	Sch 160	Tp 316	.719
3846**	6	S6	6	Sch 160	Tp 316	.719
3847**	6	S6	6	Sch 160	Tp 316	.719
13	4	S6	4	Sch 120	Tp 316	.438
14	4	S6	4	Sch 120	Tp 316	.438
15	4	S6	4	Sch 120	Tp 316	.438
4081	4	S6	4	Sch 120	Tp 316	.438

All other lines are 3" or less Ø, Sch. 160 Tp. 304, subject to penetrant test (PT)

* Specification by NSSS supplier (Westinghouse) - note spec. designated as "*"

**Portions of these lines are Class 2. See Isometric Drawing.

APPENDIX A
CLASS 2 LINES, S 1978 ASME XI

Line	Size	Spec.	Std.	Nominal Wall	Material	Thickness
225	28	K15	15	1.002 Min.	SA 516/70	1.002 Min.
226	28	K15	15	1.002 Min.	SA 516/70	1.002 Min.
227	28	K15	15	1.002 Min.	SA 516/70	1.002 Min.
228	28	K15	15	1.002 Min.	SA 516/70	1.002 Min.
1065	24	K15	14	Sch 60	A 106/B	.969
1066	24	K15	14	Sch 60	A 106/B	.969
544	16	K16	13	Sch 80	A 106/B	.844
555	16	K16	13	Sch 80	A 106/B	.844
556	16	K16	13	Sch 80	A 106/B	.844
557	16	K16	13	Sch 80	A 106/B	.844
110	14	S1	PT (11)	Sch 40	304	.438
111	14	S1	PT (11)	Sch 40	304	.438
512	14	S1	PT (11)	Sch 40	Tp 304	.438
513	14	S1	PT (11)	Sch 40	Tp 304	.438
927	14	S1	PT (11)	Sch 40	304	.438
3551	14	S1	PT (11)	Sch 40	304	.438
120	12	S6	- 16 -	Sch 160	Tp 316	1.312
223	12	S1	PT (10)	Sch 40S*	304	.375
985	12	S1	PT (10)	Sch 40S*	Tp 304	.375
112	8	S1	PT (7)	Sch 40S	Tp 304	.322
113	8	S1	PT (7)	Sch 40S	Tp 304	.322
118	8	S1	PT (7)	Sch 40S	Tp 304	.322
119	8	S1	PT (7)	Sch 40S	Tp 304	.322
279	8	S1	PT (7)	Sch 40S	Tp 304	.322
280	8	S1	PT (7)	Sch 40S	Tp 304	.322
508	8	S6	8	Sch 140	Tp 316	.812
509	8	S6	8	Sch 140	Tp 316	.812
734	8	S2	PT	Sch 10S	Tp 304	.148
735	8	S1	PT (7)	Sch 40S	Tp 304	.322
1456	8	S2	PT	Sch 10S	Tp 304	.148
1661	8	S1	PT (7)	Sch 40S	Tp 304	.322
1663	8	S1	PT (7)	Sch 40S	Tp 304	.322
1669	8	S1	PT (7)	Sch 40S	Tp 304	.322
1971	8	S1	PT (5)	Sch 40S	Tp 304	.322
1984	8	S2	PT	Sch 10S	Tp 304	.148
1986	8	S2	PT	Sch 10S	Tp 304	.148
1987	8	S2	PT	Sch 10S	Tp 304	.148
1988	8	S2	PT	Sch 10S	Tp 304	.148
2212	8	S1	PT (7)	Sch 40S	Tp 304	.322
2458	8	S1	PT (7)	Sch 40S	Tp 304	.322
2575**	8	S6	8	Sch 140	Tp 316	.812
2576**	8	S6	8	Sch 140	Tp 316	.812
42	6	S2	PT	Sch 10S	Tp 304	.134
43	6	S2	PT	Sch 10S	Tp 304	.134
1357	6	K17	30	Sch 60	A 106/B	.719
1454	6	S6	6	Sch 160	Tp 316	.719
1973	6	S7	6	Sch 160	Tp 316	.719
1982	6	S2	PT	Sch 10S	Tp 304	.134
1983	6	S2	PT	Sch 10S	Tp 304	.134
2032	6	S6	6	Sch 160	Tp 316	.719

APPENDIX A
CLASS 2 LINES, S 1978 ASME XI

Line	Size	Spec.	Std.	Nominal Wall	Material	Thickness
3844**	6	S6	6	Sch 160	Tp 316	.719
3845**	6	S6	6	Sch 160	Tp 316	.719
3846**	6	S6	6	Sch 160	Tp 316	.719
3847**	6	S6	6	Sch 160	Tp 316	.719
4296	6	S2	PT	Sch 10S	Tp 304	.134
5848	6	S2	PT	Sch 10S	Tp 304	.134

*12" Sch 40S is standard wall, .375"T. NOT same as 12" Sch 40

**Portions of these lines are Class 1. See isometric drawing.

NOTE: Class 2 lines less than .50" wall thickness are no longer subject to ultrasonic test requirement (ASME XI S 1978). For these lines, "PT" (penetrant test) will be indicated, followed by the ultrasonic calibration standard number in parentheses (for reference only)

NOTE to following page headers:

(1) Identifies the drawing sheet number of the ASME Code classification drawings, PG&E drawing 102028, Revision 38.

(2) Identifies the applicable ASME B&PV Code Section XI pressure test requirement, as established by the 1977 Edition - Summer 1978 Addenda.

(3) INS/FUNCT is the test pressure developed under the operating condition associated with normal system operation or a system/component functional test.
LLRT is the local leak rate test per 10 CFR 50 App J.

(4) I is one test per each inspection interval (10 YR)
P is one test per each inspection period (40 months; 3 1/3, 6 2/3, and 10 years)
R is one test per each refueling outage

(5) P_o is the nominal system operating pressure.

Ps_v is the safety or relief valve setting pressure.

P_g is the design pressure of vapor or gas space above liquid level for which over pressure protection is provided by relief valves.

P_D is the system design pressure.

Text Note 1: Piping pressurized during normal reactor operation and does not require test per IWC-5221. Normal reactor operation includes systems in operation during startup, operation, and cooldown to shutdown conditions. (IWC-1220 footnote [2])

General Note: PG&E has implemented ASME Code Case N-498 for Class 1 and Class 2 system hydrostatic tests; all such tests will be conducted at the normal system operating pressure, "NOP." Relief requests number 1, 5, and 6 are not required for tests conducted at NOP, therefore these reliefs are not expected to be used for Classes 1 and 2. Normal operating pressure for the reactor coolant system is 2235 psig, unless otherwise noted.

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS - CLASS I

TABLE 5.1
REV. 8

SYSTEM PRESSURE
TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS	TEST FREQ(4)	REMARKS(5)
1. Reactor Coolant Pumps 1-1, 1-2, 1-3, 1-4	8	IWB-5221 IWB-5222	NOP NOP	R I	P_o = 2235 psig for Class 1 Piping, General Note
2. Steam Generators 1-1 1-2, 1-3, 1-4 (Tube Side)	5,6,8	IWB-5221 IWB-5222	NOP NOP	R I	
3. Reactor Vessel, Primary Coolant Loops and Connected Piping	8,9	IWB-5221 IWB-5222	NOP NOP	R I	Includes Category B-E, CRD & Instrumentation partial penetration welds. See Request for Relief #10. See Request for Relief #11A.
4. Pressurizer 1-1	10	IWB-5221 IWB-5222	NOP NOP	R I	Includes Category B-E, heater partial penetration welds.
5. Pressurizer Relief/Spray	10, 14	IWB-5221 IWB-5222	NOP NOP	R I	See Request for Relief #10. See Request for Relief #11A.
6. Hot & Cold Leg RTDs	11	IWB-5221 IWB-5222	NOP NOP	R I	NOTE: This piping is expected to be eliminated prior to end of first interval
7. Reactor Coolant Pump Seal Water Injection/Bypass	12	IWB-5221 IWB-5222	NOP NOP	R I	See Request for Relief #10. See Request for Relief #11A.
8. Letdown and Excess Letdown Lines	12,13	IWB-5221 IWB-5222	NOP NOP	R I	
9. Charging and Auxiliary Spray	14	IWB-5221 IWB-5222	NOP NOP	R I	
10. SIS Accum Disch and Test Lines	17	IWB-5221 IWB-5222	NOP 625	R I	See Request for Relief #12.
11. RHR Injection to Cold Legs	17,19	IWB-5221 IWB-5222	NOP 625	R I	See Request for Relief #12.

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS - CLASS 1

TABLE 5.1
REV. 8

SYSTEM PRESSURE
TEST SUMMARY
PAGE 2 of 2

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS	TEST FREQ(4)	REMARKS(5)
12. Charging Injection Inside Containment	18	IWB-5221 IWB-5222	NOP NOP	R I	
13. Safety Injection Inside Containment	19, 20	IWB-5221 IWB-5222	NOP 1530	R I	See Request for Relief #12.
14. RHR Hot Leg Suction and Disch	20	IWB-5221 IWB-5222	NOP NOP	R I	

TEN YEAR EXAMINATION PROGRAM
ASME SECTION XI SYSTEMS - CLASS 2

TABLE 5.2
REV. 8

SYSTEM PRESSURE
TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
1. Feedwater Supply Leads	3,5,6	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
2. Auxiliary Feedwater Supply	3	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
3. Steam Generators 1-3 & 1-4	5	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
4. Main Steam Leads 3 & 4	5	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
5. Main Steam Leads 1 & 2	6	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
6. Steam Generators 1-2 & 1-1	6	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
7. Auxiliary Feed Pump 1-1 Turbine Steam Lead	5,6	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
8. Steam Generator Blowdown	(5,6) 7	IWC-5222(a)	1005	I	(P_{SV} = 1065) Note 1, **
9. Loop 1 & 4 Hot Leg Sample Lines S-1675-3/8 & S6-1676-3/8 Through Penetration 59 to 9356B	8,22	IWC-5222(a)	2235	I	No safety valve in system - tested with Class 1; Note 1.

** Steam pressure at normal condition for Mode 3 (pressure decreases in Modes 1 and 2).

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
10. Pressurizer Sample Lines S-1673-3/8 & S-1674-3/8	10,22	IWC-5222(a)	2235	I	No Safety Valve in System - Tested with Class 1; Note 1
11. Excess Letdown Heat Exchanger 1-1 Tube Side and Inlet/Outlet Piping	12	IWC-5222(a)	2235	I	No Safety Valve in System - Tested with Class 1; Note 1
12. Reactor Coolant Pumps Seal Water Outlet/Excess Letdown H-X Outlet (Spec S2 Piping Portion)	12	IWC-5222(a)	NOP	I	(P_{SV} = 150) Note 1; Request for Relief #6 is not required for NOP test
13. Reactor Coolant Pumps Hi Pressure Seal Water Outlet Piping (Spec S6) to Valve 8142	12	IWC-5222(a)	NOP	I	No Safety Valve in System - Tested with Class 1; Note 1
14. RCP Seal Water Inlet Piping	12,14	IWC-5222(a)	NOP	I	(P_{SV} = 2735) Note 1
15. RCP Seal Water Inlet Unisolable From Class 1 (8393 to 8372)	12	IWC-5222(a)	2235	I	Request for Relief #5 is not required for NOP test; Note 1
16.A Regenerative Heat Exchanger 1-1 Shell Side and Letdown Piping LCV-460 to RO-27,28,29	13	IWC-5222(a)	2235	I	No Safety Valve in System - Tested with Class 1; Note 1 (P_D = 2485)
16.B Letdown Piping RO-27,28,29 to 8152	13	IWC-5222(a)	NOP	I	(P_{SV} = 600) Note 1

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SYSTEM PRESSURE
TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
17. Boric Acid Pumps Discharge Header, BA Blender Inlet, BA Filter	14,15	IWC-5222(a)	NOP	I	(P_{sv} = 220) Note 1
18. Recip Charging Pump & Discharge Piping to 8475	14	IWC-5222(a)	NOP	I	(P_{sv} = 2735) Note 1
19. Centrifugal Charging Pumps and Suction Piping	14,18	IWC-5222(a)	NOP	I	(P_{sv} = 220) Request for Relief #1 is not required for NOP test; Note 1
20. Charging Pump Discharge, Seal Wtr Inj Filter, Regen H-X Piping	14	IWC-5222(a)	NOP	I	(P_{sv} = 2735) Note 1
21. Seal Water Injection Filters	14	IWC-5222(a)	NOP	I	(P_{sv} = 2735) Note 1
22. Charging Line to Cold Legs & Pressurizer Upstream of Aux Spray Valves 8147, 8146, 8145, 8148, 8482	14	IWC-5222(a)	NOP	I	(P_{sv} = 2735) Note 1
23. Charging Line Portions Unisolable From Class 1	14	IWC-5222(a)	2235	I	Request for Relief #5 is not required for NOP test; Note 1
24. Boric Acid Tanks to Pump Disch Iso Valves	15	IWC-5222(b)	Tank Filled	I	Request for Relief #1 is not required for NOP test; Note 1

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
25. Boric Acid Transfer Pumps, Disch and Recirc Piping	15	IWC-5222(a)	NOP	I	(P_{SV} = 220) Note 1
26. Accumulator Injection Loops 1 Thru 4, Test & Fill Piping up to Valves 8877A, B, C & D	17	IWC-5222(a)	625	I	See request for Relief #12; (P_{SV} = 700) Note 1
27. Accumulator Test & Fill Piping	17,19, 18	IWC-5221	INS/FUNCT	P	
28. Safety Injection Pumps	19	IWC-5221	NOP	I	(P_{SV} = 220) Note 1
29. Accumulator Sample Lines From Valves 9367A-D to 9352A-D and 9357A to 9357B	17,22	IWC-5222(a)	NOP	I	(P_{SV} = 700) Note 1
30. Charging Inj Check Valves Line S6-4348-3/4 & SIS Pump Disch Test Line S6-2570-3/4	17,18 19	IWC-5221	INS/FUNCT	P	
31. BIT and Associated Piping Deleted.					

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
32. Charging Injection	18	IWC-5222(a)	NOP	I	(P_{sv} = 2735) Note 1
33. Boron Injection Tank, Abandoned					
34. Charging Inj to Cold Legs (8801A,B to 8820)	18	IWC-5221	INS/FUNCT	P	(Request for Relief #5)
35. Refueling Water Storage Tank and Supply to First Iso Vlvs	18	IWC-5222(b)	Tank Filled	I	
36. RWST Supply to Chg Pump Suct (8805 to 8924)	18	IWC-5221	INS/FUNCT	P	
37. RWST Supply Header	14,18	IWC-5221	Tank Filled	I	
38. Safety Injection Pump Discharge/Hot Leg Injection Piping Inside Cont. Iso Valves (8802A,B)	19	IWC-5221	INS/FUNCT	P	(Request for Relief #5)
39. RHR Cold Leg Inj Piping from 8809A,B to Class 1	19	IWC-5222(a)	NOP	I	Request for Relief #5 is not required for NOP test; Note 1

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
40. RHR Cold Leg Inj Piping Upstrm 8809A,B	19	IWC-5222(a)	NOP	I	(P_{sv} = 600) Note 1
41. Containment Recirc Sump Outlet Lines *-2749 & 2750-14	19	IWC-5221	-	-	Request for Relief #7
42. Cont Recirc Sump Outlet Lines Downstream of Valves 8982A,B	19	IWC-5222(a)	NOP	I	(P_{sv} = 450) Note 1
43. RHR Suction Piping from RWST 8981 & 8701 to 8700A,B	19,20	IWC-5222(a)	NOP	I	(P_{sv} = 450) Note 1
44. RHR Suction Piping from RWST 8980 to 8981	19	IWC-5222(a)	NOP	I	(P_{sv} = 220) Note 1
45. RHR Disch Piping, Supply to SIS Pump Suction	19,20	IWC-5222(a)	NOP	I	(P_{sv} = 600) Note 1
46. Safety Injection Pumps Suction Line to RWST	19	IWC-5221	INS/FUNCT	P	
47. SIS Pp RHR Suction	18,19	IWC-5222(A)	NOP	I	(P_{sv} = 220) Note 1; tested together with #28

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
48. SIS Pp Discharge Piping to 8802A,B, 8835	19	IWC-5221	INS/FUNCT	P	
49. SI Cold Leg Inj Downstream of 8835	19	IWC-5221	INS/FUNCT	P	(Request for Relief #5)
50. RHR Hot Leg Inj Test Lines to 8884A-D, 8825, 8885A,B, 8824, 8823	19	IWC-5221	INS/FUNCT	P	(Request for Relief #5)
51. RHR Hot Leg 1 & 2 Injection Piping to 8703 Plus Bypass Line (8726A,B)	20	IWC-5222(a)	NOP	I	(P_{sv} = 600) Note 1
52. RHR Hot Leg 1 & 2 Downstream 8703 to 8740A,B	20	IWC-5222(a)	NOP	I	Request for Relief #5 is not required for NOP test; Note 1
53. RHR Pumps	20	IWC-5222(a)	NOP	I	(P_{sv} = 450) Note 1; Request for Relief #1 is not required for NOP test
54. RHR Pump Discharge Piping to 8730A,B	20	IWC-5222(a)	NOP	I	(P_{sv} = 450) Note 1; Request for Relief #1 is not required for NOP test

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TEST SUMMARY

	COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
55.	RHR Pump Seal Piping	21	IWC-5222(a)	NOP	I	(P_{sv} = 450) Note 1
56.	RHR Sample Lines	22	IWC-5222(a)	NOP	I	(P_{sv} = 600) Note 1
57.	Containment Spray Ring Supply Piping, Spec S3	23	IWC-5222(c)	None Req'd	-	Spray Ring Nozzles Flow Test Performed Every 5 Years
58.	Cont. Spray Pump Discharge Piping	23	IWC-5221	INS/FUNCT	P	
59.	RWST Supply to Eductors	23	IWC-5221	INS/FUNCT	P	(RWST Filled)
60.	Cont. Spray Pumps, Suction Piping. RWST Eductor Suction	18,23	IWC-5221	INS/FUNCT	P	(RWST Filled)
61.	Spray Additive Tank and Unisolable Piping	23	IWC-5222(b)	NOP	I	(P_g = 5) Note 1
62.	Containment Fan Cooler CCW Supply & Return, Spec K2 Piping	27,32	IWC-5222(a)	NOP	I	(P_{sv} = 150)
63.	Containment Fan Coolers	27,32	IWC-5222(a)	NOP	I	(P_{sv} = 150)

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COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	CONTAINMENT PENETRATION	REMARKS(5)
64. Reactor Coolant Pumps CCW Supply & Oil Cooler Return Containment Penetrations, Spec K2	29	IWC-5222(a)	NOP	I		(P_{sv} = 150)
65. Reactor Coolant Pumps CCW Return Containment Penetration, Line K17-1357-6	29	IWC-5222(a)	NOP	I		(P_{sv} = 2485)
66. Excess Letdown Heat Exchanger, Shell Side	31	IWC-5222(a)	NOP	I		(P_{sv} = 150)
67. Excess Letdown Heat Exchanger, Shell Side Pipe	31	IWC-5222(a)	NOP	I		(P_{sv} = 150)
68. Steam Gen. N_2 Supply Hdr.	6	IWC-5221(a)	INS/FUNCT	P	52	Line 1863. Tested at Normal Operating Pressure.
69. Lines 4681, 4682, 4683, 4684, 4685, 4686	9	Exempt	None	None	59,80	NA-1130 (c). Cap Sealed.
69A. Rx Vessel Level Indication and Vent System	9	IWC-5222(a)	NOP	I		(P_{sv} = 2485) See Request for Relief 11B
70. Pzr Quench Tk. Gas Analyzer	10	IWC-5221(a)	LLRT@50Psi	P	76	LINE 1163, Request For Relief #8
71. Pzr Relief Tk N_2 Supply	10	IWC-5222(a)	NOP	I	52	Line 1161, (P_{sv} = 160)

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COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	CONTAINMENT PENETRATION	REMARKS(5)
72. Pri Wtr Sup to Pzr Relief Tk	10	IWC-5222(a)	NOP	I	52	Line 3000. (No relief Valve in system, P_D = 140
73. RV's Discharge to PRT:	10	IWC-5221(a)	LLRT@50Psi	P	71	Request For Relief #8
Chg Pps Suct RV Disch						Line 1459
RHR Ht Exchr 1 Out RV						Line 2003
RHR Ht Exchr 2 Out RV						Line 2004
SI Pps Suct RV Out						Line 2061
Cnt Spray Pps Disch RV Out PRT						Line 2518
SI Pp 1-2 Disch Line RV						Line 2572
SIS RV Outlet Hdr to PRT						Line 2998
SIS RV Outlet Hdr to PRT						Line 2999
SIS Pp 1-1 Disch Line RV						Line 3851
SIS Pps Recirc Disch Line RV						Line 3852
74. Pzr Deadweight Press Gen	10	None	None	None	76	Line 478. Abandoned in Place
75. Tanks N_2 Supply Hdr	17	IWC-5222(a)	NOP	I	51	Line 531. Request for Relief #8 is not required for NOP test.
76. Accums Samples Hdr	22	IWC-5221(a)	INS/FUNCT	P	59	Line 1679. (P_{SV} = 700)
77. Lines 636, 2514, 2515, 637 4529, 4525	23	Exempt	None	None	76,59,78 52,80,59	NA-1130 (c). (Note Penetration Receives LLRT)

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	CONTAINMENT PENETRATION	REMARKS(5)
78. Fuel Trans Tube to Refuel Canal	24,42	IWC-5221(a)	<50 (remark)	P	64	Line 1336. Request for Relief #9: O-Ring Seal Test @ Flange
79. Aux Steam Cont Penetr	40	IWC-5221(a)	INS/FUNCT	P	70	Line 3935.
80. Firewater Supply Before Cont	41	IWC-5222(a)	NOP	I	79	Line 986. (P_{SV} = 175)
81. Cont. Str. Sumps Pps Disch	42	IWC-5221(a)	LLRT@50Psi	P	49	Line 749. Request for Relief #8
82. Refueling Canal Water Inlet	42	IWC-5221(a)	INS/FUNCT	P	46	Line 3001. (P_D = 70)
83. Refueling Canal Water Return	42	IWC-5221(a)	LLRT@50Psi	P	47	Line 2993. Request for Relief #8
84. React. Cool. Drn. Tk. N_2 Supply	42	IWC-5222(a)	NOP	I	52	Line 527. (P_{SV} = 150)
85. Post LOCA Sample & R & Cavity Sump	42	IWC-5221(a)	LLRT@50Psi	P	82	Line 4663. Request for Relief #8
86. React. Cool. Drn. Tk. Vent	42	IWC-5222(a)	LLRT@50Psi	P	51	Line 525. Request for Relief #8
87. React. Cool. Drn. Tk. Gas Anal.	42	IWC-5221(a)	LLRT@50Psi	P	51	Line 526. Request for Relief #8

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COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	CONTAINMENT PENETRATION	REMARKS(5)
88. React. Cool. Drn. Pps. Disch. Hdr.	42	IWC-5221(a)	INS/FUNCT	P	50	Line 3729. (P_D = 80)
89. CHPS Air Sup. Fans 1 & 2 Disch. Ext. and Penetr. 83 Inlet & Air Sup.	43	IWC-5221(a)	LLRT@50Psi	P	83	Line 4382, 4386, 4387, 4388, 4389. Request for Relief #8
90. CHPS Exh Air Filt. 2 Inlet	43	IWC-5221(a)	LLRT@50Psi	P	81	Line 4390. Request for Relief #8
91. CHPS Exh Sys. Flow Cont. In.	43	IWC-5221(a)	LLRT@50Psi	P	57	Line 4395. Request for Relief #8
92. Containment Vacuum Relief	43	IWC-5221(a)	LLRT@50Psi	P	63	Line 647. Request for Relief #8
93. Containment Purge Out	43	IWC-5221(a)	LLRT@50Psi	P	62	Line K2-48" (RCV-11 to RCV-12) Request for Relief #8
94. Containment Purge In	43	IWC-5221(a)	LLRT@50Psi	P	61	Line K2-48" (FCV-661 to FCV-660) Request for Relief #8
95. Incore Chiller Water Rtn	43	IWC-5221(a)	LLRT@50Psi	P	83	Line 3936. Request for Relief #8
96. Incore Chiller Water Supply	43	IWC-5221(a)	LLRT@50Psi	P	82	Line 3937. Request for Relief #8
97. Containment Air Sample Inlet	44	IWC-5222(a)	LLRT@50Psi	P	68	Line 3837. Request for Relief #8

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	CONTAINMENT PENETRATION	REMARKS(5)
98. Containment Air Sample Return	44	IWC-5222(a)	LLRT@50Psi	P	69	Line 3838. Request for Relief #8
99. Post-Loca Samp Cnt Air Rtn.	44	IWC-5221(a)	LLRT@50Psi	P	82	Line 5190. Request for Relief #8
100. Post-Loca Samp Cnt Air Sup	44	IWC-5221(a)	LLRT@50Psi	P	82	Line S-3/8" (FCV-698 to FCV-699) Request for Relief #8
101. Hyd Mon Cel-82 Cnt Air Sup	44	IWC-5221(a)	LLRT@50Psi	P	52	Line 4633. Request for Relief #8
102. Hyd Mon Cel-82 Cnt Air Rtn	44	IWC-5221(a)	LLRT@50Psi	P	52	Line 4634. Request for Relief #8
103. Hyd Mon Cel-83 Cnt Air Sup	44	IWC-5221(a)	LLRT@50Psi	P	78	Line 4635. Request for Relief #8
104. Hyd Mon Cel-83 Cnt Air Rtn	44	IWC-5221(a)	LLRT@50Psi	P	78	Line 4636. Request for Relief #8
105. Service Air Penetr Hdr	45	IWC-5221(a)	NOP	P	56	Line 3941.
106. Inside Cnt Instr Air Sup Hdr	45	IWC-5222(a)	NOP	I	54	Line 3242.
107. Cnt Inst Air Sup FCV-584 Bp	45	IWC-5222(a)	NOP	I	54	Line 4353.

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SYSTEM PRESSURE
TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
1. Auxiliary Feedwater Pumps Discharge Piping	3	IWD-5223(a)	1331	I	P_{sv} = 1065
		IWD-5221/5222	INS/FUNCT	P	
2. Auxiliary Feed Pumps Recirc Header to Condensate Storage Tank	3	IWD-5223(a)	126	I	P_D = 114
		IWD-5221/5222	INS/FUNCT	P	
3. Auxiliary Feed Pump Turbine Cooling Water Piping	3	IWD-5223(a)	28	I	P_D = 25
		IWD-5221/5222	INS/FUNCT	P	
4. Auxiliary Feedwater Pumps Suction Piping, and Chemical Inj	3,4	IWD-5223(b)	Tank Filled	I	Request for Relief #1; No Safety Valve in System - Tested at Normal Operating Conditions; Condensate Storage Tank
		IWD-5221/5222	INS/FUNCT	P	
5. Auxiliary Feed Pump Turbine Steam Supply & Trap Drain	6	IWD-5223(a)	1331	I	P_{sv} = 1065
		IWD-5221/5222	INS/FUNCT	P	
6. Aux Feed Pump Turbine Exhaust and Leakoff Drains	6	IWD-5223(c)	None Req'd	-	Unimpaired Flow Demonstrated Monthly by STP M-6B & every 5 years by STP M-6A on open-ended system
		IWD-5221/5222	INS/FUNCT	P	

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TEST SUMMARY

COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
7. Component Cooling Water Pumps	25	IWD-5223(a)	165	I	P_{sv} = 150
		IWD-5221/5222	INS/FUNCT	P	
8. Component Cooling Water Heat Exchangers (Shell Side)	25	IWD-5223(a)	165	I	P_{sv} = 150
		IWD-5221/5222	INS/FUNCT	P	
9. Component Cooling Water Surge Tank	25	IWD-5223(b)	Tank Filled	I	Test Conducted With Surge Tank Filled to Normal Level
		IWD-5221/5222	INS/FUNCT	P	
10. Component Cooling Water Suction & Discharge Piping, Headers A, B & C, Supply & Return Piping from Components with the Exception of Item Number 11	25,32 26,27 28,29 30,31	IWD-5223(a)	165	I	P_{sv} = 150
		IWD-5221/5222	INS/FUNCT	P	
11. Reactor Coolant Pump Thermal Barrier CCW Return & Supply from Check Valves, Spec K17	29	IWD-5223(a)	3106	I	P_{sv} = 2485
		IWD-5221/5222	INS/FUNCT	P	
12. Condensate Storage Tank and Unisolable Piping	33	IWD-5223(b)	Tank Filled	I	
		IWD-5221/5222	INS/FUNCT	P	

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COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
13. Fire Water Transfer Tank	33	IWD-5223(b)	Tank Filled	I	
		IWD-5221/5222	INS/FUNCT	P	
14. Makeup Water Transfer Pumps and Suction Piping	33,36	IWD-5223(b)	Tank Filled	I	Request for Relief #1; No Safety Valve in System - Tested at Normal Operating Conditions; Condensate Storage Tank
		IWD-5221/5222	INS/FUNCT	P	
15. MU Water Transfer Pumps Discharge Piping	33,36	IWD-5223(a)	216	I	P_D = 196
		IWD-5221/5222	INS/FUNCT	P	
16. CCW and Spent Fuel Pit System Primary Water Makeup Piping	24,25 33,34	IWD-5223(a)	115	I	P_D = 104
		IWD-5221/5222	INS/FUNCT	P	
17. Auxiliary Saltwater Pump Supply to CCW Heat Exchangers	35	IWD-5223(a)	55	I	Request for Relief #4; Tested at Max Pump Disch Pressure (P_D = 50)
		IWD-5221/5222	INS/FUNCT	P	Request for Relief #4
18. Component Cooling Water Heat Exchangers Tube Side	35	IWD-5223(a)	55	I	Tested at Max Pump Disch Pressure (P_D = 50)
		IWD-5221/5222	INS/FUNCT	P	
19. CCW Heat Exchangers Saltwater Outlet Piping	35	IWD-5223(c)	None Req'd	-	Open-ended Discharge to Ocean
		IWD-5221/5222	INS/FUNCT	P	Request for Relief #4

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COMPONENT OR PIPING DESCRIPTION	SHEET NO. (1)	CODE REQUIREMENTS(2)	REQUIRED TEST PRESS (PSIG) (3)	TEST FREQ(4)	REMARKS(5)
20. Diesel Engine Jacket Water Cooling System	37	IWD-5223(a)	7.5	I	P_{sv} = 6
		IWD-5221/5222	INS/FUNCT	P	
21. Spent Fuel Pool Pumps and Suction Piping	24	IWD-5223(a)	Pool Filled	I	Request for Relief #1; No Safety Valve in System - Tested at Normal Operating Conditions; Spent Fuel Pool
		IWD-5221/5222	INS/FUNCT	P	
22. Spent Fuel Pool Pumps Discharge Piping Through SFP Heat Exchr to Spent Fuel Pool	24	IWD-5223(a)	77	I	P_D = 70
		IWD-5221/5222	INS/FUNCT	P	
23. Raw Water Storage Reservoir to Auxiliary Feedwater Pumps Suction	3,36 37,38 39	IWD-5223(b)&(c)	99	I	P_D = 90
		IWD-5221/5222	INS/FUNCT	P	

REQUEST #	REQUEST FOR RELIEF DESCRIPTION	NRC SER DATE
1	Centrifugal Type Pumps	12/14/88
2	Withdrawn	Denied 12/14/88
3	Withdrawn	Denied 12/14/88
4	Embedded Auxiliary Saltwater Piping	12/14/88
5	Class 2 Piping	12/14/88
6	RCP Seal Return Piping	12/14/88
7	RHR Pump Suction Piping	12/14/88
8	Non-Safety Related Containment Penetration	10/25/89
9	Fuel Transfer Tube	10/25/89
10	Closed End Drains (Class 1)	09/21/92
11A	Open End Tail Pipes (Class 1)	09/21/92
11B	Open End Tail Pipes (Class 2)	09/21/92
12	Line Segments (Class 1)	09/21/92

TEN YEAR EXAMINATION SUMMARY
ASME SECTION XI SYSTEMS

REQUEST FOR RELIEF FROM CODE REQUIREMENTS
REV. 8

SYSTEM PRESSURE TEST SUMMARY
TABLE 5.4

NO.	SYSTEM OR COMPONENT DESCRIPTION	CODE CLASS	SUM. ITEM NO.	BASIS FOR REQUESTING RELIEF	TESTING IN LIEU OF REQUIREMENTS	TESTING SCHEDULE
1	Centrifugal Type Pumps - Various	2 3	19 24 53 4 14 21	Pump mechanical seals will not permit hydro pressure above suction piping test pressure.	Establish Hydro boundary in accordance with 1980 ASME Section XI IWA-5224 (d).	Testing to be specified under test frequency in the summary.
2	Withdrawn					
3	Withdrawn					
4	Embedded Auxiliary Saltwater Piping	3	17 19	The majority of ASW piping is underground and not accessible for inspection and/or testing. Preservice testing was not required by construction code.	Visual leak test of exposed portions of system during system pressure tests as specified in the summary Periodic pump testing will verify unimpaired flow through the inaccessible portions of the system.	Each inspection interval Testing to be as specified in the pump Inservice Testing Program.
5	Class 2 Safety Injection, Residual Heat Removal, RCP Seal Injection, Charging and Charging Inj Piping	2	15 23 26 34 38 39 49 50 52	Some of the piping is not isolable from the Class 1 piping.	The unisolable portions will be tested at test pressures determined by the Class 1 requirements.	Testing to be as specified under test frequency in the summary.

NO.	SYSTEM OR COMPONENT DESCRIPTION	CODE CLASS	SUM. ITEM NO.	BASIS FOR REQUESTING RELIEF	TESTING IN LIEU OF REQUIREMENTS	TESTING SCHEDULE
6	RCP Seal Return Piping from 8141A,B,C,D, to the RCP Seals	2	12	Piping is not isolable from the RCP seal and cannot be included in the hydrostatic pressure test boundary. The piping is pressurized during normal reactor operation and any leakage would be detected during operation.	None	None
7	RHR Pump Suction from Containment Sumps	2	41	Piping is open ended to the containment and can not be isolated to perform pressure tests.	None	None
8	Nonsafety Related Systems Containment Penetrations Except Refueling Fuel Transfer Tube	2	Various	See Pages 3 Thru 8 of this table.		
9	Fuel Transfer Tube to Refuel Canal	2	78	Nonsafety related system, as above. Line is inaccessible, encased in concrete.	Test of integrity of O-ring seal at flange	Every 3 1/3 Years

<u>NOTE</u>: Request for Relief #10, 11 and 12 appear following page 8.

A comparison of the requirements of visual examination VT-2 versus the requirements of 10 CFR APP. J local leak rate testing follows.

VISUAL EXAMINATION, VT-2

IWA-2212 Visual Examination General Requirements

(a) The VT-2 visual examination shall be conducted to locate evidence of leakage from pressure retaining components, or abnormal leakage from components with or without leakage collection systems as required during the conduct of system pressure or functional test.

(b) The VT-2 visual examination shall be conducted in accordance with IWA-5241 and IWA-5242 (see below).

NOTE: IWA-5241 and IWA-5242 clearly connotes liquid testing although a pneumatic test may be substituted by IWA-5211(e).

IWA-5241 Noninsulated Components

(a) The visual examination, VT-2, shall be conducted by examining the accessible external exposed surfaces of pressure retaining components for evidence of leakage.

(b) For components whose external surfaces are inaccessible for direct visual examination, VT-2, only the examination of surrounding area, including floor areas or equipment surfaces located underneath the components, for evidence of leakage shall be required.

IWA-5242 Insulated Components

(a) The visual examination, VT-2, may be conducted without the removal of insulation by examining the accessible and exposed surfaces and joints of the insulation. Essentially vertical surfaces of insulation need only be examined at the lowest elevation where leakage may be detectable. Essentially horizontal surfaces of insulation shall be examined at each insulation joint.

(b) For components whose external insulation surfaces are inaccessible for direct examination, only the examination of surrounding area, including floor areas or equipment surfaces located underneath the components, for evidence of leakage, or other areas to which such leakage may be channeled, shall be required.

(c) Discoloration or residue on surfaces examined shall be given particular attention to detect evidence of boric acid accumulations from borated reactor coolant leakage.

NOTE: There is no requirement to remove insulation and a safety caution is invoked against removing insulation.

10 CFR 50 APP. LOCAL LEAK RATE TESTING (TYPE C)

Type "C" test methods are similar to those described in ASME Section XI IWV-3424, except that the method, pressure, Acceptance Criteria, and schedule is specified and is in more detail.

IWV-3424 Seat Leakage Measurement

Valve seat leakage may be determined by one of the following:

(a) Draining the line, closing the valve, bringing one side to test pressure, and measuring leakage through a downstream tell-tale connection, or

(b) By measuring the feed rate required to maintain pressure between two valves or between two seats of a gate valve, provided the total apparent leak rate is charged to the valve or gate valve seat being tested, and that the conditions required by IWV-3423 (valve pressure test direction and exceptions) are satisfied.

DISCUSSION

LLRT is an instrumented test measuring leakage (WP) throughout the entire test boundary, including the penetration valves and the pipe segment inside the penetration itself. The VT-2 examination only checks the accessible outside surface of the pipe (or floors underneath) for evidence of leakage that is visually apparent.

NOTE: Although the ILRT examination demonstrates the collective integrity of the entire containment structure, credit is not requested for these type "A" test which are performed at least three times each ten year interval.

JUSTIFICATION

The lines on pages 6 through 8 are classified as ASME code class 2 solely because they penetrate containment and constitute part of the containment pressure boundary. They have no other safety related function. These lines can be considered in three categories:

1. Those that operate at 50 psi or less (See Pages 6 and 7). The scheduled Appendix J local leak rate tests (LLRT) at 50 psi, which are conducted at least once every 3 1/3 years, fully demonstrate all aspects of the components safety related containment integrity function. PG&E requests to substitute the LLRT for the VT-2 examination in these cases. If excessive leakage is discovered during the LLRT additional testing will be performed as necessary to identify the location of the leakage. This testing may be visual examination following application of leak detection fluid (snoop), extension of the test boundary to eliminate boundary valve leakage, use of ultrasonic leak detection equipment to detect valve seat leakage or other means. Appropriate repairs in accordance with ASME Section XI requirements will be made, and the LLRT will be reperformed until successful test results are obtained.

2. Those that are not normally in service, but may see operating pressures greater than 50 psi (See Page 8) during the occasions they are in use. These lines would nominally be required to have a system functional test at normal operating pressure once each 3 1/3 years. The concern is that since these lines can see pressures greater than 50 psi, a leak may develop at this higher pressure which would subsequently degrade the containment integrity function. The lines in this category (749, 2993, 4663) should be tested with the Appendix J LLRT each 3 1/3 years. The specific reasons for which PG&E requests to substitute LLRT for periodic system functional tests follow:

   Line 749: This line is seldom operated, and when in service normally sees only 27 psi, although the design maximum is 63 psi. The LLRT at 50 psi guarantees line integrity at nearly double its normal pressure.

   Line 2993: This line operates only in mode 6, and its normal pressure is only 7 psi, although the design maximum is 54 psi. The LLRT at 50 psi guarantees its integrity at over seven times its normal pressure.

   Line 4663: This system normally operates at less than 50 psi, although the design maximum is 80 psi. Again the LLRT assures line integrity; and the code examination would be based on the lower normal operating pressure.

3. Those that are normally in service at a pressure greater than 50 psi (Line 531, see page 8). This line would nominally be required to have a hydrostatic test at 1.1 times the relief valve setpoint, once each 10 years. A pnuematic hydrostatic test at 1100 psi (RV-290 setpoint is 1000 psi) would create the potential for serious injury to examination personnel. Since the line is continuously pressurized with 900 psi nitrogen, leakage would be continuously noticeable due to loss of inventory.

NOTE: This portion of the Request for Relief is not required with Code Case N-498.

TEN YEAR EXAMINATION SUMMARY
ASME SECTION XI SYSTEMS

REQUEST FOR RELIEF FROM CODE REQUIREMENTS
REQUEST FOR RELIEF #8
MAXIMUM OPERATING PRESSURE ≤ 50#
REV. 8

SYSTEM PRESSURE TEST SUMMARY
TABLE 5.4

TEST NO.	SYSTEM OR COMPONENT DESCRIPTION	LINE	SIZE	FLUID	NORM PRESS	MAX PRESS	OPERAT Y/N	CODE REQ SF/HYD[1]	TESTING IN LIEU OF REQUIREMENTS	TESTING SCHEDULE
70	Pzr Quench Tk Gas Analyzer	1163	3/8	N2	20	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SI Pp 1-2 Disch Line RV	2572	1	Wtr	0	3	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	Cnt Spray Pps Disch RV Out PRT	2518	1	Wtr	3	9	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	Chg Pps Suct RV Disch	1459	1	Wtr	0	15	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SIS RV Outlet Hdr to PRT	2999	4	Wtr	3	15	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SIS RV Outlet Hdr to PRT	2998	4	Wtr	3	15	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SI Pps Suct RV Out	2061	1	Wtr	0	14	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	RHR Ht Exchr 2 Out RV	2004	3	Wtr	0	37	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	RHR Ht Exchr 1 Out RV	2003	3	Wtr	0	42	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SIS Pp 1-1 Disch Line RV	3851	1	Wtr	0	12	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
73	SIS Pps Recirc Disch Line RV	3852	1	Wtr	0	10	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
86	React Cool Drn Tk Vent	525	3/4	Gas	1.5	25	Y	HYD	LLRT @ 50 Psi	Ea. 3 1/3 Years
87	React Cool Drn Tk Gas Anal	526	1/2	Air	1.5	25	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
89	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4382	4	Air	3	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
89	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4386	4	Air	3	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
89	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4388	4	Air	3	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years

[1] SF = System Functional @ NOP @ 3 1/3 Yrs
HYD = Hydro @ 1.1 X PSV @ 10 Yrs

TEN YEAR EXAMINATION SUMMARY
ASME SECTION XI SYSTEMS

REQUEST FOR RELIEF FROM CODE REQUIREMENTS
REQUEST FOR RELIEF #8
MAXIMUM OPERATING PRESSURE ≤ 50#
REV. 8

SYSTEM PRESSURE TEST SUMMARY
TABLE 5.4

TEST NO.	SYSTEM OR COMPONENT DESCRIPTION	LINE	SIZE	FLUID	NORM PRESS	MAX PRESS	OPERAT Y/N	CODE REQ SF/HYD[1]	TESTING IN LIEU OF REQUIREMENTS	TESTING SCHEDULE
89	CHPS Air Sup Fans 1&2 Disch Pene 83 IN	4389	4	Air	3	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
89	CHPS Air Sup Fans 1&2 Disch Pene 83 IN	4387	4	Air	3	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
90	CHPS Exh Air Filt 2 Inlet	4390	4	Air	5	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
91	CHPS Exh Air Filt 2 Inlet	4395	4	H2	0	20	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
92	Containment Vacuum Relief	647	12	Air	0	18	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
93	Containment Purge Out	K2	48	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
94	Containment Purge In	K2	48	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
95	Incore Chiller Water Rtn	3936	2	Wtr	25	25	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
96	Incore Chiller Water Supply	3937	2	Wtr	25	25	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
97	Containment Air Sample Inlet	3837	1	Air	3	14.7	Y	HYD	LLRT @ 50 Psi	Ea. 3 1/3 Years
98	Containment Air Sample Return	3838	1	Air	0	20	Y	HYD	LLRT @ 50 Psi	Ea. 3 1/3 Years
99	Post-LOCA Samp Cnt Air Rtn	5190	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
100	Post-LOCA Samp Cnt Air Sup	S.38	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
101	Hyd Mon Cel 82 Cnt Air Sup	4633	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
102	Hyd Mon Cel 82 Cnt Air Sup	4634	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
103	Hyd Mon Cel 83 Cnt Air Sup	4635	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
104	Hyd Mon Cel 83 Cnt Air Rtn	4636	3/8	Air	< 50	< 50	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years

[1] SF = System Functional @ NOP @ 3 1/3 Yrs. HYD = Hydro @ 1.1 X PSV @ 10 Yrs.

TEN YEAR EXAMINATION SUMMARY
ASME SECTION XI SYSTEMS

REQUEST FOR RELIEF FROM CODE REQUIREMENTS
REQUEST FOR RELIEF #8
MAXIMUM OPERATING PRESSURE > 50#
REV. 8

SYSTEM PRESSURE TEST SUMMARY
TABLE 5.4

TEST NO.	SYSTEM OR COMPONENT DESCRIPTION	LINE	SIZE	FLUID	NORM PRESS	MAX PRESS	OPERAT Y/N	CODE REQ SF/HYD[1]	TESTING IN LIEU OF REQUIREMENTS	TESTING SCHEDULE
71	Withdrawn	1161								
72	Withdrawn	3000								
75	Accum Tanks N2 Supply Hdr	531	1	N2	900	1000	Y	HYD	SF @ NOP(900#)	Ea. 10 Years
76	Withdrawn	1679								
79	Withdrawn	3935								
80	Withdrawn	986								
81	Cont Str Sump Pps Disch	749	2	Wtr	27	63	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
82	Withdrawn	3001								
83	Refueling Canal Water Return	2993	4	Wtr	7	54	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
84	Withdrawn	527								
85	Post LOCA Sample & R & Cavity Sump	4663	1/4	Wtr	< 50	80	N	SF	LLRT @ 50 Psi	Ea. 3 1/3 Years
88	Withdrawn	3729								
105	Withdrawn	3941								
106	Withdrawn	3242								
107	Withdrawn	4353								

[1] SF = System Functional @ NOP @ 3 1/3 Yrs.

HYD = Hydro @ 1.1 X PSV @ 10 Yrs.
Lines shown "Withdrawn" were denied approval of Request for Relief in NRC letter of 10/25/89; relief is not needed when testing is performed in accordance with Code Case N-498.

RELIEF REQUEST 10: CLOSED-END DRAINS (CLASS 1) (Page 1 of 2)

System/Component(s) for Which Relief is Requested

Reactor coolant system. 8 ASME Code Class 1 closed end drain line segments between first and second-off manual isolation valves. Examination Category B-P, Item Number B15.51.

No.	Size	Location	Description/Function
1	3/4"	line 2527 between valves 8364A and 283	RCP loop 1 seal injection drain to RCDT
2	3/4"	line 2534 between valves 8364B and 294	RCP loop 2 seal injection drain to RCDT
3	3/4"	line 2536 between valves 8364C and 303	RCP loop 3 seal injection drain to RCDT
4	3/4"	line 2541 between valves 8364D and 308	RCP loop 4 seal injection drain to RCDT
5	3/4"	line segment between valves 513 and 514	Pressurizer spray drain to RCDT
6	2"	line segment between valves 8057A and 8058A	RCP loop 1 cold leg drain to RCDT
7	2"	line segment between valves 8057B and 8058B	RCP loop 2 cold leg drain to RCDT
8	2"	line segment between valves 8057C and 8058C	RCP loop 3 cold leg drain to RCDT

Code Requirements

Section XI, Table IWB-2500-1, Examination Category B-P, Item B15.51 requires a system hydrostatic test per IWB-5222, with VT-2 visual examination per IWA-5250 acceptance criteria, once each 10-year examination interval.

Code Requirement from Which Relief is Requested

Relief is requested from performing the Code-required system hydrostatic test and VT-2 visual examination on the identified drain line segments.

Basis for Relief

These closed-end line segments serve as drains from the high pressure reactor coolant system (RCS) to the low-pressure reactor coolant drain tank (RCDT). The portions of lines are between first and second-off RCS isolation valves. The lines are short (less than 18" on the average) and small diameter. The lines are not normally pressurized. Line pressure may exist due to first-off valve leakage and thermal effects.

The Code-required 10-year pressure test is impractical, and relief is requested for the following reasons:

(a) Using system pressure to test these line segments would require opening the first-off manual valve in Mode 3 (hot standby) to pressurize between the two valves. However, pressure testing in this manner would result in a violation of Class 1 system design requirements for double isolation valve protection.

(b) The plant design does not include provisions to allow pressure testing at or above normal system pressure. Testing during Mode 6 (refueling) would require costly modifications to install a test connection with an open-ended isolation valve on each line, concurrent with unnecessary radiation doses to plant personnel.

RELIEF REQUEST 10: CLOSED-END DRAINS (CLASS 1) (Page 2 of 2)

(c) Testing during Mode 6 without modifications would require defueling the reactor and repressurizing the primary system, extending the critical path outage time by approximately 10 days.

Alternate Examinations

PG&E proposes that, in lieu of the Code-required pressurization and VT-2 examination, these line segments be visually inspected once every 10 years concurrent with the scheduled RCS hydrostatic test.

Justification for Granting of Relief

The relief request is justified in accordance with 10 CFR 50.55a(a)(3) because:

a. The proposed alternative provides a reasonable assurance of continued structural integrity. These small, short line segments are normally depressurized, except for any valve leakby that may cause pressurization. The proposed visual examination will confirm the structural integrity of the drain lines. During a system hydrostatic test, these lines are expected to remain depressurized. If, however, the line segments pressurize due to valve leakby during the hydrostatic pressure test, the proposed alternate visual examination will essentially be identical to the Code-required VT-2 visual examination.

b. Compliance with the Code requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety. Should the relief request be denied, PG&E would have to either (a) pressurize in Mode 3 which would involve an unreviewed safety question by defeating RCS double isolation, resulting in operation in a less conservative manner, (b) add costly test connections with concurrent increase in potential failure points and unnecessary radiation exposure to plant personnel, or (c) test with the reactor defueled which would significantly increase outage critical path time to repressurize the reactor and would impose additional stress on the system due to thermal cycling.

c. The public health and safety is not compromised by this relief because the proposed alternate examination provides an acceptable level of quality and safety.

Implementation Schedule

Ten-year hydrostatic testing is scheduled for implementation during the third period in the first 10-year examination interval. PG&E's proposed alternate visual examinations will be performed concurrent with the system hydro test.

RELIEF REQUEST 11A: OPEN-END TAILPIPES (CLASS 1) (Page 1 of 3)

System/Component for Which Relief is Requested

Reactor coolant system. 25 ASME Code Class 1 open-end tailpipes between first and second-off manual isolation valves or valve and blind flange. Examination Category B-P, Item number B15.51.

No.	Location	Description/Function (see Note)
1	line 109	hot leg recirc vent between valves 579 and 570
2	line 961	loop 4 cold leg drain (2" to 3/4") between valves 8057D and 8066, 8058D
3	V-8070	RVRLIS connection between valve 8070 and blind flange
4	line 14	loop 2 spray line vent between valves 517 and 518
5	line 14	loop 2 spray line drain to RCDT between valves 515 and 516
6	line 14	loop 2 spray line drain to RCDT between valves 519 and 520
7	line 13	loop 1 spray line vent between valves 521 and 522
8	line 13	loop 1 spray line drain between valves 523 and 524
9	line 1195	pressurizer PORV vent between valve 8056 and blind flange
10	line 1469	pressurizer loop seal vent between valves 8052 and 8064A, 8064B, 8064C
11	line 1495	RCP 1 seal bypass vent between valve 8362A and blind flange
12	line 1496	RCP 2 seal bypass vent between valve 8362B and blind flange
13	line 1497	RCP 3 seal bypass vent between valve 8362C and blind flange
14	line 1498	RCP 4 seal bypass vent between valve 8362D and blind flange
15	line 246	charging line loop 4 vent between valves 100 and 572
16	line 253	accumulator injection loop 1 vent between valves 138 and 139
17	line 254	accumulator injection loop 2 vent between valves 140 and 141
18	line 255	accumulator injection loop 3 vent between valves 142 and 143
19	line 256	accumulator injection loop 4 vent between valves 144 and 145
20	line 235	safety injection loop 1 hot leg vent between valves 50 and 51
21	line 236	safety injection loop 2 hot leg vent between valves 54 and 55
22	line 237	safety injection loop 3 hot leg vent between valves 58 and 59
23	line 238	safety injection loop 4 hot leg vent between valves 62 and 63
24	line 109	hot leg recirc vent between valves 6 and 935
25	line 109	RHR loop 4 valve 8702 thermal expansion drain between valves 3, 4, and 7

NOTE: All piping is NPS 3/4", except item 2 which includes a section of NPS 2" pipe. The piping is not assigned a line number; rather, the line numbers identify the major line that the subject piping originates from.

Code Requirements

Section XI, Table IWB-2500-1, Examination Category B-P, Item B15.51 requires a system hydrostatic test per IWB-5222, with VT-2 visual examination per IWA-5250 acceptance criteria, once each 10-year examination interval.

RELIEF REQUEST 11A: OPEN-END TAILPIPES (CLASS 1) (Page 2 of 3)

Code Requirement from Which Relief is Requested

Relief is requested from performing the Code-required system hydrostatic test and VT-2 visual examination on the identified line segments.

Basis for Relief

These line segments between the isolation valves are open-end tailpipes and serve as drain, vent, test and fill lines. The line segments are short (less than 12" on the average) and small diameter. The line segments are not normally pressurized. Line pressure may exist due to first-off valve leakage and thermal effects. The isolation valves are not capable of automatic closure.

The Code-required 10-year hydro pressure test is impractical, and relief is requested for the following reasons:

(a) Using system pressure to test these lines would require opening the first-off valve in Mode 3 (hot standby) to pressurize between the two isolation valves. However, pressure testing in this manner would result in a violation of Class 1 system design requirements for double isolation valve protection.

(b) Testing in Mode 6 (refueling) is possible because these lines are provided with test connections and isolation. However, hydrotesting each line segment would require use of a hydro test pump at each location to pressurize the line. This method would result in unnecessary radiation exposure to plant personnel and increased risk of contaminated liquid spill. All of these locations are in high radiation areas. Staging the hydro pump, removing the pipe cap, opening the second off valve, filling and pressurizing the line segment, depressurizing and restoring the system is estimated by PG&E to require one manrem at each location.

Alternate Examinations

PG&E proposes that, in lieu of the Code-required pressurization and VT-2 examination, these line segments be visually inspected once every 10 years concurrent with the scheduled RCS hydrostatic test.

Justification for the Granting of Relief

The relief request is justified in accordance with 10 CFR 50.55a(a)(3) because:

a. The proposed alternative provides a reasonable assurance of continued structural integrity. These small, short line segments are normally depressurized, except for any valve leakby that may cause pressurization. The proposed visual examination will confirm the structural integrity of the lines. During a system hydrostatic test, these lines are expected to remain depressurized. If, however, the line segments pressurize due to valve leakby during the hydrostatic pressure test, the proposed alternate visual examination will essentially be identical to the Code-required VT-2 visual examination.

RELIEF REQUEST 11A: OPEN-END TAILPIPES (CLASS 1) (Page 3 of 3)

b. Compliance with the Code requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety. Should the relief request be denied, PG&E would have to either (a) pressurize in Mode 3 which would involve an unreviewed safety question be defeating RCS double isolation, resulting in operation in a less conservative manner, or (b) pressurize in Mode 6 which would require multiple applications of hydrotest pumps in high radiation areas with increased potential for contaminated liquid spill and increased radwaste generation.

c. The public health and safety is not compromised by this relief because the proposed alternate examination provides an acceptable level of quality and safety.

Implementation Schedule

Ten-year hydrostatic testing is scheduled for implementation during the third period in the first 10-year examination interval. PG&E's proposed alternate visual examinations will be performed concurrent with the system hydro test.

RELIEF REQUEST 11B: OPEN-END TAILPIPES (CLASS 2) (Page 1 of 2)

System/Component for Which Relief is Requested

Reactor coolant system. 4 ASME Code Class 2 open-end tailpipes between first and second-off manual isolation valves, or valve and connection. Examination Category C-H, Item number C7.11.

No.	Size	Description/Function
1	1"	reactor vessel head vent between valves 8078B and 8078A
2	1"	reactor vessel head vent between valves 8078C and 8078D
3	3/4"	RVRLIS hot leg instrumentation connection between valves 617 and 616
4	3/4"	reactor vessel head vent valve test connection between the test connection and valve 661

Code Requirement

Section XI, Table IWC-2500-1, Examination Category C-H, Item C7.11 requires a system hydrostatic test per IWC-5222, with VT-2 visual examination per IWA-5250 acceptance criteria, once each 10-year examination interval.

Code Requirement from Which Relief is Requested

Relief is requested from performing the Code-required system hydrostatic test and VT-2 visual examination on the identified line segments.

Basis for Relief

These line segments between the isolation valves are open-end tailpipes and serve as drain, vent, test and fill lines. The line segments are short (less than 12" on the average) and small diameter. The line segments are not normally pressurized. Line pressure may exist due to first-off valve leakage and thermal effects. The isolation valves are not capable of automatic closure.

The Code-required 10-year hydro pressure test is impractical, and relief is requested for the following reasons:

(a) Using system pressure to test these lines would require opening the first-off valve in Mode 3 (hot standby) to pressurize between the two isolation valves. However, pressure testing in this manner would result in a violation of Class 1 system design requirements for double isolation valve protection.

(b) Testing in Mode 6 (refueling) is possible because these lines are provided with test connections and isolation. However, hydrotesting each line segment would require use of a hydrotest pump at each location to pressurize the line. This method would result in unnecessary radiation exposure to plant personnel and increased risk of contaminated liquid spill. All of these locations are in high radiation areas. Staging the hydro pump, removing the pipecap, opening the second off valve, filling and pressurizing the line segment, depressurizing and restoring the system is estimated by PG&E to require one manrem at each location.

RELIEF REQUEST 11B: OPEN-END TAILPIPES (CLASS 2) (Page 2 of 2)

Alternate Examinations

PG&E proposes that, in lieu of the Code-required pressurization and VT-2 examination, these line segments be visually inspected once every 10 years concurrent with the scheduled RCS hydrostatic test.

Justification for Granting of Relief

The relief request is justified in accordance with 10 CFR 50.55a(a)(3) because:

a. The proposed alternative provides a reasonable assurance of continued structural integrity. These small, short line segments are normally depressurized, except for any valve leakby that may cause pressurization. The proposed visual examination will confirm the structural integrity of the lines. During a system hydrostatic test, these lines are expected to remain depressurized. If, however, the line segments pressurize due to valve leakby during the hydrostatic pressure test, the proposed alternate visual examination will essentially be identical to the Code-required VT-2 visual examination.

b. Compliance with the Code requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety. Should the relief request be denied, PG&E would have to either (a) pressurize in Mode 3 which would involve an unreviewed safety question by defeating RCS double isolation, resulting in operation in a less conservative manner, (b) pressurize in Mode 6 which would require multiple applications of hydrotest pumps in high radiation areas with increased potential for contaminated liquid spill and increased radwaste generation.

c. The public health and safety is not compromised by this relief because the proposed alternate examination provides an acceptable level of quality and safety. Visual examinations will be able to detect leakage that is visibly apparent.

Implementation Schedule

Ten-year hydrostatic testing is scheduled for implementation during the third period in the first 10-year examination interval. PG&E's proposed alternate visual examinations will be performed concurrent with the system hydro test.

RELIEF REQUEST 12: LINE SEGMENTS (CLASS 1) (Page 1 of 3)

System/Component for Which Relief is Requested

Reactor coolant system. 8 Code Class 1 line segments between first and second-off check valves. Examination Category B-P, Item Number B15.51.

No.	Line	Size	Description
1	253	10"	Accumulator, RHR, SI injection to loop 1 cold leg between 8948A and 8956A, 8819A, 8818A, 8879A
	3844	6'	
	3855	2"	
	1999	3/4"	
2	254	10"	Accumulator, RHR, SI injection to loop 2 cold leg between 8948B and 8956B, 8819B, 8818B, 8879B
	3845	6"	
	3856	2"	
	2000	3/4"	
3	255	10"	Accumulator, RHR, SI injection to loop 3 cold leg between 8948C and 8956C, 8819C, 8818C, 8879C
	3846	6"	
	3857	2"	
	2001	3/4"	
4	256	10"	Accumulator, RHR, SI injection to loop 4 cold leg between 8948D and 8956D, 8819D, 8818D, 8879D
	3847	6"	
	3858	2"	
	2002	3/4"	
5	2575	8"	SI, RHR to loop 1 hot leg between 8949A and 8884A, 8740A, 8905A
	235	6"	
	3863	2"	
	689	3/4"	
6	2576	8"	SI, RHR to loop 2 hot leg between 8949B and 8884B, 8740B, 8905B
	236	6"	
	3864	2"	
	691	3/4"	
7	237	6"	SI to loop 3 hot leg between 8949C, 8884C, and 8905C
	1976	2"	
	3866	3/4"	
8	238	6"	SI to loop 4 hot leg between 8949D, 8884D, and 8905D
	1990	2"	
	3867	3/4"	

RELIEF REQUEST 12: LINE SEGMENTS (CLASS 1) (Page 2 of 3)

Code Requirement

Section XI, Table IWB-2500-1, Examination Category B-P, Item B15.51 requires a system hydrostatic test per IWB-5222, with VT-2 visual examination per IWA-5250 acceptance criteria, once each 10-year examination interval.

Code Requirements from Which Relief is Requested

Relief is requested from performing the Code-required system hydrostatic test and VT-2 visual examination on the identified line segments.

Basis for Relief

The first four groups of line segments are normally pressurized at 625 psi (accumulator pressure) during normal operation and Mode 3. The second four groups of line segments are not normally pressurized. Line pressure may exist due to first-off valve leakage and thermal effects only.

The Code-required 10-year hydrostatic test is impractical for the following reasons:

(a) These line segments are located between check valves which function as RCS pressure boundary isolation valves, per DCPP Technical Specification Table 3.4-1. These check valves are boundary points, making it impossible to test the lines during Modes 4, 5, or 6 due to insufficient RCS pressure to keep the first-off valve shut against test pressure.

(b) In Mode 3, pressurization to the nominal test pressure would risk injection to the RCS.

Alternate Examination

PG&E proposes that, in lieu of the Code-required pressurization and VT-2 examination, these line segments be visually inspected as follows:

The first four groups of line segments will be visually inspected every refueling outage in Mode 3 at 625 psi, their normal system pressure, in accordance with STP R-8A, "RCS Operational Pressure Leak Test."

The second four groups of line segments will be pressurized to 1530 psi once every ten years in Mode 3 during performance of STP X-238, "Leak Test of Safety Injection Piping Downstream of 8802A & B." The lines will be visually inspected at that time.

Additionally, all eight groups of line segments are subject to visual inspections during routine walkdowns during cold shutdowns of sufficient duration (per STP R-8C, "Containment Walkdown for Evidence of Boric Acid Leakage"), as required by NRC Generic Letter 88-05.

RELIEF REQUEST 12: LINE SEGMENTS (CLASS 1) (Page 3 of 3)

Justification for Granting of Relief

The relief request is justified in accordance with 10 CFR 50.55a(a)(3) because:

a. The proposed alternatives provide a reasonable assurance of continued structural integrity. Testing at a lower pressure than the Code-required hydro test pressure is sufficient to detect through-wall leakage before system failure.

b. Compliance with the Code requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety. These line segments are isolated by check valves which prevent pressurization of the system in Modes 4, 5, and 6 since there is no back pressure to close the valves and the system downstream is open directly to the reactor vessel. Should this relief request be denied, (a) pressurization in Modes 4, 5, or 6 would require defueling and reclosing the RCS, heating and pressurizing the system for the test, then depressurizing and reopening the system, an evolution that requires 10 days of critical path outage time, including an unnecessary thermal cycling of the system; (b) testing in Mode 3 at full pressure would risk injection to the RCS and cause the system to be operated in a less conservative manner.

c. The public health and safety is not compromised by this relief because the proposed alternate examination provides an acceptable level of quality and safety.

Implementation Schedule

Ten-year hydrostatic testing is scheduled for implementation during the third period in the first 10-year examination interval. PG&E's proposed alternate visual examinations will be performed concurrent with the system hydro test.