



MANUAL REVISION INSTRUCTIONS

Title		Rev. Package No.		Date	
Inservice Inspection Program Plan		1		5/18/93	
Description of the Change		REMOVE		INSERT	
		Page	Rev.	Page	Rev.
Program Plan - Volume 1					
Signature Page			0		1
1.0 Table of Contents		1-1 thru 1-2	0	1-1 thru 1-2	1
2.0 Record of Revisions		2-1 thru 2-8	0	2-1 thru 2-22	1
3.0 Program Description		3-1 thru 3-10	0	3-1 thru 3-9	1
4.0 Code Commitments		4-1 thru 4-26	0	4-1 thru 4-32	1
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6.0 Component Supports		6-1 thru 6-9	0	6-1 thru 6-7	1
Table 6.1		1-38	0	6-8 thru 6-46	1
Table 6.2		1-20	0	6-47 thru 6-60	1
7.0 ISI Boundary Diagrams		7-1 thru 7-14	0	7-1 thru 7-14	1
8.0 Visual Program		8-1, 8-2	0	8-1, 8-2	1
9.0 UT Calibration Standards		All	0	All	1
10.0 Procedures		10-1	0	10-1	1
11.0 Management Plan		11-1	0	11-1	1
12.0 Repair/Replacement		12-1	0	12-1	1
13.0 ISI Summary Report		13-1	0	13-1	1

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Title		Rev. Package No.		Date	
Inservice Inspection Program Plan		1		5/18/93	
Description of the Change		REMOVE		INSERT	
		Page	Rev.	Page	Rev.
14.0 Weld ID Diagrams - Volume 2		14-1 thru 14-4	0	14-1 thru 14-4	1
Add "ISI Program Plan Schedule".				dated 2/26/93	
Move all "Systems tabs" i.e. RPV, RCIC, etc. to Volume 3.					
14.0 Weld ID Diagrams - Volume 3				14-5 14-6	1 1
Remove all pages after each tab (RPV, RCIC) and replace with respective system weld and component ID diagrams.					

1012

Owner:

the U.S. District Court (in New York)

Plan: WFL-
Plan No.

Commercial: No

Locality:

Resector: No

1012 T-12
1012 T-12

Prepared by:

Reviewed by:

Date
1-18-47

Date
2-18-47

Date
3-18-47

Date
4-18-47

Date
5-18-47

Date
6-18-47

Date
7-18-47

Date
8-18-47

At: 1012 T-12

Continued

INSERVICE INSPECTION PROGRAM PLAN

Amendment No. 1
March 1993

FOR THE

WPPSS NUCLEAR PLANT NO. 2

Owner: Washington Public Power Supply System
3000 George Washington Way
Richland, Washington 99352

Plant: WNP-2, located 11 miles north of Richland, Washington on the U.S. Department of Energy
Hanford Reservation.

Commercial Service Date: December 13, 1984

Capacity: 1,145 MWe

Reactor Pressure Vessel: Manufacturer: CBIN Serial Number: T-45
State No.: N/A Nat'l Bd. No.: CBIN-8

Prepared By:	<u></u>	<u>March 11, 1993</u>
	ISI Engineer	Date
Reviewed By:	<u></u>	<u>3-18-93</u>
	Supervisor, NDE/ISI Services	Date
	<u></u>	<u>3-18-93</u>
	Manager, Materials & Inspection	Date
	<u></u>	<u>3/18/93</u>
	Manager, Engineering Programs	Date
	<u></u>	<u>4/8/93</u>
	Manager, Plant Quality Assurance	Date
	<u></u>	<u>4/23/93</u>
	Manager, Technical Services	Date
Approved By:	<u></u>	<u>4/27/93</u>
	Plant Manager	Date
Concurrence:	<u></u>	<u>4/28/93</u>
	Authorized Nuclear Inspector (Inservice)	Date

NOTE: This amendment takes effect on the date the Nuclear Regulatory Commission grants approval.

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11.0 MANAGEMENT PLAN

12.0 ASME SECTION XI REPAIRS/REPLACEMENTS

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RPV
RCIC
HPCS
LPCS
RHR
MS
RFW
RRC
RWC
CRD
SLC
FPC
RCC
EDR/FDR
MSLC
MISC.

TITLE	SHEET	AMEND/DATE/REV
Title Sheet	1	0.0
Sign. Orig.	1	1.0
1.0 Table of Contents	1-1	1.0
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2.0 Record of Revisions	2-1	1.0
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	2-3	1.0
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	2-7	1.0
	2-8	1.0
	2-9	1.0
	2-10	1.0
	2-11	1.0
	2-12	1.0
	2-13	1.0
	2-14	1.0
	2-15	1.0
	2-16	1.0
	2-17	1.0
	2-18	1.0
	2-19	1.0
	2-20	1.0
	2-21	1.0
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	2-23	1.0
	2-24	1.0
	2-25	1.0

TITLE/DESCRIPTION	SHEET	AMEND/DATE/REV
2.0 Record of Revisions (cont'd)	2-26	delete
	2-27	delete
3.0 Program Description	3-1	1
	3-2	1
	3-3	1
	3-4	1
	3-5	1
	3-6	1
	3-6A	1(New)
	3-6B	1(New)
	3-7	1
	3-8	1
	3-9	1
4.0 Code Compliance	4-1	1
	4-2	1
	4-3	1
Table 4-1	1-26	1
	4-4	1
	4-5	1
	4-6	1
	4-7	1
	4-8	1
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	4-10	1
	4-11	1
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TITLE	SHEET	AMEND/DATE/REV
4.0 Code Compliance (cont'd)	4-15	(1)(New) 1/1/93
	4-16	1
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	4-21	1
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	4-23	1
	4-24	1
	4-25	1
	4-26	1
	4-27	1(New)
	4-28	1(New)
	4-29	1(New)
	4-30	1(New)
	4-31, 32	1(New)
5.0 FSAR/NRC Commitments	5-1	1
	5-2	1
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	5-4	1
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	5-9	1
Table 5-2	i thru vii	1(New)
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	5-11	1

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6.0 Component Supports	6-1	1
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	6-3	1
	6-4	1
	6-5	1
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Table 6.1	6-8 thru 6-46	1
Table 6.2	6-47 thru 6-60	1
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ISI-200	1	3
	7-2	1
ISI-217	1	4
	7-3	1
ISI-219	1	5
	2	3
	7-4	1
ISI-220	1	4
	2	4
	7-5	1
ISI-221	1	6
	1A	6
	2	5
	2A	5
	3	6
	4	2(New)
	7-6	1
ISI-222	1	3
	7-7	1

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ISI-223	1	3
	2	3
	7-8	1
ISI-224	1	3
	1A	4
	2	4
	2A	4
	3	4
	3A	4
	4	4
	4A	4
	5	5
	6	4
	7	2
	7A	2
	7-9	1
	1	3
ISI-225	2	3
	3	3
	4	2
	7-10	1
	1	6
ISI-226	1A	4
	2	5
	7-11	1
	1	3
ISI-228	7-12	1
	1	4
ISI-229	1	4

TITLE	SHEET	AMEND/DATE/REV
ISI-229 (cont'd)	1A	4
	2	4
	2A	4
	3	2
	4	2
	7-13	1
ISI-230	1	4
	2	4
	3	5
	7-14	1
ISI-275	1	2
8.0 Visual Program	8-1	1
	8-2	1
9.0 UT Calibration Standards, Table 9.1	9-1	1
	1	1
	2	1
UTCB-101	1	2
UTCB-102	1	2
UTCB-104	1	1
UTCB-105	1	2
UTCB-106	1	2
UTCB-107	1	1
UTCB-108	1	1
UTCB-109	1	2
UTCB-110	1	1
UTCB-111	1	2
UTCB-203	1	1
UTCB-204	1	1
UTCB-205	1	1

TITLE	SHEET	AMEND/DATE/REV
UTCB-206	1	1
UTCB-207	1	1
UTCB-208	1	1
UTCB-209	1	1
UTCB-210	1	3
UTCB-211	1	3
UTCB-250	2	0
UTCB-251	2	1
	9-2	1
Table 9.2	1-6	1
UTCB-220	1	7
UTCB-221	1	6
UTCB-222	1	2
UTCB-223	1	2
UTCB-224	1	2
UTCB-225	1	1
UTCB-226	1	1
UTCB-229	1	0
UTCB-230	1	1
UTCB-231	1	0
UTCB-232	1	1
UTCB-233	1	0
UTCB-234	1	0
UTCB-235	1	1
10.0 Procedures	10-1	1
11.0 Management Plan	11-1	1
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13.0 ISI Summary Report	13-1	1

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14.0 Weld ID Diagrams	14-1	1
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	14-3	1
	14-4	1
Tablés	N/A	2/26/1993
		N/A
ZN-201	1	
ZN-202	1	N/A
ZN-203	1	N/A
ZN-204	1	N/A
ZN-205	1	N/A
ZN-206	1	N/A
ZN-207	1	N/A
ZN-208	1	N/A
ZN-209	1	N/A
ZN-210	1	N/A
RPV-101	1	4
RPV-102	1	3
RPV-103	1	2
RPV-104	1	0
RPV-105	1	1
RPV-106	1	1
RPV-107	1	1
RPV-108	1	1
RPV-109	1	1
RPV-110	1	1
RPV-111	1	1
RPV-112	1	1

TITLE	SHEET	AMEND/DATE/REV
RPV-113	1	1
RPV-114	1	1
RPV-115	1	1
RPV-116	1(New)	0
RPV-117	1(New)	0
RCIC-101	1	5
	2	7
	3	5
RCIC-102	1	4
	2	5
	3	6
RCIC-201	1	4
	2	3
RCIC-202	1	2
	2	2
	3	2
	4	2
	5	2
RCIC-203	1	3
	2	3
	3(New)	2
RCIC-204	1	3
	2	3
	3	2
	4	4
RCIC-205	1	3
	2	3
	3	3
	4	3

TITLE	SHEET	AMEND/DATE/REV
RCIC-205 (cont'd)	5	3
	6	3
	6A(New)	3
	7	2
HPCS-101	1	4
	2	6
HPCS-201	1	3
	2	3
	3(New)	1
HPCS-202	1	3
	2	4
	3	3
	4	3
	5	3
	6	3
HPCS-205	1	1
	2	1
LPCS-101	1	3
	2	4
LPCS-201	1	3
	2	3
LPCS-202	1	3
	2	3
	3	3
	4	3
	5	3
LPCS-205	1	1
	2	1
	3	1

TITLE	SHEET	AMEND/DATE/REV
LPCS-205(cont)	4	1
RHR-101	1	8
RHR-102	1	7
RHR-103	1	7
RHR-104	1	4
RHR-105	1	4
RHR-106	1	5
RHR-201	1	4
	2	4
	3	3
	4	3
	5	6
	6	2
	7	3
	8	3
	9	3
	10	3
	11	5
RHR-202	1	2
	2	4
RHR-203	1	3
	2	3
	3	5
	4(New)	2
	5(New)	2
RHR-204	1	2
	2	3
	3	2
	4	2

TITLE	SHEET	AMEND/DATE/REV
RHR-205	1	4
	2	3
	3	4
	4	4
RHR-206	1	3
	2	3
	3	4
RHR-207	1	3
	2	3
	3	3
	4	3
	5	4
	6	3
	7	4
	8	4
	9	3
	10	3
	11	4
	12	3
	13	4
	14	4
	15	4
	16	5
	17	3
	18(New)	2
RHR-208	1	2
	2	3
	3	2
	4	2

TITLE	SHEET	AMEND/DATE/REV
RHR-208(cont)	5	2
RHR-209	1	4
	2	4
RHR-210	1	3
	2	2
	3	3
	4	4
	5	3
	6	1
RHR-211	1	3
	2	4
	3(New)	2
RHR-212	1	2
RHR-213	1	2
RHR-214	1	1
RHR-216	1	1
RHR-224	1	1
MS-101	1	6
	2	6
	3(New)	1
MS-102	1	6
	2	4
MS-103	1	6
	2	4
MS-104	1	5
	2	5
MS-105	1	3
	2	3
	3	3

TITLE	SHEET	AMEND/DATE/REV
MS-106	1	4
	2	2
	3	2
	4	2
MS-107	1	0
MS-108	1	0
MS-109	1	0
MS-110	1	0
MS-201	1	4
	2	5
	3	6
	4	5
	5(New)	1
MS-202	1	5
	2	5
	3	6
	4	4
	5(New)	1
MS-203	1	5
	2	4
	3	5
	4	4
	5(New)	2
MS-204	1	4
	2	5
	3	5
	4	4
	5(New)	1
MS-205	1	3

TITLE	SHEET	AMEND/DATE/REV
MS-206	1	3
MS-301	1	2
	2	1
	3	0
MS-302	1	1
	2	2
	3	0
MS-303	1	1
	2	2
	3	1
MS-304	1	1
	2	1
	3	2
MS-305	1	1
	2	1
	3	0
MS-306	1	1
	2	1
	3	0
MS-307	1	1
	2	1
	3	1
MS-308	1	1
	2	1
	3	1
	4	0
MS-309	1	1
	2	1
	3	1

TITLE	SHEET	AMEND/DATE/REV
MS-310	1	0
	2	0
	3	0
MS-311	1	0
	2	0
	3	0
MS-312	1	0
	2	1
	3	1
MS-313	1	0
	2	1
	3	
MS-314	1	0
	2	0
	3	
MS-315	1	1
	2	1
	3	
MS-316	1	1
	2	0
	3	
MS-317	1	1
	2	0
	3	2
MS-318	1	1
	2	1
MS-318 (cont'd)	3	2
RFW-101	1	4
	2	3

TITLE	SHEET	AMEND/DATE/REV
RFW-101 (cont'd)	3	5
	4	5
	5	5
RFW-102	1	5
	2	3
	3	5
	4	5
	5	5
RFW-103	1	4
RRC-101	1	5
	2	3
	3	3
	4	3
	5	3
	6	3
	7	3
	8	3
RRC-102	1	4
	2	5
	3	4
	4	3
	5	3
	6	3
	7	3
	8	3
RRC-103	1	2
RRC-104	1	5
RRC-105	1	3
RRC-106	1	2

TITLE	SHEET	AMEND/DATE/REV
RRC-107	1	2
RRC-108	1	3
RRC-109	1	3
RRC-110	1	3
RRC-111	1	2
RWCU-101	1	4
	2	5
	3	4
	4	5
	5	4
RWCU-301	1	3
RWCU-302	1	2
RWCU-303	1	2
	2	2
	3	2
RWCU-304	1	2
	2	2
	3	2
RWCU-305	1	2
CRD-201	1	1
	2	1
	3	1
CRD-202	1	1
	2	1
	3	1
SLC-101	1	1
	2	1
	3	1
	4	2

TITLE	SHEET	AMEND/DATE/REV
SLC-101 (con'd)	5	1
	6	1
	7(New)	0
SW-301	1	1
	2	2
	3	2
	4	2
	5	3
	6	2
SW-302	1	2
SW-303	1	1
	2	2
	3	2
	4	2
	5	2
	6	2
	7	2
	8	3
SW-304	1	2
SW-305	1	2
	2	2
	3	2
	4	3
SW-306	1	2
SW-307	1	2
	2	2
	3	3
	4	2
	5	2

TITLE	SHEET	AMEND/DATE/REV
SW-308	1	2
SW-309	1	2
SW-310	1	2
SW-311	1	2
SW-312	1	1
	2	1
SW-313	1	1
SW-314	1	1
	2	1
SW-315	1	1
FPC-201	1	2
FPC-202	1	1
FPC-301	1	2
	2	2
	3	2
	4	2
	5	2
	6	2
	7	2
	8	2
FPC-302	1	2
	2	1
	3	2
	4(New)	1
FPC-303	1	2
	2	2
	3	1
	4(New)	1
FPC-304	1	2

TITLE	SHEET	AMEND/DATE/REV
FPC-304 (cont'd)	2	2
	3	2
	4(New)	1
	5(New)	1
FPC-305	1	2
	2	2
	3	2
	4	2
	5	2
	6	2
	7	2
	8	2
	9	3
	10	2
	11	1
FPC-306	1	2
FPC-307	1	2
FPC-308	1	2
	2	1
	3	2
	4	1
RCC-201	1	1
RCC-202	1	2
RCC-301	1	2
	2	2
	3	2
RCC-302	1	2
	2	3
RCC-303	1	1

TITLE	SHEET	AMEND/DATE/REV
RCC-303 (cont'd)	2	1
RCC-304	1	1
	2	1
EDR-201	1	3
FDR-201	1	2

3.0 PROGRAM DESCRIPTION

3.1 INTRODUCTION

This Inservice Inspection (ISI) Program Plan is applicable to the Washington Public Power Supply System Nuclear Plant No. 2 (WNP-2). This single unit Boiling Water Reactor (BWR) power plant is located 11 miles north of Richland, Washington, on the Hanford Reservation. The plant employs a General Electric (GE) supplied Nuclear Steam Supply System (NSSS) designated as BWR/5. The reactor is contained within an over-under drywell/wetwell containment vessel designated Mark II. The plants net rated electrical output is 1,145 MWe. The plant received its operating license December 20, 1983 and was placed into commercial operation December 13, 1984.

This Program Plan has been prepared as the controlling document governing the inservice examination activities at WNP-2 during the first 10-year inspection interval commencing with commercial operations. The requirements for inservice examinations are outlined in the ASME Boiler and Pressure Vessel Code, Section XI, entitled "Rules for Inservice Inspection of Nuclear Power Plant Components." The scope of this plan is limited to nondestructive examinations of ASME Section III Class 1, 2 and 3 piping systems, components and examination and testing of component supports. Inservice testing of pumps and valves, required by subsection IWP and IWV of ASME Section XI, is not included in this plan, but is the subject of a separate document.

This Program Plan is prepared in accordance with the following:

1. ASME Section XI 1980 Edition, Winter 1980 Addendum.
2. ASME Section XI 1980 Edition, Winter 1981 Addendum (IWF-3400).
3. ASME Section XI 1983 Edition, Winter 1983 Addendum [Category C-F, IWA-2300(a)(1)].
- 3a. ASME Section XI 1986 Edition No Addendum (IWB-3600, GL88-01, compliance).
4. Regulatory Guide 1.150, Revision 1 for Reactor Vessel Examinations.
5. Deleted
6. Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping", response contained in letters GO2-88-164, dated July 26, 1988, GO2-89-123, dated July 20, 1989, GO2-91-088, dated May 3, 1991, GO2-92-004, dated January 8, 1992, and G02-92-241, dated October 16, 1992.
7. NUREG 0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking", response contained in letter G02-82-36, dated January 13, 1982.
8. Inspection and Enforcement Bulletin 80-07, Supplement 1, "BWR Jet Pump Assembly Failure".

9. Inspection and Enforcement Bulletin 80-13, "Cracking in Core Spray Spargers".
10. Certain nonmandatory augmented examinations performed voluntarily by, and at the discretion of the Supply System.
11. Supply System letter GO2-90-024, from G. C. Sorensen to NRC dated February 14, 1990 in support of issuance of Amendment 77 (Facility Operating License No. NPF-21) for adding Section 3/4.1.6, "Reactivity Control Systems, Feedwater Temperature".

3.2 PROGRAM PHILOSOPHY

The overall intent of the Supply System in preparing the WNP-2 Inservice Inspection (ISI) Program Plan is to develop a program which reflects a good balance of the following objectives and constraints:

- a. To the maximum extent practical, comply with the approved codes, regulations, and commitments governing the inservice inspection of WNP-2 during the first 10-year inspection interval.
- b. Minimize the cost and schedule impact of the required examination activities during plant operation and refueling outages.
- c. Develop a program which includes the philosophy of the latest addenda of ASME Section XI.

The Supply System believes that the WNP-2 Inservice Inspection Program Plan reflects the above philosophy and as such will result in a program of inspections which are in the best interest of the health and safety of the general public.

3.3 PROGRAM SCOPE

This Program Plan governs all manual and automated nondestructive examinations, visual examinations, evaluations, and reporting activities required by ASME Section XI as invoked by 10CFR50.55a and applicable augmented examination requirements.

3.3.1 RPV EXAMINATIONS

The design of the RPV shield wall and external inservice inspection system was completed prior to the promulgation of amendments to 10CFR 50.55a which required the upgrading of the utilities' inservice inspection Code commitment for examinations subsequent to the baseline examination. The design allows access to approximately 35% of shell circumferential and 90% of vessel longitudinal welds.

Access to the external surface of the RPV for inservice inspection is provided by removable insulation panels and shield plugs. Hinged shield wall doors around the nozzles provide access to the nozzles and to the pole tracks on shell courses 2 and 3. Access to the pole tracks above the shield wall is through removable panels at the top of the tracks. Access to the bottom head track is through a door in the shield wall and through openings in the RPV support skirt. The pole tracks on shell course 1 are accessible from the bottom. Drawings RPV-102 and RPV-103 (section 14.0) show the location of the pole tracks.

The RPV vessel flange area and vessel closure head can be examined during refueling outages using manual ultrasonic techniques. The volumetric examination of the vessel-to-flange weld can be performed by applying the search units directly to the seal surface areas. The vessel-to-flange weld can also be examined from the vessel shell surface.

The closure head is dry stored during refueling which allows direct manual examination. Removable insulation allows examination of the head welds from the outside surface. The RPV nuts and washers are removed to dry storage and can be examined during refueling. Selected studs will be examined during refueling so that all studs will be examined during the inspection interval.

Access to the interior of the RPV is gained by removal of the steam dryer and steam separator assembly during refueling. The RPV interior will be examined using remote visual techniques.

The volumetric examination technique of the RPV will comply with the Reference Code and the requirements of Regulatory Guide 1.150 Revision 1, Appendix A "Ultrasonic Testing of Reactor Vessel Welds during Preservice and Inservice Examinations".

3.3.2 NSSS, BOP PIPING AND COMPONENTS EXAMINATIONS

The manual examinations of NSSS piping, BOP piping and components will be performed to the requirements of the Reference Code to the maximum extent practical. Access has been provided in design to comply with ASME Section XI. Some components such as the RHR pumps and the RHR heat exchangers were designed to an earlier Code which did not require inservice inspection. Therefore access limitations do exist. These components will be examined to the Reference Code to the extent practical. Limitations to examination are identified in the requests for relief found in Section 4.6.

The 1980W80 Code requirements for the Emergency Core Cooling System (ECCS) are under development by the ASME Code Committee, NRC and industry representatives including the Supply System. The Supply System will instead comply with ASME Section XI 1983 Edition Winter 1983 Addenda for all Code Category C-F welds as allowed by Letter A. Schwencer to G.C. Sorensen "WNP-2, Inservice Inspection Program", dated May 11, 1984.

3.3.3 AUGMENTED INSERVICE INSPECTION

The Supply System will implement mandatory and nonmandatory augmented examinations during the inspection interval. The mandatory augmented examinations are committed to by the Supply System in the FSAR or in response to NRC questions. Nonmandatory augmented examinations are examinations that the Supply System has committed to internally to monitor wall thickness of certain welds, piping and valve bodies identified prior to operation. For details of these programs and the affected components refer to Sections 5.3 and 5.4.

3.3.4 VISUAL EXAMINATIONS

The Supply System will perform visual examinations as required by the Reference Code, the FSAR and the Plant Technical Specifications. The examinations are described under two programs. One program, found in Section 6.0, contains the visual examinations of the component supports and snubber testing. The other program, found in Section 8.0, contains the remaining items requiring visual examination.

3.3.5 ADDITIONAL EXAMINATIONS

When ISI examinations reveal indications that exceed the allowable indications standards of IWB-3000 or IWC-3000 additional examinations of similar components or areas will be performed. These additional examinations will be chosen from the same category and contain approximately the same number of components as the first group.

If the second group reveals indications that exceed the allowable indication standards of IWB-3000 or IWC-3000, the remaining similar components in that examination category will be examined.

3.4 PROGRAM SUMMARY

Following is a listing of the Program Plan Sections with brief summaries of the purpose and content of certain sections. This summary is intended to orient the reader with the organization of the Program Plan. Details regarding the use of a given section are found in the introduction to that section.

- 1.0 TABLE OF CONTENTS
- 2.0 RECORD OF PROGRAM PLAN REVISIONS

 Identifies latest revision of each page of the Program Plan.
- 3.0 PROGRAM DESCRIPTION

 Contains an overview of the Program Plan.

4.0 CODE COMPLIANCE

Identifies applicable Code commitments, Code cases, Code exemptions and Code applicability. Contains requests for relief.

5.0 FSAR/NRC COMMITMENTS/AUGMENTED EXAMINATIONS

Identifies FSAR commitments and applicable augmented inspection requirements.

6.0 COMPONENT SUPPORT PROGRAM

Contains the component support and snubber testing program.

7.0 ISI BOUNDARY DIAGRAMS

Illustrates on system P&ID type drawings, the boundaries of inservice inspection, and the types of examinations performed on each portion of each system.

8.0 VISUAL EXAMINATION PROGRAM AND PRESSURE TESTS

Describes the visual examination program. Describes the pressure tests required by ASME Section XI.

9.0 UT CALIBRATION STANDARDS

Tabulates the various ultrasonic calibration standards, their material, their applicability, and their identification numbers. Also included are design drawings for each standard.

10.0 PROCEDURES

Describes how the procedures for ISI will be handled. A list of procedures used will be included in the ISI Summary Reports.

11.0 MANAGEMENT PLAN

Describes the responsibilities and interfaces between all participants in Inservice Inspection Program activities.

12.0 ASME SECTION XI REPAIRS/REPLACEMENTS

Describes how repairs/replacements to ASME Section III components will be performed.

13.0 ISI REPORT SUBMITTALS

Identifies the format and content of the Inservice Inspection Summary Report and the anticipated filing schedule for the report.

14.0 WELD AND COMPONENT IDENTIFICATION DIAGRAMS/
EXAMINATION SCHEDULE

Illustrates on piping isometric-type diagrams, each pipe spool and associated welds and components which require examination per the ISI Boundary Diagrams in Section 7.0. Each weld and component requiring surface, visual (VT-1, VT-3, VT-4) or volumetric examination is assigned a unique ISI identification number which is used exclusively in referring to that weld on all examination diagrams, tables, examination records, and reports. The first part of this section contains the table listing each examination area. The last part of this section contains the Weld and Component Identification Diagrams.

3.5 SCHEDULE

Inspection Program B, as defined in ASME Section XI paragraph IWA-2420, will be used. This program contains 10 year inspection intervals. These intervals represent calendar years after the reactor has been placed in commercial service. The interval may be extended by up to one year to permit the examinations to coincide with plant outages.

The inspection interval is divided into three inspection periods. A certain minimum/maximum percentage, defined by Section XI, of the examinations are required to be completed each inspection period.

The outages in which ISI will be performed will be determined by the Plant Manager. They will usually correspond to major outages for maintenance or refueling. Major ISI activities will be incorporated into the plant outage schedule. Table 3.1 defines the inspection periods for the first inspection interval.

3.6 DEFINITION OF TERMS AND ABBREVIATIONS

The following terms and abbreviations are defined below as they are used in this document.

Access: The ability to perform nondestructive examinations (NDE) on a weld or component in accordance with applicable Codes, Standards, and Regulatory Requirements. Access may include: ability to physically reach the point of examination; proper weld contouring and surface finish; proper weld geometry; adequate clearances from a weld to adjacent structures, fittings, restraints; removability of insulation; adequate radiation protection; and lighting.

TABLE 3.1

1st INSPECTION INTERVAL 12/13/84 to 12/13/94

Inspection Period	Refueling ¹ Outage	From	To
1	RF86A (R1)	<u>12/13/84</u>	09/15/88
	RF87A (R2)	03/31/86	06/10/86
	RF88A (R3)	04/13/87	06/25/87
		05/02/88	06/27/88
2	RF89A (R4)	<u>09/16/88</u>	<u>09/30/91</u>
	RF90A (R5)	04/28/89	06/30/89
	RF91A (R6)	04/21/90	08/07/90
		04/15/91	09/30/91
3	RF92A (R7)	<u>10/01/91</u>	<u>12/13/94</u>
	RF93A (R8)	04/15/92	07/18/92
	RF94A (R9)	04/15/93	06/15/93
		04/15/94	06/15/94
(1) Assuming one refueling or maintenance outage each year. Actual timing of the spring outages for RF93A and RF94A may vary slightly due to BPA's hydroelectric capacity and WNP-2's maintenance schedule. Corresponding sequential outage designations, more commonly used at WNP-2, are shown in parenthesis.			

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Alternative Examination: Examination performed in lieu of the minimum Code requirements which is the closest practical approach to Code compliance.

Analysis: Process of determining the pertinent characteristics of an indication--such as its origin (crack, porosity, laminations, etc.), location, orientation, and may include sizing.

BOP: Balance of Plant

Calibration Block (Standard): An NDE calibration device used to simulate defects in a weld or component, the purpose of which is to calibrate ultrasonic or other NDE equipment.

Code Acceptance Standards: Acceptance standards for flaw indications as defined in ASME Section XI, IWB-3000 and IWC-3000.

Components: Items in a power plant such as vessels, piping systems, pumps and valves.

Component Support: A metal device that is designed to transmit loads from the component to the load carrying building or foundation structures.

Defect: A flaw in a weld or component material which exceeds Code acceptance standards. Only by direct observation of the flaw, usually following excavation of covering material, is the presence of a defect confirmed. Prior to such confirmation, the term "Reportable Indication" shall be used.

Evaluation: As used pertains to indications, the process of applying Code acceptance criteria to determine the acceptability or rejectability of an indication.

Examination: A performance of a nondestructive examination (NDE) method such as visual observation, radiography, ultrasonic, liquid penetrant, and magnetic particle.

Examination Equipment: Instruments, mechanical devices, data acquisition systems, tracks, film, sources, etc., used to accomplish a nondestructive examination.

Examiner: Person performing a nondestructive examination.

Flaw: An indication which is determined to be other than geometric; which may be a crack, slag, inclusion or segregates; aligned or clustered rounded indications; lack of weld penetration; lack of weld fusion, lamination, or combinations thereof.

Inaccessible: An examination area which is within the scope of this document which cannot be fully examined in compliance with the applicable Codes, Standards, and Regulations due to insufficient access.

Indication: Evidence or signal obtained by application of an examination technique that may reveal the presence of a flaw or surface degradation or may be caused by geometry or material properties.

Inspection: Denotes verifying the performance of examinations and tests by an Inspector representing a state or municipality of the United States, Authorized Inspection Agency, or other enforcement authorities having jurisdiction over the nuclear power components at the WNP-2 site.

Inspection Interval: The 10-years following initial start of power unit commercial operation, and each subsequent 10 years.

Inspection Period: The inspection interval is divided into three inspection periods, 1st period, 0-3 years, 2nd period, 4-7 years, and 3rd period, 8-10 years of plant service.

Inspector: "Authorized Nuclear Inservice Inspector" as defined in ASME Section XI, subarticle IWA-2130.

Inservice Inspection (ISI): Inspection and examination activities performed in accordance with ASME Section XI, which include preservice inspection (PSI) activities.

NSSS: Nuclear Steam Supply System

Owner Recording Criteria: Requirements the Owner places on ISI examinations in addition to the requirements of the Reference Code.

Performing Organization: That organization within the Supply System which is responsible for completing ISI examinations and tests.

Preservice Inspection (PSI): Inspection activities performed before the plant enters service.

RPV: Reactor Pressure Vessel

Recordable Indication: An indication which equals or exceeds Owner recording criteria. The Owner recording criteria may be more restrictive than the Code requirements, but will not be less restrictive than the Code requirements.

Reportable Indication: Any indication which equals or exceeds Code reporting criteria.

Reference Code: The ASME Section XI Edition and Addenda with which the ISI Program Plan complies.

Safety-Related: Systems or parts of systems defined in FSAR Table 3.2-1 as Quality Control Class I.

Sizing of Indications: Application of the sizing criteria given in ASME Section XI, IWB-3000 and IWC-3000, to determine the size of a flaw indication--part of the evaluation process.

Snubber: A device which provides restraint to a component or system during a sudden application of forces but allows essentially free motion during thermal movement.

Surface Examination: Liquid penetrant or magnetic particle examinations performed in accordance with the applicable Codes, Standards, and Regulations.

System Leakage Test: A system pressure test performed at nominal operating pressure following opening and reclosing of a pressure boundary. A VT-2 visual examination is performed in conjunction with this test.

System Functional Test: A system pressure test performed while system is under normal operating pressure to verify operability in systems (or components) not required to operate during normal plant operation. A VT-2 visual examination is performed in conjunction with this test.

System Inservice Test: A system pressure test conducted to perform visual examination VT-2 while system is in service under operating pressure.

System Hydrostatic Test: A system pressure test conducted during a system outage at a pressure above nominal operating pressure for which overpressure protection is provided. A VT-2 visual examination is performed in conjunction with this test.

System Pneumatic Test: A system pressure test conducted in lieu of a hydrostatic pressure test for components within the scope of IWC and IWD. A VT-2 visual examination is performed in conjunction with this test.

Visual Examinations: Examinations using visual techniques, either using the eye through direct observation or by the use of remote equipment such as mirrors, borescopes, television, etc.

Volumetric Examinations: Radiographic, eddy current, or ultrasonic examinations performed in accordance with applicable Codes, Standards, and Regulations.

4.0 CODE COMPLIANCE

4.1 CODE COMMITMENTS

Inservice inspection of nuclear power plant components is required by federal law as stated in the Code of Federal Regulations, Title 10, Part 50 (10CFR50), Paragraph 50.55a. According to that document the applicable edition of ASME Section XI for the first inservice inspection interval at WNP-2 is the 1980 Edition, Winter 1980 Addenda [(see 10CFR50.55a (g)(4)(i))]. The Reference Code is 1980W80 with the following sections upgraded to later Editions and Addenda:

IWA-2300(a)(1) upgraded to 1983W83
C-F upgraded to 1983W83
IWF-3400 upgraded to 1980W81
IWB-3600 1986 no addendum (GL 88-01)

Table 4.1 summarizes the Code applicability for the various plant components and Supply System augmented requirements in tabular form for ease of reference.

4.2 CODE CASES

The Supply System has reviewed the Code cases in effect for applicability to the WNP-2 Inservice Inspection Program. The following Code cases, accepted by the NRC and the State Boiler Inspector will be used by the WNP-2 ISI Program:

N-236	Containment Repair
N-308	NIS-2 Form
N-341	Certification of Level III NDE Examiner
N-343	Alternate Integral Attachment Exam
N-416	Hydrostatic Test of Class 2 Repairs
N-460	Alternate Class 1 and 2 Examination Coverage
N-498	Alternate Rules for 10-year Hydrostatic Pressure Testing for Class 1 and 2 systems

4.3 CODE EXEMPTIONS

The Supply System will, on a continuing basis, make every effort to assure compliance with the referenced Code and regulatory commitments applicable to inservice examinations of the WNP-2 power plant. Where the Code or regulatory requirements are not practical, relief will be requested.

The following exemptions are being applied in this ISI Program Plan. How they are applied is summarized below and where they are applied is summarized in the tables following each boundary diagram. (see Section 7.0)

4.3.1 ASME SECTION III, CLASS I SYSTEMS

IWB-1220 - The exemptions allowed by this paragraph have been applied to each Class 1 system requiring volumetric and/or surface examinations.

- a) IWB-1220(a) The Supply System will exempt from volumetric and surface examination components that are of such size and shape so that upon postulated rupture the resultant coolant flow from the reactor coolant system under normal plant operating conditions is within the capacity of the makeup systems which are operable from on-site emergency power. This exemption is applied to all Class 1 ISI boundaries as follows:
 - 1) Class 1 piping penetrating the RPV below the normal reactor water level and 1.5 inch NPS or less, and
 - 2) Class 1 piping penetrating the RPV above the normal reactor water level and 3.0 inch NPS or less.

The above exemption is supported by Calculation Number ME-02-78-01-1.

4.3.2 ASME SECTION III, CLASS 2 AND CLASS 3 SYSTEMS

The exemptions allowed by paragraphs IWC-1220 and IWC-1230 have been applied to each Class 2 system requiring a volumetric and/or surface examination. The exemptions allowed by paragraph IWD-1220 have been applied to each Class 3 system requiring examination under Table IWD 2500-1. The portions of the system where these exemptions have been applied are detailed in the Boundary Diagram tables found after each Boundary Diagram in Section 7.0.

4.4 CODE APPLICABILITY

Table 4.1 summarizes for each ASME Section XI item whether or not the Supply System ISI Program Plan complies with the Reference Code. Also included are Supply System augmented requirements.

For items that do not comply with the Reference Code, the request for relief number is identified. Requests for relief are found in Section 4.6.

4.5 EXAMINERS CERTIFICATION

The Supply System will use the provisions of ASME Section XI 1983 edition Winter 1983 addenda subarticle IWA-2300 (a)(1) for certification of Level III examiners. This subarticle provides for recertification of Level III examiners by examination every five years instead of every three years per the 1980 edition Winter 1980 addenda of Section XI. The NRC has approved the Supply System's use of this subarticle by letter T. M. Novak to G. C. Sorensen, "Use of ASME Code Case N-341 for WNP-1, WNP-2 and WNP-3", Docket Nos. 50-460, 50-397 and 50-508, dated December 5, 1984.

TABLE 4.1
ITEMIZED CODE APPLICABILITY

Page 1 of 26
Amendment No. 1
March 1993

EXAMINATION CATEGORY B-A PRESSURE RETAINING WELDS IN REACTOR VESSEL					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B1.10	Shell Welds				
B1.11	Circumferential	1968, S'70	No	ISI-2-001	1, 2, 8
B1.12	Longitudinal	1968, S'70	No	ISI-2-001	1, 2, 8
B1.20	Head Welds				
B1.21	Circumferential	1968, S'70	No	ISI-2-001	2
B1.22	Meridional	1968, S'70	No	ISI-2-001	2
B1.30	Shell-to-Flange Weld	1968, S'70	Yes		2
B1.40	Head-to-Flange Weld	1968, S'70	Yes		2
B1.50	Repair Welds	1968, S'70	Yes		2
B1.51	Beltline Region				

TABLE 4.1
ITEMIZED CODE APPLICABILITY

Page 2 of 26
Amendment No. 1
March 1993

EXAMINATION CATEGORY B-B PRESSURE RETAINING WELDS IN VESSELS OTHER THAN RPV					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
A11	There are no Class 1 pressure vessels at WNP-2 other than the reactor vessel.		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

Page 3 of 26
Amendment No. 1
March 1993

EXAMINATION CATEGORY B-D PENETRATION WELDS OF NOZZLES IN VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B3.90	Reactor Vessel Nozzle-to-Vessel Welds	1968, S'70	No		2, 9
B3.100	Nozzle Inside Radius Sections	1968, S'70	Yes		3
All Other Item No.	Pertain to PWRs WNP-2 is a BWR		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

Page 4 of 26
Amendment No. 1
March 1993

EXAMINATION CATEGORY B-E PRESSURE RETAINING PARTIAL PENETRATION WELDS IN VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B4.10	Partial Penetration Welds		Yes		2
B4.11	Vessel Nozzles		Yes		2, 3
B4.12	Control Rod Drive Nozzles		Yes		
B4.13	Instrumentation Nozzles		Yes		
B4.20	Pressurizer Heater Penetration Welds		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY B-F PRESSURE RETAINING DISSIMILAR METAL WELDS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B5.10	Reactor Vessel Nominal Pipe Size ≥ 4 in. Nozzle-to-Safe End Butt Welds	1968, S'70	Yes		
B5.11	Nominal Pipe Size < 4 in. Nozzle-to-Safe End Butt Welds	1968, S'70	Yes		
B5.12	Nozzle-to-Safe End Socket Welds	1968, S'70	N/A		
B5.50	Piping Nominal Pipe Size ≥ 4 in. Dissimilar Metal Butt Welds	1971, S'73	Yes		
B5.51	Nominal Pipe Size < 4 in. Dissimilar Metal Butt Welds	1971, S'73	Yes		
B5.52	Dissimilar Metal Socket Welds	1971, S'73	N/A		
All Other Item No.	WNP-2 is a BWR. These items pertain to PWR		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-G-1 PRESSURE RETAINING BOLTING GREATER THAN 2 IN. DIAMETER					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B6.10	Reactor Vessel Closure Head Nuts	1968, S'70	No	ISI-2-004	
B6.20	Closure Studs, in place	1968, S'70	Yes		
B6.30	Closure Studs, when removed	1968, S'70	Yes		
B6.40	Threads in Flange	1968, S'70	Yes		
B6.50	Closure Washers, Bushings	1968, S'70	Yes		
B6.150 B6.160 B6.170	Piping No piping bolting greater than 2 in. diameter		N/A		
B6.180	Pumps Bolts and Studs	1971	Yes		
B6.190	Flange Surfaces when connection disassembled	1971	Yes		
B6.200	Nuts, Bushings and Washers	1971	Yes		
B6.210	Valves Bolts and Studs	Various	Yes		
B6.220	Flange surfaces when connection disassembled	Various	Yes		
B6.230	Nuts, Bushing and Washers	Various	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-G-2 PRESSURE RETAINING BOLTING 2 IN. AND LESS IN DIAMETER					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B7.10	Reactor Vessel Bolts, Studs, and Nuts	1968, S'70	Yes		
B7.50	Piping Bolts, Studs, and Nuts	1971, S'73	Yes		
B7.60	Pumps Bolts, Studs, and Nuts	1971	Yes		
B7.70	Valves Bolts, Studs, and Nuts	Various	Yes		
B7.80	CRD Housings Bolts, Studs, and Nuts when disassembled	1968, S'70	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-H INTEGRAL ATTACHMENTS FOR VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B8.10	Reactor Vessel Integrally Welded Attachments	1968, S'70	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-J PRESSURE RETAINING WELDS IN PIPING					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B9.10 B9.11 B9.12	Nominal Pipe Size ≥ 4 in. Circumferential Welds Longitudinal Welds	1971, S'73 1971, S'73	Yes Yes	ISI-2-005	5
B9.20 B9.21 B9.22	Nominal Pipe Size < 4 in. Circumferential Welds Longitudinal Welds	1971, S'73 1971, S'73	Yes Yes	ISI-2-005	5
B9.30 B9.31 B9.32	Branch Pipe Connection Welds Nominal Pipe Size ≥ 4 in. Nominal Pipe Size < 4 in.	1971, S'73 1971, S'73	Yes Yes	ISI-2-005	5
B9.40	Socket Welds	1971, S'73	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-K-1 INTEGRAL ATTACHMENTS FOR PIPING, PUMPS AND VALVES					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B10.10	Piping Integrally Welded Attachments	1971, S'73	Yes		
B10.20	Pumps Integrally Welded Attachments	1971	Yes		
B10.30	Valves Integrally Welded Attachments. WNP-2 does not have any valves with integrally welded attachments.		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORIES B-L-1, B-M-1 PRESSURE RETAINING WELDS IN PUMP CASINGS AND VALVE BODIES EXAMINATION CATEGORIES B-L-2, B-M-2 PUMP CASINGS AND VALVE BODIES					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B12.10	Pumps Pump Casing Welds - WNP-2 does not have Class 1 pumps with casing welds.		N/A		
B12.20	Pump Casing	1971	Yes		
B12.30	Valves Valves, nominal pipe size <4 in. valve body welds - WNP-2 does not have Class 1 valves with body welds.		N/A		
B12.31	Valves, nominal pipe size <4 in. valve body welds - WNP-2 does not have Class 1 valves with body welds.		N/A		
B12.40	Valve body exceeding 4 in. nominal pipe size.	1971, S'73	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

Page 12 of 26
Amendment No. 1
March 1993

EXAMINATION CATEGORY B-N-1, B-N-2 - INTERIOR OF REACTOR VESSEL, INTEGRALLY WELDED CORE SUPPORT STRUCTURES AND INTERIOR ATTACHMENTS TO REACTOR VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B13.10	Reactor Vessel Vessel Interior	1968, S'70	Yes		
B13.20	Reactor Vessel (BWR) Interior Attachments	1968, S'70	Yes		
B13.21	Core Support Structure	1968, S'70	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY B-O PRESSURE RETAINING WELDS IN CONTROL ROD HOUSINGS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B14.10	Reactor Vessel Welds in CRD Housing	1968, S'70	Yes		Exempt by IWB- 1220(a) see pg 4-2

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY B-P PRESSURE RETAINING BOUNDARY					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
B15.10	Reactor Vessel Pressure Retaining Boundary (System Leakage Test)	1968, S'70	Yes		7
B15.11	Pressure Retaining Boundary (System Hydro Test)	1968, S'70	Yes		7
B15.50	Piping Pressure Retaining Boundary (System Leakage Test)	1971, S'73	Yes		7
B15.51	Pressure Retaining Boundary (System Hydro Test)	1971, S'73	Yes		7
B15.60	Pumps Pressure Retaining Boundary (System Leakage Test)	1971	Yes		7
B15.61	Pressure Retaining Boundary (System Hydro Test)	1971	Yes		7
B15.70	Valves Pressure Retaining Boundary (System Leakage Test)	Various	Yes		7
B15.71	Pressure Retaining Boundary (System Hydro Test)	Various	Yes		7

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY C-A PRESSURE RETAINING WELDS IN PRESSURE VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C1.10	Shell Circumferential Welds	1968, S'70	Yes		
C1.20	Head Circumferential Welds	1968, S'70	Yes		
C1.30	Tubesheet-to-Shell Weld	1968, S'70	Yes		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY C-B PRESSURE RETAINING NOZZLE WELDS IN VESSELS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C2.10	Nozzles in Vessels $\leq \frac{1}{2}$ in. Nominal Thickness	1968, S'70	Yes		
C2.20	Nozzles in Vessels $> \frac{1}{2}$ in. Nominal Thickness	1968, S'70	Yes		
C2.21	Nozzle-to-Shell (or Head) Weld	1968, S'70	Yes		
C2.22	Nozzle inside radius section	1968, S'70	NA		

**TABLE 4.1
ITEMIZED CODE APPLICABILITY**

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March 1993

EXAMINATION CATEGORY C-C INTEGRAL ATTACHMENTS FOR VESSELS, PIPING, PUMPS AND VALVES					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C3.10	Pressure Vessels Integrally Welded Attachments	1971, S'72	Yes		
C3.40	Piping Integrally Welded Attachments	1971, S'72	Yes		
C3.70	Pumps Integrally Welded Attachments WNP-2 does not have any Class 2 pumps with integrally welded attachments.		N/A		
C3.100	Valves Integrally Welded Attachments WNP-2 does not have any Class 2 valves with integrally welded attachments.		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY C-D PRESSURE RETAINING BOLTING GREATER THAN 2 IN. IN DIAMETER					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
All	WNP-2 does not have any Class 2 bolting greater than 2 in. diameter.		N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY C-F-1 PRESSURE RETAINING WELDS IN AUSTENITIC STAINLESS STEEL OR HIGH ALLOY PIPING					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C5.10	Piping welds $\geq 3/8$ in. Nominal wall thickness for piping NPS4				
C5.11	Circumferential Weld	NA	NA		
C5.12	Longitudinal Weld	NA	NA		
C5.20	Not applicable, applies to PWR				
C5.21					
C5.22					
C5.30	Socket welds Pipe branch connection of branch piping \geq NPS2* Circumferential weld Longitudinal weld				
C5.40		NA	NA		
		NA	NA		
	There are no Class 2 stainless steel or high alloy welds at WNP-2				
	* \geq NPS4 for BWR				

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY C-F-2 PRESSURE RETAINING WELDS IN CARBON AND LOW ALLOY STEEL PIPING					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C5.50	Piping welds $\geq 3/8$ in. Nominal wall thickness for piping $> \text{NPS}4$ Circumferential weld Longitudinal weld				
C5.51		1971, W'73	Yes		
C5.52		1971, W'73	Yes		
C5.60 C5.61 C5.62	Not applicable, applies to PWR				
C5.70	Socket welds	1971, W'73	Yes		
C5.80	Pipe branch connections of branch piping $\geq \text{NPS}2^*$	1971, W'73	Yes		
C5.81	Circumferential weld Longitudinal weld	1971, W'73	Yes		
C5.82		1971, W'73	NA		
	* $\geq \text{NPS}4$ for BWR				

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March 1993

[illegible]

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY C-H ALL PRESSURE RETAINING COMPONENTS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
C7.10	Pressure Vessels Pressure Retaining Components (System Leakage Test)	1971, S'73	Yes		7
C7.11	Pressure Retaining Components (System Hydro Test)	1971, S'73	Yes		7
C7.20	Piping Pressure Retaining Components (System Leakage Test)	1971, S'73	Yes		4, 7
C7.21	Pressure Retaining Components (System Hydro Test)	1971, S'73	Yes		4, 7
C7.30	Pumps Pressure Retaining Components (System Leakage Test)	1971, S'73	Yes		7
C7.31	Pressure Retaining Components (System Hydro Test)	1971, S'73	Yes		7
C7.40	Valves Pressure Retaining Components (System Leakage Test)	Various	Yes		4, 7
C7.41	Pressure Retaining Components (System Hydro Test)	Various	Yes		4, 7

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY D-A SYSTEM IN SUPPORT OF REACTOR SHUTDOWN FUNCTION					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
D1.10	Pressure Retaining Components	Various	Yes		7
D1.20	Integral Attachment - Component Supports and Restraints	1971, S'73	Yes		
D1.30	Integral Attachment Mechanical Snubbers	1971, S'73	Yes		
D1.40	Integral Attachment Spring type supports	1971, S'73	Yes		
D1.50	Integral Attachment Constant load type supports	1971, S'73	Yes		
D1.60	Integral Attachment Shock Absorbers	1971, S'73	N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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March 1993

EXAMINATION CATEGORY D-B, SYSTEMS IN SUPPORT OF EMERGENCY CORE COOLING, CONTAINMENT HEAT REMOVAL, ATMOSPHERE CLEANUP, AND RESIDUAL HEAT REMOVAL					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
D2.10	Pressure Retaining Components	Various	Yes		7
D2.20	Integral Attachment - Component Supports and Restraints	1971, S'73	Yes		
D2.30	Integral Attachment Mechanical Snubbers	1971, S'73	Yes		
D2.40	Integral Attachment Spring type supports	1971, S'73	Yes		
D2.50	Integral Attachment Constant load type supports	1971, S'73	Yes		
D2.60	Integral Attachment Shock Absorbers	1971, S'73	N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY D-C SYSTEMS IN SUPPORT OF RESIDUAL HEAT REMOVAL FROM SPENT FUEL STORAGE POOL					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
D3.10	Pressure Retaining Components	Various	Yes		7
D3.20	Integral Attachment - Component Supports and Restraints	1971, S'73	Yes		
D3.30	Integral Attachment Mechanical Snubbers	1971, S'73	Yes		
D3.40	Integral Attachment Spring type supports	1971, S'73	Yes		
D3.50	Integral Attachment Constant load type supports	1971, S'73	Yes		
D3.60	Integral Attachment Shock Absorbers	1971, S'73	N/A		

TABLE 4.1
ITEMIZED CODE APPLICABILITY

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Amendment No. 1
March 1993

EXAMINATION CATEGORY F-A, F-B, F-C COMPONENT SUPPORTS					
ITEM NO.	DESCRIPTION	SECTION III CODE	COMPLIES WITH SECTION XI	REQUEST FOR RELIEF NO.	NOTES
F-1	Mechanical Attachments, including bolting	1971, W'73	Yes	ISI-2-003	
F-2	Welded Attachments	1971, W'73	Yes		
F-3	Component Displacement Settings of guides and stops Misalignment of supports Assembly of support items	1971, W'73	Yes		
F-4	Spring Type Supports Constant load type supports Mechanical Snubbers	1971, W'73	Yes		
N/A	Snubber Visual Examination Testing	1971, W'73	Yes	ISI-2-007	Complying with WNP-2 Tech Spec 3/4.7.4 which has more stringent requirement than Section XI.

NOTES TO TABLE 4.1

1. The design of the RPV shield wall and external inservice inspection system was completed before the code required 100% of the welds to be examined. Approximately 35% of vessel circumferential welds and 90% of vessel longitudinal welds are accessible.
2. The examinations will be augmented by complying with Reg. Guide 1.150 Rev. 1 Appendix A "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations", dated June 1981, Revised February 1983.
3. An augmented examination of the Feedwater nozzle inner radius will be performed as described in Section 5.3.2.
4. The Main Steam Class 2 system does not perform a safety-related function and is capable of automatic isolation; therefore, it does not require pressure testing. See Table IWC-2500-1 Category C-H, note 7 of the reference code.
5. Austenitic stainless steel lines, defined in the Supply System's response to GL 88-01 (see Section 3.1 Item 6), will be subject to more frequent examinations. All crack-like indications will be recorded.
6. The RHR pumps were designed prior to the requirement to perform Class 2 component examinations for inservice inspection. The pump casings are embedded in a pump pit which allows no access from the outside surface. The upper flange is at floor level. The welds are accessible from the inside, if the pump impeller is removed. Removal of the pump impeller is considered impractical and not in the interest of safety, both from a potential pump damage or reassembly error and from a radiation exposure standpoint. Also per 10CFR50.55a (g) (4) access is not required to be upgraded to the Inservice Inspection Code. Diagram RHR-213 in Section 14.0 illustrates the pump installation details.

The welds in the request for relief are inaccessible to all examination methods. If the internals are removed for maintenance the Supply System will evaluate whether inservice examination is practical.
7. The pressure retaining boundary will not extend past the transition from instrument piping to instrument tubing. Instrument tubing will not be subject to a visual examination during system pressure tests.
8. 10CFR50.55a, dated August 6, 1992, revokes all relief requests for RPV shell weld examination.
9. Item B3.90, entire exam volume not covered.

4.6 REQUESTS FOR RELIEF FROM CODE REQUIREMENTS

This section contains the Supply System's requests for relief from the referenced Code requirements. The Supply System has determined that the items in this section are not practical to examine to the requirements of the Reference Code. Each item is supported by the basis for not performing the examination per the Reference Code.

All requests for relief in this section apply during the entire first inspection interval. The alternate examinations will be performed during the first inspection interval.

The following requests for relief are included in this section:

<u>Request #</u>	<u>Description</u>
ISI-2-001	RPV welds in Code Category B-A that could not be fully examined. NRC approval: March 27, 1987. Modified by 10CFR50.55a, dated August 6, 1992.
ISI-2-002	Deleted Denied: March 27, 1987
ISI-2-003	Component Supports (SW and RCIC supports). NRC approval: March 27, 1987
ISI-2-004	RPV nuts. NRC approval: March 27, 1987
ISI-2-005	Use of Appendix III for austenitic welds. NRC approval: March 27, 1987
ISI-2-006	Deleted Withdrawn November 4, 1986
ISI-2-007	Snubber examination and testing. NRC approval: March 27, 1987 Revision approved May 27, 1992
ISI-2-008	IWA-5244, Buried Piping. NRC approval: May 16, 1989
ISI-2-009	Use of Code Case N-498 on hydro testing. NRC approval: March 3, 1992

REQUEST FOR RELIEF NO. ISI-2-001

Component or System	ASME Class 1, Section XI Category B-A pressure retaining welds in reactor pressure vessel. List attached.				
Code	All of the subject welds were designed and fabricated to ASME Section III Class 1 1968 Edition, Summer 1970 Addenda. The inservice inspection is to be performed to the 1980 Edition Winter 1980 Addenda of ASME Section XI.				
Number of Welds	<table><thead><tr><th><u>Category</u></th><th><u>No.</u></th></tr></thead><tbody><tr><td>B-A</td><td>16</td></tr></tbody></table>	<u>Category</u>	<u>No.</u>	B-A	16
<u>Category</u>	<u>No.</u>				
B-A	16				
Section XI Requirements	Section XI requires examination of 100% of the pressure retaining welds in Category B-A be performed completely. The following examinations are required: B-A All pressure retaining welds in reactor vessel. Volumetric				
Basis for Requesting Relief	Relief is required from ASME Section XI examination requirements on the basis of partial inaccessibility of the weld due to plant design. The design and access provisions complied with earlier Codes which did not require 100% examination. Per 10CFR50.55a (g) (4), access is not required to be upgraded to the Inservice Inspection Code.				

REQUEST FOR RELIEF NO. ISI-2-001

Alternative
Examinations

The accessible portion of each weld will be examined per Section XI requirements.

Impact on Plant
Quality and
Safety

There will be no adverse impact on plant quality and safety by doing only a partial Code examination of these welds.

1. The Class 1 RPV welds have passed radiographic, magnetic particle and ultrasonic examinations in accordance with Section III.
2. All of the identified welds will be subject to a system pressure test in accordance with Section XI Class 1 requirements.
3. Leak detection systems identify significant leakage in the areas of the subject welds. Appropriate operator action would occur due to leak detection system alarms.
4. Other similar welds in the vessel will receive full Code examinations. The integrity of the pressure boundary can thus be verified by sampling.

REQUEST FOR RELIEF NO. ISI-2-001

Amendment No. 1
March 1993Category B-A

ISO No.	Weld Number	Description	% of Weld Examinable	Remarks
RPV-101	AA	BTM HD-SC #1 WD	53%	See Note 1, 4
RPV-101	AB	#1-#2 SC CRC WD	52%	See Note 1, 4
RPV-101	AC	#2-#3 SC CRC WD	39%	See Note 1, 4
RPV-101	AD	#3-#4 SC CRC WD	25%	Seven two-foot long stabilizer lugs obstruct weld at 45° intervals. See Note 1, 4
RPV-101	AE	Vessel to flange	95%	Thermocouples at 135°, 270°, and 350°. See Note 4
RPV-101	BJ	#3 SC VRT WD at 50°	90%	Stabilizer lug at weld AD intersection. See Note 4
RPV-101	BK	#3 SC VRT WD at 170°	90%	Stabilizer lug at weld AD intersection. See Note 4
RPV-102	DA	BTM HD MRD at 272°	67%	Thermocouples at weld AA intersection. See Note 2
RPV-102	DB	BTM HD MRD at 332°	67%	See Note 2
RPV-102	DC	BTM HD MRD at 32°	67%	See Note 2
RPV-102	DD	BTM HD MRD at 92°	67%	See Note 2
RPV-102	DE	BTM HD MRD at 152°	67%	See Note 2
RPV-102	DF	BTM HD MRD at 212°	67%	See Note 2
RPV-102	DG	BOT HD DOL at 270°	17%	See Note 3
RPV-102	DR	BOT HD DOL at 90°	17%	See Note 3
RPV-102	AJ	BOT HD DOL WD	93%	See Note 1

REQUEST FOR RELIEF NO. ISI-2-001

Amendment No. 1
March 1993

Category B-A Continued

Notes:

1. Design of RPV shield wall and external inservice inspection system was completed prior to promulgation of amendments to 10CFR50.55a. Their design limits access to less than 100% of this weld.
2. Only 21" starting from the intersection of weld AA and 14" starting from the intersection of weld AJ can be examined due to the vessel skirt. (Approximately one foot is not being examined on each weld.)
3. Only 12" to 23" on each end of the weld, starting from the intersection of weld AJ, can be examined due to CRD penetrations and housings.
4. 10CFR50.55a, dated August 6, 1992, revokes previously granted relief requests for RPV shell welds. This relief request will be revised and resubmitted to the Commission before the end of the first Inspection Interval (December 13, 1994).

REQUEST FOR RELIEF ISI-2-002

This relief request was denied for use by NRC:

Reference: NRC letter dated March 27, 1987

REQUEST FOR RELIEF ISI-2-002

Deleted

Denied by NRC: March 27, 1987

REQUEST FOR RELIEF NO. ISI-2-003

Component or
System Component Supports

Code All of the component supports were designed and fabricated to ASME Section III, NF. The inservice inspection is to be performed to ASME Section XI 1980 Edition, Winter 1990 Addenda.

Number of Component Supports	<u>Category</u>	<u>Item No.</u>	<u>No. of Items</u>
	F-B	F-2	16

Supports are listed at the end of this request for relief.

Section XI
Requirements Section XI requires a visual examination (VT-3) of component supports.

REQUEST FOR RELIEF NO. ISI-2-003

Basis for
Requesting
Relief

The component supports are inaccessible to examination. The component supports are in or close to wall penetrations which are foam-filled for fire protection. The support is covered by the foam. A loss of function of the support is expected to be identified at adjacent supports which are examined. It should also be noted that the pipe is completely surrounded by concrete with the metal support embedded in the concrete; the annulus between the pipe and concrete is foam filled. If any failure did occur, the concrete would perform a backup support function.

Alternate
Examinations

The component supports are inaccessible to all examination techniques.

Impact of Plant
Quality and
Safety

There will be no adverse impact on plant quality and safety. Failure of these component supports will not prevent the reactor from being shut down.

REQUEST FOR RELIEF NO. ISI-2-003

List of Inaccessible Component Supports

Identification Number	Drawing	Description
SW-69	SW-301	Rigid
SW-67	SW-301	Rigid
SW-72	SW-301	Rigid
SW-317	SW-301	Rigid
SW-152	SW-303	Rigid
SW-431	SW-303	Rigid
SW-137	SW-303	Rigid
SW-438	SW-303	Rigid
SW-203	SW-303	Rigid
SW-77	SW-301	Rigid
SW-34	SW-305	Rigid
SW-142	SW-303	Rigid
SW-60	SW-301	Rigid
SW-916N	SW-307	Rigid
SW-75	SW-301	Rigid
RCIC-18	RCIC-205	Rigid

REQUEST FOR RELIEF NO. ISI-2-004

Component or System ASME Class 1, Section XI Category B-G-1, Reactor Pressure Vessel Nuts.

Code All of the subject nuts were designed and fabricated to ASME Section III, Class 1 1968 Edition, Summer 1970 Addenda. The inservice inspection is to be performed to the 1980 Edition Winter 1980 Addenda of ASME Section XI.

Number of Nuts

Category

Number

B-G-1

76 (plus spares if used)

Section XI
Requirements

Section XI requires a surface examination of 100% of each nut.

REQUEST FOR RELIEF NO. ISI-2-004

Basis for Requesting
Relief

A meaningful surface exam of the thread area cannot be achieved with the protective phosphate coating. A volumetric (ultrasonic) examination of the nut will be performed to augment the surface exam. The ultrasonic examination will consist of a L-wave from the end and shear wave in four directions (two parallel to axis and two perpendicular to axis). A spare RPV nut will be used for the calibration standard.

Alternative
Examinations

RPV closure nuts will be examined using a surface method except for the thread area. The thread area will be examined by a volumetric method.

Impact on Plant
Quality and Safety

None; a more thorough examination is being done.

REQUEST FOR RELIEF NO. ISI-2-005

Component or System	Austenitic and dissimilar piping welds requiring volumetric examination.
Code	The subject welds are required to be examined to the 1980 Edition, through Winter 1980 Addenda of ASME Section XI.
Section XI Requirements	IWA-2232(c) requires the ultrasonic examination of austenitic and dissimilar piping welds performed to Article 5 of Section V.
Alternate Examinations	The ultrasonic examination of austenitic and dissimilar metal welds will be performed to Appendix III and Supplement 7 to Appendix III of the Referenced Code.
Basis for Requesting Relief	The WNP-2 PSI examination of these welds were performed to Appendix III with Supplement 7 of Section XI. The requirements of Appendix III with Supplement 7 and Article 5 are similar except that Appendix III is more stringent. Since the WNP-2 PSI was performed to Appendix III with Supplement 7, a better data comparison between ISI and PSI data will be obtained.
Impact on Plant Quality and Safety	The examination techniques in Appendix III with Supplement 7 will give a better examination since the requirements are more stringent.

REQUEST FOR RELIEF NO. ISI-2-006

This relief request was withdrawn by
Supply System: November 4, 1986

REQUEST FOR RELIEF NO. ISI-2-006

Deleted

REQUEST FOR RELIEF NO. ISI-2-007

Component or System All ASME Class 1, 2, and 3 snubbers.

Code Section XI 1980 Edition with Addenda through Winter 1980.

Number of Snubbers These snubbers are identified on Table 6.2 of the ISI Program Plan. Total number of snubbers is currently 620¹. This number has been decreasing with the implementation of the WNP-2 snubber optimization program.

Section XI Requirements The referenced Code requires all nonexempt snubbers to be visually examined and functionally tested in accordance with the requirements contained in Subsection IWF.

Basis for Requesting Relief The WNP-2 Technical Specification 3/4.7.4 includes requirements for testing of safety-related snubbers. The examination and testing requirements are similar and more restrictive than the IWF requirements.

The testing requirements of Section XI are also less stringent in that Section XI requires 10% of the snubbers to be examined each 40 months whereas the Technical Specification requires testing of snubbers using either the 10% plan or 37 sample plan each 18 months or refueling outage.

¹ The number of snubbers at the end of refueling outage R7 (July, 1992) was 494.

REQUEST FOR RELIEF NO. ISI-2-007

Alternate
Examinations

Testing per WNP-2 Technical Specification 3/4.7.4.

Impact on Plant
Quality and Safety

None. It is the Supply System's position that testing of snubbers in accordance with the WNP-2 Technical Specifications provides an equal or greater level of plant quality and safety.

REQUEST FOR RELIEF NO. ISI-2-007

Deleted

REQUEST FOR RELIEF NO. ISI-2-007

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REQUEST FOR RELIEF NO. ISI-2-007

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REQUEST FOR RELIEF NO. ISI-2-008

Component or System ASME Section III Code Class 3 service water (SW) buried piping.

Code ASME Section XI 1980 Edition with Addenda through Winter 1980.

Systems The buried portions of the following systems are affected by this request for relief:

SW Loop A Supply 20" SW (1)-2
SW Loop B Supply 20" SW (2)-2

Section XI Requirements ASME Section XI (TWA-5244) requires a test to determine the change in flow between ends of nonisolatable, redundant buried piping.

Basis for Requesting Relief The design of the piping in the service water pump houses prevents direct flow monitoring. Figures 1 and 2 (SW-301-1 and SW-305-1) attached to this request show the dimensions between the pump, valves and elbow. The close proximity of these items does not allow sufficient stable flow required for meaningful flow measurement. The direct measurement of flow at this end of the buried piping is impossible.

Alternate Examination In place of the Code required flow test, WNP-2 will verify that the flow during operation is adequate to perform the systems required function. This will be accomplished by verifying the flow and pump discharge pressure is within the acceptable range per the last pump and valve surveillance. In addition the area between the pump house and reactor building where the buried piping runs will be observed for any anomalies or disturbances which may indicate a leak each inspection period.

REQUEST FOR RELIEF NO. ISI-2-008

Impact on Plant
Quality and Safety

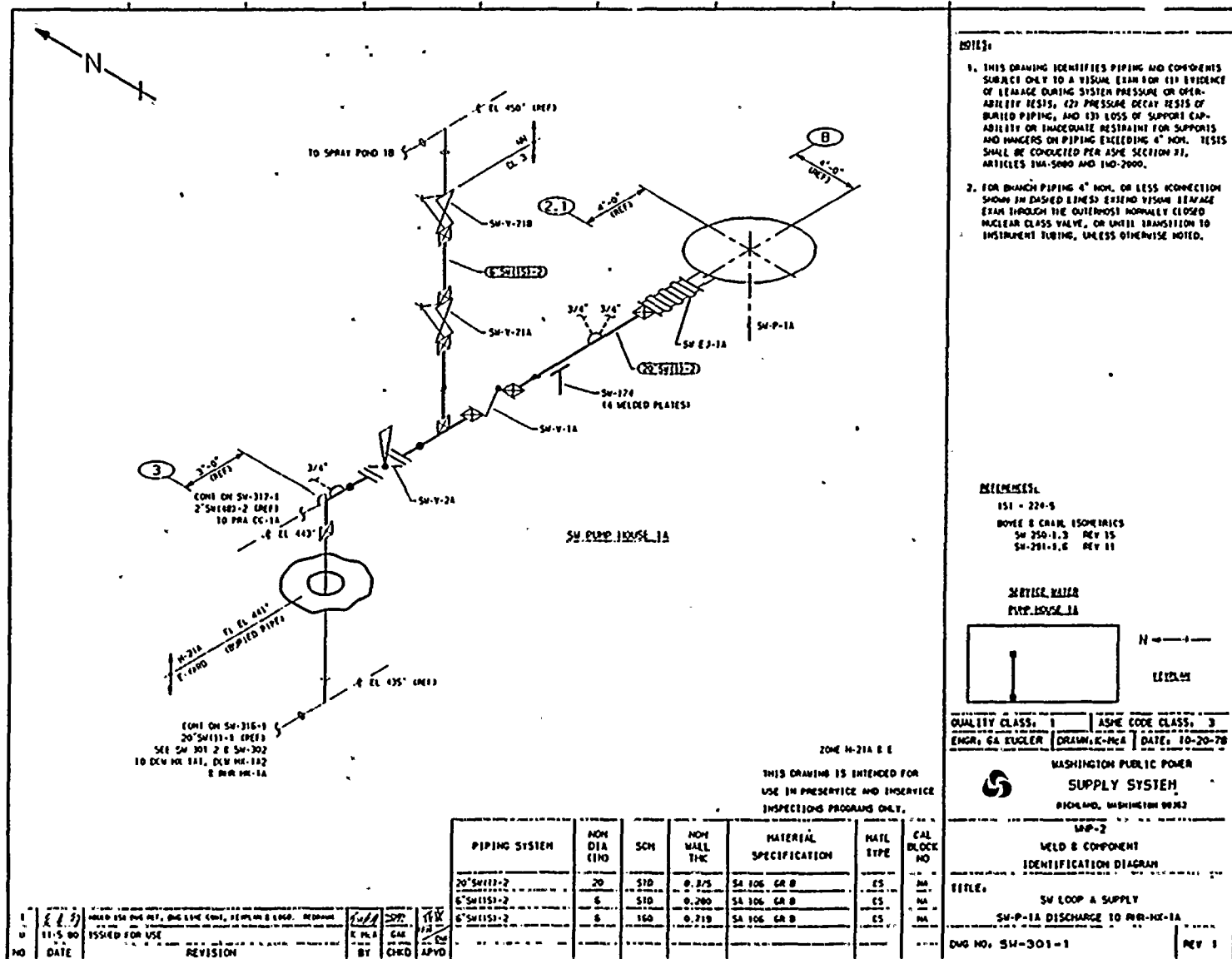
There will be no decrease in plant quality and safety by performing the alternate examinations. The service water system provides for heat removal for:

- a. Reactor decay heat during normal shutdown;
- b. RHR and diesel generators during and after transient and/or accident conditions;
- c. Essential pump motors and air handling cooling coils; and
- d. Fuel pool if normal cooling is lost.

It also is capable of supplying water to flood the containment if required post-LOCA. To provide these functions, adequate flow is required. Per ASME Section IX, the pumps in both SW Loops A and B are tested quarterly to verify that they are operating correctly and providing adequate flow. Per Section XI IWA-5244 verification of adequate flow is an acceptable test to perform as the VT-2 visual examination for buried piping. In addition to being recognized by the Code, the alternate examination would be performed more frequently, quarterly versus once per inspection period. Based on more frequent testing, Code acceptability and system function, the performance of the alternate examination will not decrease plant quality or safety.

REQUEST FOR RELIEF NO. ISI-2-008

Amendment No. 1
March 1993

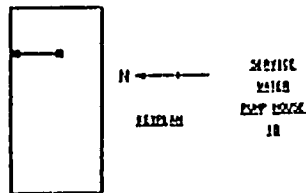





4. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT ONLY TO A VISUAL EXAM FOR (1) EVIDENCE OF LEAKAGE DURING SYSTEM PRESSURE OR OPERABILITY TESTS; (2) PRESSURE DECADE TESTS OF BURIED PIPING; AND (3) LOSS OF SUPPORT CAPABILITY OR INADEQUATE RESTRAINT FOR SUPPORTS AND HANGERS ON PIPING EXCEEDING 4" NOM. TESTS SHALL BE CONDUCTED PER ASME SECTION III, ARTICLES IWA-5000 AND IMA-2000.
5. FOR BRANCH PIPING 4" NOM. OR LESS CONNECTION SHOWN IN DASHED LINES, EXTEND VISUAL LEAKAGE EXAM THROUGH THE OUTFLOWSH NORMALLY CLOSED NUCLEAR CLASS VALVE, OR UNTIL TRANSITION TO INSTRUMENT TUBING, UNLESS OTHERWISE NOTED.

RECEIVED

151 - 224-S & 224-4A
BOYLE & CRAIG ISOMETRICS
SW-251-1.3 REV 12
SW-252-1.5 REV 9



QUALITY CLASS: 1	ASME CODE CLASS: 3
ENGR. GA KUCLER	DRAWN, K-MCA DATE, 2-5-78
 <p>WASHINGTON PUBLIC POWER SUPPLY SYSTEM BIDLAND, WASHINGTON 98523</p>	
<p>WPP-2 WELD & COMPONENT IDENTIFICATION DIAGRAM</p>	
<p>TITLE: SW LOOP B SUPPLY SW-P-1B DISCHARGE</p>	
DWG NO. SW-305-1	REV 2

REQUEST FOR RELIEF NO. ISI-2-008

Amendment No. 1
March 1993

RELIEF REQUEST NO. ISI-2-009

Component or System

Class 1 and Class 2 systems except for the following previously approved exemptions in the ISI Program Plan.

1. The pressure retaining boundary will not extend past the transition from instrument piping to instrument tubing. Instrument tubing will not be subject to a visual examination during system pressure tests.
2. The main steam Class 2 system does not perform a safety-related function and is capable of automatic isolation; therefore, it does not require pressure testing. See Table IWC-2500-1, Category C-H, Note 7 of the Reference Code.
3. Leakage integrity of Class 2 containment penetration for DW, EDR, FDR and MWR systems is satisfied during the 10CFR50 Appendix J tests.

Code

All the components in the affected systems were designed and fabricated to ASME Section III Code Class 1 or 2. The ISI pressure tests are being performed to Section XI, 1980 Edition Winter 1980 Addendum.

Section XI Requirements

1. 10-year hydrostatic pressure test required by Table IWB-2500-1, Category B-P.
2. 10-year hydrostatic pressure test required by Table IWC-2500-1, Category C-H.

Alternate Examination

Use Code Case N-498 to perform the 10-year hydrostatic pressure test on Class 1 and 2 systems.

Basis

The ASME Section XI Code Committee has approved the use of this Code Case.

Impact on Quality and Safety

Use of the alternative hydrostatic pressure test rules will reduce the testing duration and result in lower total radiation exposure to personnel without any reduction in the level of quality of safety of the applicable systems.

5.0 FSAR/NRC COMMITMENTS

5.1 FSAR COMMITMENTS

The Supply System committed in the WNP-2 FSAR to perform inservice inspections pursuant to the requirements of 10CFR50.55a(g). Based on this commitment the mandatory inservice inspection Code is ASME Section XI 1980 Edition, Winter 1980 Addenda. The Supply System will comply with the 1980 Edition, Winter 1980 Addenda of ASME Section XI upgraded per Section 4.1 page 4-1.

The FSAR Sections applicable to this Program Plan are as follows:

- FSAR Section 5.2.4: Inservice Inspection and Testing of the Reactor Coolant Pressure Boundary
- FSAR Section 6.6: Inservice Inspection of ASME III Class 2 and 3 components
- FSAR Question 121.8: Augmented Reactor Feedwater Examination
- FSAR Question 121.0: PSI/ISI Program
- FSAR Question 110.030: Snubber Operability
- FSAR Section 3.9.3.4: Component Supports
- FSAR Section 3.6.2.1.2.1: Augmented High Energy Piping Examination
- FSAR Section 5.2.3.2.3: Compatibility of Construction Materials with Reactor Coolant

5.2 NRC REGULATORY GUIDES

The Supply System has reviewed the augmented inservice inspection requirements found in the NRC Regulatory Guides listed in Table 5.1. Following careful review and consideration of those augmented requirements, the WNP-2 Inservice Inspection Program Plan has been written to comply with the Regulatory Guides which are applicable to WNP-2. A brief statement of applicability is given for each Guide in Table 5.1.

TABLE 5.1
NRC REGULATORY GUIDE REVIEW
FOR
APPLICABILITY TO WNP-2 ISI PROGRAM PLAN

Reg. Guide No.	Title	Applicability to WNP-2 ISI Program Plan
1.14, Rev. 1	Reactor Coolant Pump Flywheel Integrity	Not applicable; WNP-2 reactor coolant pumps, do <u>not</u> have flywheels.
1.26, Rev 3	Quality Group Classifications and Standard for Water, Steam, and Radioactive Waste Containing Components in Nuclear Power Plants.	Applicable; WNP-2 ISI Program Plan is written to comply.
1.33, Rev. 2	Quality Assurance Program. Requirements (Operation).	Applicable; Supply System Operational QA Program addresses compliance and exceptions.
1.35, Rev. 2	Inservice Inspection of UngROUTed Tendons in Pre-stressed Concrete Containment Structures.	Not applicable; WNP-2 does <u>not</u> have a pre-stressed concrete containment.
1.58; Rev. 1	Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel.	Applicable; Supply System Operational QA Program addresses compliance and exceptions.
1.65	Materials and Inspections for Reactor Pressure Vessel Closure Studs.	Applicable; WNP-2 ISI Program Plan complies through incorporation of ASME Section XI examination requirements.
1.66	NDE of Tubular Products.	Reg. Guide withdrawn. Not applicable.
1.70, Rev. 2	Standard Format and Content for FSARs.	Applicable; The FSAR Section in the WNP-2 ISI Program Plan is written using the formats in the Regulatory Guide.
1.83, Rev. 1	ISI Of PWR Steam Generator Tubes.	Not applicable; WNP-2 is a BWR.
1.88, Rev. 2	Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records.	Applicable; Supply System Operational QA Program addresses compliance and exceptions.

TABLE 5.1
NRC REGULATORY GUIDE REVIEW
FOR
APPLICABILITY TO WNP-2 ISI PROGRAM PLAN
(cont'd.)

Reg. Guide No.	Title	Applicability to WNP-2 ISI Program Plan
1.90, Rev. 1	ISI of Pre-stressed Concrete Containment Vessels with UngROUTed Tendons.	Not applicable; WNP-2 does <u>not</u> have a pre-stressed concrete containment.
1.96	Design of Main Steam Isolation Valve Leakage Control Systems.	Applicable; WNP-2 ISI Program Plan is written to comply. (There are no examinations beyond that required by ASME Section XI.)
1.116, Rev. O-R	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems.	Applicable; Supply System Operational QA Program addresses compliance and exceptions.
1.123, Rev.1	Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants.	Applicable; Supply System Operational QA Program addresses compliance and exceptions.
1.137, Rev. 1*	Fuel Oil Systems for Standby Diesel Generators.	Not applicable; The construction permit precedes the 11/1/79 cut-off date.
1.147, Rev. 8	Inservice Inspection Code Case Acceptability ASME Section XI Division I.	Applicable; The Code cases being used are identified in Section 4.2
1.150, Rev. 1	UT of Reactor Vessel Welds during Preservice and Inservice Inspection.	Applicable; WNP-2 will comply with Appendix A of this Reg. Guide.

* Pressure testing requirements for the fuel-oil system are addressed in Technical Specification.

5.3 MANDATORY AUGMENTED INSERVICE INSPECTION

The Supply System will implement mandatory augmented examinations during the inspection interval. The mandatory augmented examinations are examinations committed to by the Supply System in the FSAR or in response to NRC questions.

5.3.1 HIGH ENERGY LINES PENETRATING CONTAINMENT

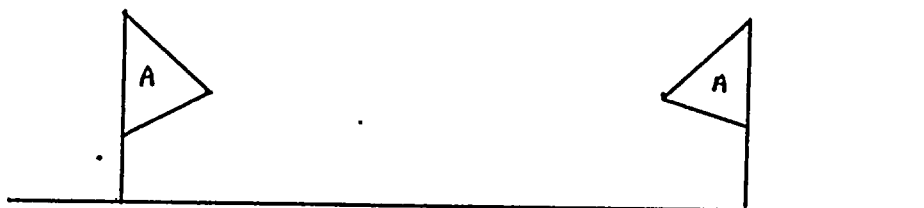
Augmented inservice inspections will be implemented on high energy piping systems which penetrate containment for which the effects of postulated pipe breaks would be unacceptable. This program will entail a volumetric examination of all circumferential butt welds (surface examination for socket welds) between the first pipe whip restraint beyond the inside containment isolation valve, and the first pipe whip restraint beyond the outside containment isolation valve on high energy lines greater than one inch which penetrate the containment. (see Fig. 5.1.A) Where the inside/outside containment isolation valve does not exist, the augmented inservice inspection will extend to the first pipe whip restraint beyond the containment penetration or up to the Class 2 boundary, whichever comes first. (see Fig. 5.1.B and Fig. 5.1.C) If there is no pipe whip restraint located beyond the inside/outside containment isolation valve, the augmented inservice inspection boundary will extend to the isolation valve. (see Fig. 5.1.D) Where two containment isolation valves in series are located outside containment, the above criteria will be applied to the outermost valve. (see Fig. 5.1.E)

This program will include branch lines which fall within the augmented inservice inspection boundary to the first pipe whip restraint beyond the branch line isolation valve or the first normally closed valve, whichever comes first. (see Fig. 5.1.A)

If no pipe whip restraint and/or isolation (normally closed) valve is located on the branch line, the same criteria stated above for main run line will be applied.

The augmented inservice inspection boundary is shown on ISI Boundary Diagrams in Section 7.0 and on Weld and Component Identification Diagrams in Section 14.0 as follows:

AUGMENTED ISI BOUNDARY



Augmented inservice inspection will be implemented on high-energy piping systems associated with the following penetrations:

<u>Penetration No.</u>	<u>System</u>
X-18A	Main Steam
X-18B	Main Steam
X-18C	Main Steam
X-18D	Main Steam
X-21	RCIC
X-45	RCIC
X-17A	RFW
X-17B	RFW
X-14	RWCU

The volumetric examination will be done once each inspection interval.

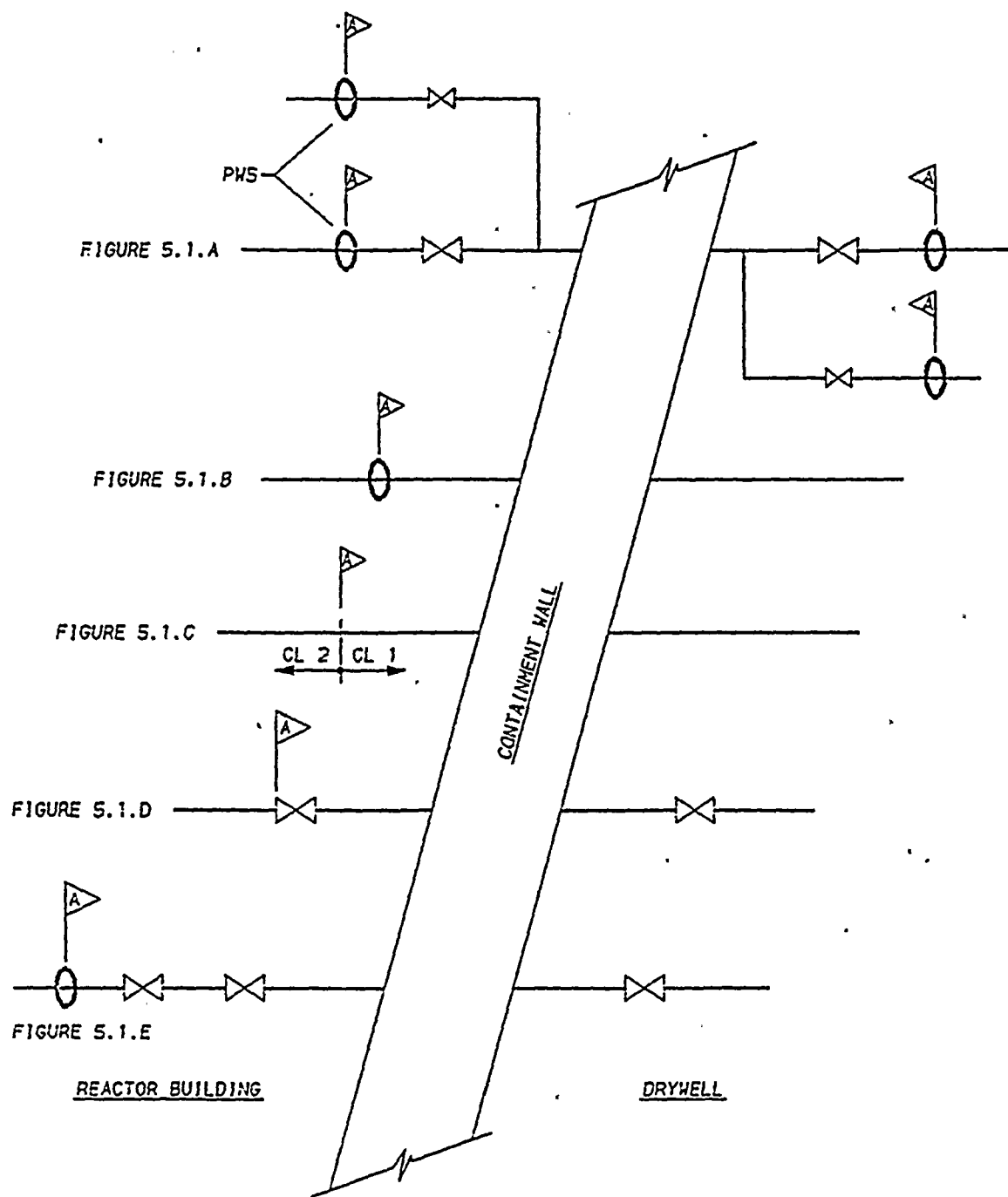


FIGURE 5.1
AUGMENTED HIGH-ENERGY
LINE BOUNDARY

5.3.2 Reactor Feedwater Nozzle

An augmented inservice inspection program will be implemented to examine the reactor feedwater nozzle inner radii for cracks. Per Supply System's response to FSAR question 121.8 and NUREG 0619 (letter G02-82-36, dated January 13, 1982) the augmented program will consist of the following:

- Ultrasonic examination of one feedwater nozzle each refueling outage.
- A surface examination will be used only to verify the nature of an indication discovered by ultrasonics.
- If an indication is found to result from service induced cracks propagating from the nozzle inner surfaces, the following actions will be taken.
 - a. All remaining feedwater nozzles will be examined using UT (from the OD) and penetrant techniques during the refueling outage in which the cracking is verified.
 - b. Remove by local grinding all surface indications determined to be service induced cracks.
 - c. The integrity of the RFW thermal sleeve to safe end joints will be determined by an inspection method such as a leak test.
 - d. Appropriate corrective action will be taken as required and as practical to prevent recurrence of crack initiation.
 - e. A RFW nozzle examination program for subsequent refueling outages will be modified to include an external ultrasonic examination of all feedwater nozzle radii, bore and safe end regions for each scheduled refueling outage for 3 consecutive outages. If no new indications are discovered or if new indications are determined to not result from service induced cracks at the nozzle inner surfaces, the original Supply System program will be resumed.
 - f. Surface examination of accessible nozzle inner radius surfaces will continue to be used throughout plant life only to confirm or characterize new UT indications.
- If no indications resulting from service induced cracks are found after six refueling outages, subsequent inservice examinations will be performed in accordance with normal ASME Section XI requirements.

The UT examinations will be done by personnel qualified on the WNP-2 Feedwater Nozzle Mockup. The technique will be similar to the technique used in the preservice examinations and will be qualified on the WNP-2 Feedwater Nozzle Mockup.

5.3.3 Jet Pump Holddown Beams

An augmented inservice inspection of the jet pump holddown beams will be implemented in accordance with the recommendations of GE document NEDE-24362-1 issued December, 1981. The first examination will be five calendar years after commercial operation and at two year intervals thereafter. The examinations will consist of a visual examination and a special UT examination of the holddown beams.

5.3.4 Intergranular Stress Corrosion Cracking (IGSCC)

An augmented inservice inspection of all piping and components which are considered susceptible to IGSCC will be performed. The examination will be performed on piping and components which:

- 1) Are made of nonconforming material,
- 2) Are four (4) inches or larger in nominal diameter and
- 3) Contain reactor coolant at a temperature above 200°F during power operation.

Per Supply System's response to Generic Letter 88-01 and NUREG 0313 Revision 2 (See Section 3.1), the augmented program will consist of the following:

- 1) Examine at least 25% of the Category B welds and 12% of the Category A welds within six years of the refueling outage scheduled for Spring, 1989 (RF89A);
- 2) Within 10 years of RF89A, examine at least 50% of Category B welds and at least 25% of Category A welds;
- 2a) Examine all Category D welds every three years.
- 3) In addition to complying to the ASME Section XI Code committed to by this ISI Program Plan, detailed procedures, equipment and personnel will be qualified by the formal program conducted in accordance with the NRC/EPRI/BWROG Coordination Plan at the EPRI NDE Center in Charlotte, North Carolina;
- 4) If one or more cracked welds are found during a sample inspection, an additional sample of welds will be examined during that outage. The sample will contain the approximate same number of welds as the original sample. Unless there exists a technical reason to select a different distribution, the additional sample will be similar in distribution (pipe size, system and location) to the original sample. If additional cracked welds are found, all welds in that IGSCC Category will be examined unless the sample was chosen on a technical basis. In that case all the IGSCC Category welds that meet that technical basis will be examined.

5)The Supply System will use ASME Section XI Section IWB-3600 of the 1986 Edition of the ASME Boiler and Pressure Vessel Code for methods and criteria for crack evaluation and repair. The Commission will be notified if a flaw is found that does not meet Section XI, IWB-3500 criteria for continued operation without evaluation. Prior to resuming operation, an evaluation of the flaw justifying continued operation and/or the repair plans will be submitted to the Commission for approval. Resumption of operation will not be allowed until Commission approval has been granted.

The welds included in the augmented program are identified in Table 5-2.

TABLE 5-2

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
A	4JP(NZ)A-2	RPV-101	
	4JP(NZ)B-2	RPV-101	
	10HPCS(1)-3	HPCS-101	2
	10LPCS(1)-3	LPCS-101	2
	12LPCI(1)A-5	RHR-101	
	12LPCI(1)B-5	RHR-102	
	12LPCI(1)C-5	RHR-103	
	12RFW(1)AC-11	RFW-101	5
	12RFW(1)AC-12	RFW-101	5
	12RFW(1)AB-9	RFW-101	4
	12RFW(1)AB-10	RFW-101	4
	12RFW(1)AA-9	RFW-101	3
	12RFW(1)AA-10	RFW-101	3
	12RFW(1)BF-12	RFW-102	5
	12RFW(1)BF-13	RFW-102	5
	12RFW(1)BE-9	RFW-102	4
	12RFW(1)BE-10	RFW-102	4
	12RFW(1)BD-9	RFW-102	3
	12RFW(1)BD-10	RFW-102	3
	16RRC(1)A-1/12RRC(1)-N2D	RRC-101	3
	16RRC(1)A-1/12RRC(1)-N2E	RRC-101	3
	16RRC(1)A-3/12RRC(1)-N2B	RRC-101	3
	16RRC(1)A-3/12RRC(1)-N2A	RRC-101	3
	12RRC(1)-N2A-2	RRC-101	8
	12RRC(1)-N2A-3	RRC-101	8
	12RRC(1)-N2A-4	RRC-101	8
	12RRC(1)-N2B-2	RRC-101	7
	12RRC(1)-N2B-3	RRC-101	7
	12RRC(1)-N2B-4	RRC-101	7
	12RRC(1)-N2C-2	RRC-101	6
	12RRC(1)-N2C-3	RRC-101	6
	12RRC(1)-N2C-4	RRC-101	6
	12RRC(1)-N2D-2	RRC-101	5
	12RRC(1)-N2D-3	RRC-101	5
	12RRC(1)-N2D-4	RRC-101	5
	12RRC(1)-N2E-2	RRC-101	4
	12RRC(1)-N2E-3	RRC-101	4

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
A	12RRC(1)-N2E-4	RRC-101	4
	16RRC(1)B-1/12RRC(1)-N2G	RRC-102	3
	16RRC(1)B-1/12RRC(1)-N2F	RRC-102	3
	16RRC(1)B-3/12RRC(1)-N2J	RRC-102	3
	16RRC(1)B-3/12RRC(1)-N2K	RRC-102	3
	12RRC(1)-N2F-2	RRC-102	8
	12RRC(1)-N2F-3	RRC-102	8
	12RRC(1)-N2F-4	RRC-102	8
	12RRC(1)-N2G-2	RRC-102	7
	12RRC(1)-N2G-3	RRC-102	7
	12RRC(1)-N2G-4	RRC-102	7
	12RRC(1)-N2H-2	RRC-102	6
	12RRC(1)-N2H-3	RRC-102	6
	12RRC(1)-N2H-4	RRC-102	6
	12RRC(1)-N2J-2	RRC-102	5
	12RRC(1)-N2J-3	RRC-102	5
	12RRC(1)-N2J-4	RRC-102	5
	12RRC(1)-N2K-2	RRC-102	4
	12RRC(1)-N2K-3	RRC-102	4
	12RRC(1)-N2K-4	RRC-102	4
Number of welds in Category A = 57			
B	20RHR(2)-1	RHR-104	
	20RHR(2)-2	RHR-104	
	12RHR(1)A-14	RHR-105	
	12RHR(1)A-15	RHR-105	
	12RHR(1)A-16	RHR-105	
	12RHR(1)A-17	RHR-105	
	12RHR(1)A-18	RHR-105	
	12RHR(1)B-10	RHR-106	
	12RHR(1)B-11	RHR-106	
	12RHR(1)B-12	RHR-106	
	12RHR(1)B-13	RHR-106	
	24RRC(2)A-2	RRC-101	1
	24RRC(2)A-3	RRC-101	1
	24RRC(2)A-4	RRC-101	1
	24RRC(2)A-5	RRC-101	1

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
B	24RRC(2)A-6	RRC-101	1
	24RRC(2)A-7	RRC-101	1
	24RRC(2)A-8	RRC-101	1
	24RRC(2)A-9	RRC-101	1
	24RRC(2)A-10	RRC-101	1
	24RRC(2)A-10/4RRC(8)-4S	RRC-101	1
	4RRC(8)2A-1	RRC-101	1
	4RRC(8)2A-2	RRC-101	1
	24RRC(2)A-10/4RRC(4)-4S	RRC-101	1
	24RRC(2)A-11	RRC-101	1
	24RRC(2)A-12	RRC-101	1
	24RRC(1)A-13	RRC-101	2
	24RRC(1)A-13/8CAP	RRC-101	2
	24RRC(1)A-13/8CAP-1	RRC-101	2
	24RRC(1)A-13/4RRC(8)-4S	RRC-101	2
	4RRC(8)1A-1	RRC-101	2
	4RRC(8)1A-2	RRC-101	2
	24RRC(1)A-14	RRC-101	2
	24RRC(1)A-15	RRC-101	2
	24RRC(1)A-16	RRC-101	2
	24RRC(1)A-17	RRC-101	2
	24RRC(1)A-18	RRC-101	2
	24RRC(1)A-19	RRC-101	2
	24RRC(1)A-20	RRC-101	2
	24RRC(1)A-20/12RRC(7)-4S	RRC-101	2
	24RRC(1)A-20/12CAP	RRC-101	2
	24RRC(1)A-20/12CAP-1	RRC-101	2
	24RRC(1)A-21	RRC-101	2
	24RRC(1)A-22	RRC-101	3
	16RRC(1)A-1	RRC-101	3
	16RRC(1)A-2	RRC-101	3
	16RRC(1)A-3	RRC-101	3
	16RRC(1)A-4	RRC-101	3
	12RRC(1)-N2A-1	RRC-101	8
	12RRC(1)-N2A-1A	RRC-101	8
	12RRC(1)-N2B-1	RRC-101	7
	12RRC(1)-N2B-1A	RRC-101	7
	12RRC(1)-N2C-1	RRC-101	6

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
B	12RRC(1)-N2C-1A	RRC-101	6
	12RRC(1)-N2D-1	RRC-101	5
	12RRC(1)-N2D-1A	RRC-101	5
	12RRC(1)-N2E-1	RRC-101	4
	12RRC(1)-N2E-1A	RRC-101	4
	24RRC(2)B-2	RRC-102	1
	24RRC(2)B-3	RRC-102	1
	24RRC(2)B-4	RRC-102	1
	24RRC(2)B-5	RRC-102	1
	24RRC(2)B-6	RRC-102	1
	24RRC(2)B-7	RRC-102	1
	24RRC(2)B-8	RRC-102	1
	24RRC(2)B-8/4RRC(8)-4S	RRC-102	1
	4RRC(8)2B-1	RRC-102	1
	4RRC(8)2B-2	RRC-102	1
	24RRC(2)B-8/4RRC(4)-4S	RRC-102	1
	24RRC(2)B-9	RRC-102	1
	24RRC(2)B-10	RRC-102	1
	24RRC(1)B-11	RRC-102	2
	24RRC(1)B-11/8CAP	RRC-102	2
	24RRC(1)B-11/8CAP-1	RRC-102	2
	24RRC(1)B-11/4RRC(8)-4S	RRC-102	2
	4RRC(8)1B-1	RRC-102	2
	4RRC(8)1B-2	RRC-102	2
	24RRC(1)B-12	RRC-102	2
	24RRC(1)B-13	RRC-102	2
	24RRC(1)B-14	RRC-102	2
	24RRC(1)B-15	RRC-102	2
	24RRC(1)B-16	RRC-102	2
	24RRC(1)B-17	RRC-102	2
	24RRC(1)B-18	RRC-102	2
	24RRC(1)B-18/12RRC(7)-4S	RRC-102	2
	24RRC(1)B-18/12CAP	RRC-102	2
	24RRC(1)B-18/12CAP-1	RRC-102	2
	24RRC(1)B-19	RRC-102	2
	24RRC(1)B-20	RRC-102	3
	16RRC(1)B-1	RRC-102	3
	16RRC(1)B-2	RRC-102	3

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
B	16RRC(1)B-3	RRC-102	3
	16RRC(1)B-4	RRC-102	3
	12RRC(1)-N2F-1	RRC-102	8
	12RRC(1)-N2F-1A	RRC-102	8
	12RRC(1)-N2G-1	RRC-102	7
	12RRC(1)-N2G-1A	RRC-102	7
	12RRC(1)-N2H-1	RRC-102	6
	12RRC(1)-N2H-1A	RRC-102	6
	12RRC(1)-N2J-1	RRC-102	5
	12RRC(1)-N2J-1A	RRC-102	5
	12RRC(1)-N2K-1	RRC-102	4
	12RRC(1)-N2K-1A	RRC-102	4
	20RRC(6)-1	RRC-105	
	20RRC(6)-2	RRC-105	
	20RRC(6)-3	RRC-105	
	20RRC(6)-4	RRC-105	
	20RRC(6)-5	RRC-105	
	20RRC(6)-6	RRC-105	
	20RRC(6)-7	RRC-105	
	20RRC(6)-7A	RRC-105	
	12RRC(7)A-1	RRC-106	
	12RRC(7)A-2	RRC-106	
	12RRC(7)A-3	RRC-106	
	12RRC(7)A-4	RRC-106	
	12RRC(7)A-5	RRC-106	
	12RRC(7)A-6	RRC-106	
	12RRC(7)B-1	RRC-107	
	12RRC(7)B-2A	RRC-107	
	12RRC(7)B-2	RRC-107	
	12RRC(7)B-3	RRC-107	
	12RRC(7)B-4	RRC-107	
	12RRC(7)B-5	RRC-107	
	12RRC(7)B-6	RRC-107	
	4RRC(4)A-1	RRC-108	
	4RRC(4)A-2	RRC-108	
	4RRC(4)A-3	RRC-108	
	4RRC(4)A-4	RRC-108	
	4RRC(4)A-5	RRC-108	

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
B	4RRC(4)A-6	RRC-108	
	4RRC(4)A-7	RRC-108	
	4RRC(4)A-8	RRC-108	
	4RRC(4)A-9	RRC-108	
	4RRC(4)A-10	RRC-108	
	4RRC(4)A-11	RRC-108	
	4RRC(4)B-1	RRC-109	
	4RRC(4)B-2	RRC-109	
	4RRC(4)B-3	RRC-109	
	4RRC(4)B-4	RRC-109	
	4RRC(4)B-5	RRC-109	
	4RRC(4)B-6	RRC-109	
	4RRC(4)B-7	RRC-109	
	4RRC(4)B-8	RRC-109	
	4RRC(4)B-9	RRC-109	
	4RRC(4)B-10	RRC-109	
	4RRC(4)B-11	RRC-109	
	4RRC(4)B-12	RRC-109	
Number of welds in Category B = 147			
D	4JP(NZ)A-1	RPV-101	
	4JP(NZ)B-1	RPV-101	
	10HPCS(1)-4	HPCS-101	2
	10LPCS(1)-4	LPCS-101	2
	12LPCI(1)A-6	RHR-101	
	12LPCI(1)B-6	RHR-102	
	12LPCI(1)C-6	RHR-103	
	12RFW(1)AC-13	RFW-101	5
	12RFW(1)AB-11	RFW-101	4
	12RFW(1)AA-11	RFW-101	3
	12RFW(1)BF-14	RFW-102	5
	12RFW(1)BE-11	RFW-102	4
	12RFW(1)BD-11	RFW-102	3
	24RRC(2)A-1	RRC-101	1
	12RRC(1)-N2A-6	RRC-101	8
	12RRC(1)-N2B-6	RRC-101	7
	12RRC(1)-N2C-6	RRC-101	6

TABLE 5-2(cont)

WELDS SUBJECT TO AUGMENTED IGSCC REQUIREMENTS

Category	Identification	Drawing	Pg No
D	12RRC(1)-N2D-6	RRC-101	5
	12RRC(1)-N2E-6	RRC-101	4
	24RRC(2)B-1	RRC-102	1
	12RRC(1)-N2F-6	RRC-102	8
	12RRC(1)-N2G-6	RRC-102	7
	12RRC(1)-N2H-6	RRC-102	6
	12RRC(1)-N2J-6	RRC-102	5
	12RRC(1)-N2K-6	RRC-102	4

Number of welds in Category D = 25

F	20RRC(6)-8	RRC-105
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Number of welds in Category F = 1

Total Number of Welds in Augmented Program = 230

5.3.5 Core Spray Spargers

An augmented inservice inspection program that complies with IE Bulletin 80-13 will be implemented to examine the reactor core spray spargers. This program will entail remote underwater TV examinations of the core spray spargers and the segment of piping between the inlet nozzle and the vessel shroud. The examination will be performed every refueling outage.

5.3.6 CRD Scram Discharge Headers

The inservice inspection for the CRD scram discharge headers (SDH) will consist of a visual examination of all welds for evidence of leakage once an inspection period and a volumetric examination of 10% of the circumferential welds greater than 4 NPS once each inspection interval. The welds subject to volumetric examination will be the same ones which received a preservice examination. (Reference letter number G02-83-523, G.D. Bouchey to Mr. A. Schwencer, "PSI Summary Report Clarification" dated June 15, 1983.)

5.3.7 Piping Minimum Wall Thickness

The following ISI welds had their corrosion allowance reduced below the minimum specified during blending for ISI NDE examination:

16 LPCS(1)-5
26 MS(1)C-15

The Supply System will determine the actual corrosion of these areas by measuring the thickness of the pipe towards the end of the first 10-year inspection interval. Results of these thickness measurements will determine the action to be taken during subsequent intervals.

5.3.8 Final Feedwater Temperature Reduction

When final feedwater temperature reduction (FFTR) or "coastdown" is used to extend the fuel cycle, one feedwater nozzle inner radii will be examined at the next refueling outage per Section 5.3.2. This commitment is contained in Supply System letter G02-90-024, dated February 14, 1990 and NRC SER dated March 1, 1990.

5.4 NONMANDATORY AUGMENTED EXAMINATIONS

The following examinations are not required by the Reference Code, the FSAR nor the NRC. They are being performed by the Supply System to aid in maintenance activities.

5.4.1

Thickness measurements of small bore valves whose corrosion allowance is less than minimum specified.

The following valves are in this program:

MS-V-161B
RWCU-V-450
RWCU-V-451

The Supply System will determine the actual corrosion rate of these valves by measuring the wall thickness towards the end of the first inspection interval.

5.4.2 Reactor Feedwater Pump Discharge Erosion

Transferred to Erosion/Corrosion Program.

5.4.3 RWCU Thermal Sleeve

The thermal sleeve welds and the bottom of the 6" RWCU pipe downstream of the thermal sleeve will be subject to dye penetrant or ultrasonic examination, as applicable. This commitment is defined in Supply System internal memos SS2-PE-85-778, LT Harrold to KD Cowan dated August 1, 1985, and SS2-PE-85-779, LT Harrold to DW Porter Dated August 1, 1985. The locations of these welds can be found on ISI Diagram RWCU-301.

6.0 COMPONENT SUPPORT ISI PROGRAM

6.1 DESCRIPTION

The Component Support ISI Program governs the inservice inspection of component supports as required by ASME Section XI, 1980 Edition with addenda through Winter 1980 and WNP-2 Technical Specification 3/4.7.4. The program consists of a Visual Examination Program and a Snubber Visual Examination and Testing Program. Due to the rapidly evolving requirements and regulations pertaining to component supports in the industry, guidance from ASME Section XI 1980 Edition with addenda through Winter 1981, and ANSI/ASME OM-4 including the latest proposed drafts have been utilized during the development of this program. The location of most component supports is shown on the inservice inspection weld and component identification diagrams which are found in Section 14.0. The following tables are included at the end of this section which identify the component supports subject to inspection.

Table 6.1, "Component Supports", all component supports subject to examination.

Table 6.2, "Snubbers", all safety-related snubbers required to be visually examined and tested by Technical Specification 3/4.7.4. This table also includes all ASME snubbers which are required to be examined and tested by ASME Section XI.

6.2 RELIEF REQUESTS

This program satisfies ASME Section XI and augmented NRC requirements to the maximum extent practical. However some installations cannot be examined due to limited access. In such cases, a relief request is included which identifies the unexaminable area and identifies alternative examinations, if any. Additionally a request for relief from the snubber examination and testing requirements contained in ASME Section XI, Subsection IWF has been included in Section 4.6. The WNP-2 Plant Technical Specifications contains similar and generally more restrictive requirements for visual examination and testing than does IWF. The Technical Specifications requirements will be implemented at WNP-2. Relief requests are included in Section 4.6.

6.3 EXEMPTIONS

Section IWF-1230 of Section XI (W-80), which covers exemptions, is in the course of preparation. Therefore, the Supply System will use the following as exemption criteria for component supports:

Class 1

Component supports shall be exempt from examination and test requirements of this program if the component connection, piping, pump or valve is 1 inch nominal pipe size or smaller.

Class 2

Component supports shall be exempt from examination and test requirements of this program if the component connection, piping, pump or valve is 4 inches nominal pipe size or smaller.

Spray ring header supports on open ended piping past the last shutoff valve will not be examined. These lines are not pressurized during normal modes of operation and are not subject to hydraulic stresses, thermal movement, etc. This exemption applies to RHR spray headers in the drywell and the wetwell.

Supports on open ended piping in the wetwell will not be examined. Note these supports are structural and are considered building structures and not piping supports. This exemption applies to ECCS suction and discharge lines in the wetwell. The supports on the MS relief valve discharge lines in the wetwell will not be examined (IWF-2510 (a)).

Class 3

Component supports shall be exempt from examination and test requirements of this program if the system in which they are part of does not require examination by Table IWD-2500-1.

Component supports shall be exempt from examination and test requirements of this program if the component connection, piping, pump or valve is 4 inches nominal pipe size or smaller.

The above exemptions are consistent with the earlier versions of ASME Section XI to which the preservice inspection was performed.

The above exemptions will not be applied to safety-related snubbers required to be examined and tested per WNP-2 Technical Specification 3/4.7.4 requirements.

6.4 VISUAL EXAMINATION PROGRAM

The visual examination program establishes requirements for visual examination of component supports to determine the general mechanical and structural conditions and, where applicable, functional capability of the component support. This program is written to comply with the requirements of the Reference Code.

Table 6.1 lists all ASME component supports subject to visual examination.

6.4.1 REQUIREMENTS

(a) Component supports shall not be subjected to prior maintenance specifically for the

purpose of meeting examination requirements.

- (b) The visual examination procedure shall include a checklist which will include inspection items required by the Code.
- (c) When a component support requires corrective action to meet the acceptance criteria of 6.4.2, that support shall be reexamined during the next inspection period.

6.4.2 ACCEPTANCE CRITERIA

The acceptance criteria (IWF-3400) from the Winter 1981 addendum shall be used in this program. The Winter 1980 addendum does not contain acceptance criteria.

6.4.3 EXAMINATION FREQUENCY

ASME Component Supports (Table 6.1)

ASME component supports are examined in accordance with Inspection Program B of Table IWB/IWC-2412-1, which requires 100% of all non-exempt component supports to be examined during each inspection interval (10 years), with approximately 33% of the examinations performed each inspection period (40 months). The actual component supports selected for examination during a particular period will be determined by selecting various component supports based on system and size. The sequence of component support examinations established during the first inspection interval shall be repeated during each successive inspection interval to the extent practical.

6.4.4 MULTIPLE COMPONENTS

For multiple components within a system of similar design and service, the supports of only one of the multiple components are required to be examined. The above does not apply to those snubbers requiring examination per the plant technical specification.

APPLICATION

RRC Pump 1A/1B
RHR Pump 1A/1B
RHR Hx 1A/1B
FPC Pump 1A/1B
FPC Hx 1A/1B
SW Pump 1A/1B
RCC Hx 1A/1B/1C
RCC Pump 1A/1B/1C

6.4.5 ADDITIONAL EXAMINATIONS

ASME Component Supports

When component supports require rework or the results of examinations require corrective measures, additional examinations shall be performed as required by IWF-2420 and IWF-2430.

6.5 SNUBBER VISUAL EXAMINATION AND TESTING PROGRAM

The Snubber Visual Examination and Testing Program establishes requirements for the examination and testing of snubbers in ASME Section III Class 1, 2 and 3 systems and safety-related snubbers in non-ASME systems. This program is written to comply with the requirements of the latest approved revision of WNP-2 Plant Technical specification for snubbers (Tech. Spec. 3/4.7.4). The program is defined in Plant Procedures 7.4.7.4.1 and 7.4.7.4.2.

The augmented requirements included in the plant technical specification differ and are generally more restrictive than the corresponding code requirements. Therefore, by meeting these augmented requirements, it is the Supply System's position that the ASME Code requirements are met. All snubbers (Table 6.2) will be treated the same as far as visual examination and testing is concerned, irrespective of whether they fall under ASME or Technical Specification 3/4.7.4 requirements. See Relief Request ISI-2-007.

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TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
DCW-HX-1A1(CS)	HX BASE	D-11	441	SW-302	
DCW-HX-1A2(CS)	HX BASE	D-11	441	SW-302	
DCW-HX-1B1(CS)	HX BASE	D-11	441	SW-306	
DCW-HX-1B2(CS)	HX BASE	D-11	441	SW-306	
DCW-HX-1C(CS)	HX BASE	D-11	441	SW-310	
FPC-10	BOX	W-14	455	FPC-308	02
FPC-100	BOX	R-21	464	FPC-307	
FPC-101	RIGID	R-63	555	FPC-301	04
FPC-102	RIGID	R-33	482	FPC-304	03
FPC-103	RIGID	R-33	482	FPC-304	03
FPC-104	RIGID	R-33	482	FPC-304	03
FPC-105	RIGID	R-33	482	FPC-304	03
FPC-106	RIGID	R-33	482	FPC-304	03
FPC-107	RIGID	R-33	482	FPC-304	03
FPC-108	RIGID	R-33	482	FPC-304	03
FPC-109	RIGID	R-33	482	FPC-304	03
FPC-11	BOX	W-14	455	FPC-308	02
FPC-110	RIGID	R-33	482	FPC-304	03
FPC-111	BOX	W-24	479	FPC-304	04
FPC-112	STRUT	W-24	479	FPC-304	05
FPC-113	BOX	W-24	479	FPC-304	04
FPC-114	RIGID	W-34	488	FPC-304	04
FPC-116	RIGID	W-34	487	FPC-304	05
FPC-118	RIGID	R-11	427	FPC-306	
FPC-119	SPRING	R-11	433	FPC-306	
FPC-12	STRUT	W-14	455	FPC-308	02
FPC-120	BOX	R-11	433	FPC-306	
FPC-122	ANCHOR	R-11	443	FPC-306	
FPC-123	BOX	R-21	448	FPC-306	
FPC-126	STRUT	R-21	451	FPC-306	
FPC-127	BOX	R-63	558	FPC-301	03
FPC-128	BOX	R-63	558	FPC-301	03
FPC-129	BOX	R-63	560	FPC-301	03
FPC-13	BOX	W-14	455	FPC-308	02
FPC-130	BOX	R-63	560	FPC-301	03
FPC-14	STRUT	W-14	455	FPC-308	02
FPC-158	BOX	R-61	558	FPC-305	10
FPC-159	BOX	R-61	558	FPC-305	10
FPC-160	RIGID	R-61	550	FPC-305	06
FPC-161	BOX	R-61	553	FPC-305	06
FPC-162	BOX	R-51	547	FPC-305	05
FPC-163	BOX	R-51	526	FPC-305	05

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
FPC-164	BOX	R-41	506	FPC-305	05
FPC-165	BOX	R-31	480	FPC-305	04
FPC-166	BOX	R-33	480	FPC-305	04
FPC-167	BOX	R-33	480	FPC-305	04
FPC-168	BOX	R-33	480	FPC-305	04
FPC-17	STRUT	W-24	476	FPC-308	03
FPC-170	BOX	R-32	468	FPC-201	
FPC-172	BOX	R-32	468	FPC-201	
FPC-177	SPRING	R-61	559	FPC-302	04
FPC-178	BOX	R-61	560	FPC-302	04
FPC-179	BOX	R-61	559	FPC-302	03
FPC-18	SPRING	W-24	483	FPC-308	03
FPC-180	BOX	R-61	557	FPC-302	03
FPC-181	BOX	R-61	553	FPC-302	03
FPC-182	BOX	R-63	560	FPC-302	01
FPC-184	SPRING	R-63	555	FPC-302	01
FPC-185	BOX	R-63	560	FPC-302	02
FPC-186	SPRING	R-63	558	FPC-302	02
FPC-187	BOX	R-61	561	FPC-303	02
FPC-188	BOX	R-63	560	FPC-303	02
FPC-189	SPRING	R-63	558	FPC-303	04
FPC-19	BOX	W-14	455	FPC-308	04
FPC-190	SPRING	R-61	558	FPC-303	03
FPC-191	BOX	R-63	560	FPC-303	01
FPC-192	BOX	R-63	560	FPC-303	01
FPC-193	SPRING	R-63	553	FPC-303	01
FPC-194	BOX	R-61	549	FPC-304	01
FPC-195	BOX	R-51	543	FPC-304	01
FPC-196	BOX	R-51	537	FPC-304	01
FPC-197	BOX	R-51	522	FPC-304	01
FPC-198	BOX	R-41	504	FPC-304	01
FPC-199	BOX	R-31	495	FPC-304	01
FPC-20	STRUT	W-14	453	FPC-308	04
FPC-200	BOX	R-31	484	FPC-304	02
FPC-201	RIGID	R-51	536	FPC-305	05
FPC-202	BOX	R-31	484	FPC-304	02
FPC-203	BOX	R-33	484	FPC-304	02
FPC-204	BOX	R-33	484	FPC-304	02
FPC-205	RIGID	R-33	484	FPC-304	02
FPC-206	BOX	R-31	480	FPC-305	05
FPC-207	BOX	R-63	555	FPC-303	01
FPC-208	BOX	R-63	554	FPC-302	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
FPC-209	BOX	R-61	558	FPC-305	09
FPC-21	STRUT	W-14	453	FPC-308	04
FPC-210	BOX	R-61	558	FPC-305	09
FPC-211	STRUT	R-61	558	FPC-305	07
FPC-213	BOX	R-61	561	FPC-305	07
FPC-214	BOX	R-71	581	FPC-305	08
FPC-215	BOX	R-71	601	FPC-305	08
FPC-216	BOX	R-73	601	FPC-305	08
FPC-22	SPRING	W-14	453	FPC-308	04
FPC-223	ANCHOR	R-63	558	FPC-305	09
FPC-224	BOX	R-63	559	FPC-305	09
FPC-225	STRUT	R-63	559	FPC-305	09
FPC-226	SPRING	R-63	559	FPC-305	09
FPC-227	PSA-3 SNUBBER	R-63	559	FPC-305	09
FPC-230	SPRING	R-63	559	FPC-305	09
FPC-231	BOX	R-61	569	FPC-305	07
FPC-237	BOX	R-32	468	FPC-201	
FPC-238	BOX	R-32	468	FPC-201	
FPC-239	BOX	R-32	468	FPC-201	
FPC-240	BOX	R-71	601	FPC-305	08
FPC-243	BOX	R-73	602	FPC-325	02
FPC-244	BOX	R-73	572	FPC-325	02
FPC-245	BOX	R-73	569	FPC-325	02
FPC-246	BOX	R-71	602	FPC-325	01
FPC-247	BOX	R-71	572	FPC-325	01
FPC-248	BOX	R-71	569	FPC-325	01
FPC-39	SPRING	R-13	434	FPC-301	08
FPC-40	STRUT	R-13	434	FPC-301	08
FPC-41	SPRING	R-13	434	FPC-301	08
FPC-42	STRUT	R-13	434	FPC-301	08
FPC-43	PSA-3 SNUBBER	R-13	434	FPC-301	08
FPC-44	ANCHOR	R-23	450	FPC-301	08
FPC-45	BOX	R-11	426	FPC-307	
FPC-47	BOX	R-11	433	FPC-307	
FPC-48	BOX	R-11	433	FPC-307	
FPC-49	BOX	R-11	443	FPC-307	
FPC-5	SPRING	W-24	482	FPC-308	01
FPC-50	BOX	R-31	472	FPC-307	
FPC-51	BOX	R-61	558	FPC-301	02
FPC-52	BOX	R-61	558	FPC-301	02
FPC-53	BOX	R-63	558	FPC-301	02
FPC-54	BOX	R-63	558	FPC-301	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
FPC-55	BOX	R-63	558	FPC-301	01
FPC-56	BOX	R-63	558	FPC-301	01
FPC-57	BOX	R-63	558	FPC-301	07
FPC-58	BOX	R-63	558	FPC-301	07
FPC-59	BOX	R-63	554	FPC-301	07
FPC-6	STRUT	W-24	476	FPC-308	01
FPC-60	BOX	R-53	547	FPC-301	07
FPC-61	SPRING	R-43	518	FPC-301	07
FPC-62	BOX	R-33	496	FPC-301	08
FPC-63	BOX	R-33	486	FPC-301	08
FPC-64	BOX	R-23	470	FPC-301	08
FPC-65	PSA-1 SNUBBER	R-63	558	FPC-301	04
FPC-66	RIGID	R-33	480	FPC-305	04
FPC-67	RIGID	W-24	480	FPC-305	04
FPC-68	RIGID	W-24	480	FPC-305	03
FPC-69	RIGID	W-24	480	FPC-305	03
FPC-70	RIGID	W-24	473	FPC-305	04
FPC-71	BOX	W-24	480	FPC-305	03
FPC-72	RIGID	W-24	480	FPC-305	03
FPC-73	BOX	W-24	480	FPC-305	03
FPC-74	RIGID	W-24	480	FPC-305	03
FPC-75	RIGID	W-24	480	FPC-305	03
FPC-76	BOX	W-24	480	FPC-305	03
FPC-77	RIGID	W-24	480	FPC-305	03
FPC-78	BOX	W-24	479	FPC-305	01
FPC-79	RIGID	W-24	479	FPC-305	01
FPC-8	STRUT	W-14	463	FPC-308	02
FPC-82	RIGID	W-24	479	FPC-305	01
FPC-83	RIGID	W-34	487	FPC-305	01
FPC-86	SPRING	R-63	549	FPC-301	05
FPC-87	BOX	R-63	549	FPC-301	06
FPC-88	SPRING	R-63	555	FPC-301	04
FPC-9	BOX	W-14	455	FPC-308	02
FPC-903N	ANCHOR	R-31	472	FPC-201	
FPC-906N	BOX	R-31	484	FPC-304	02
FPC-907N	RIGID	R-31	482	FPC-307	
FPC-908N	PSA-1 SN(2)	R-13	434	FPC-301	08
FPC-909N	RIGID	R-13	434	FPC-301	08
FPC-91	STRUT	W-24	479	FPC-305	02
FPC-911N	BOX	R-31	480	FPC-305	04
FPC-912N	BOX	R-61	542	FPC-305	07
FPC-913N	BOX	R-61	530	FPC-305	07

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
FPC-914N	RIGID	R-11	433	FPC-307	
FPC-915N	RIGID	R-61	550	FPC-305	11
FPC-916N	SPRING	R-63	558	FPC-301	04
FPC-918N	PSA-1 SNUBBER	R-63	558	FPC-301	04
FPC-919N	RIGID	R-63	558	FPC-301	07
FPC-92	RIGID	W-24	479	FPC-305	02
FPC-93	RIGID	W-34	487	FPC-305	02
FPC-98	RIGID	R-33	482	FPC-304	03
FPC-99	BOX	R-11	432	FPC-307	
FPC-DM-1A(CS)	DEMIN BASE	W-34	489	FPC-304	04
FPC-DM-1B(CS)	DEMIN BASE	W-34	489	FPC-304	05
FPC-HX-1A(CS)	HX BASE	R-63	552	FPC-302	02
FPC-HX-1B(CS)	HX BASE	R-61	552	FPC-303	03
FPC-P-1A(CS)	PUMP BASE	R-63	549	FPC-301	05
FPC-P-1B(CS)	PUMP BASE	R-63	549	FPC-301	06
FPC-P-3(CS)	PUMP BASE	R-11	424	FPC-306	
G306	RIGID		534	CRD-201	
G319	RIGID		534	CRD-201	
G323	RIGID		534	CRD-201	
G327	RIGID		534	CRD-201	
G333	RIGID		535	CRD-201	
G339	RIGID		535	CRD-201	
G406	RIGID		535	CRD-202	
G418	RIGID		535	CRD-202	
G422	RIGID		535	CRD-202	
G426	RIGID		535	CRD-202	
G432	RIGID		535	CRD-202	
G500	RIGID		534	CRD-201	
G501	RIGID		534	CRD-201	
G503	RIGID		533	CRD-201	
G504	RIGID		532	CRD-201	
G506	RIGID		532	CRD-201	
G513	RIGID		533	CRD-201	
G519	RIGID		532	CRD-201	
G600	RIGID		535	CRD-202	
G601	RIGID		535	CRD-202	
G603	RIGID		534	CRD-202	
G604	RIGID		534	CRD-202	
G605	RIGID		534	CRD-202	
G606	RIGID		534	CRD-202	
G607	RIGID		532	CRD-202	
G608	RIGID		532	CRD-202	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
G613	RIGID		534	CRD-201	
HPCS-1	SPRING	R-13	420	HPCS-20	01
HPCS-12	BOX	R-13	456	HPCS-20	02
HPCS-13	ANCHOR	R-23	454	HPCS-20	02
HPCS-15	ANCHOR	R-33	471	HPCS-20	02
HPCS-16	STRUT	R-23	452	HPCS-20	03
HPCS-17	STRUT	R-23	452	HPCS-20	03
HPCS-18	STRUT	R-23	452	HPCS-20	03
HPCS-20	RIGID	R-23	447	HPCS-20	02
HPCS-21	RIGID	R-13	420	HPCS-20	01
HPCS-23	SPRING	R-13	420	HPCS-20	01
HPCS-24	STRUT	R-33	483	HPCS-20	02
HPCS-25	SPRING	R-33	483	HPCS-20	04
HPCS-26	STRUT	R-33	483	HPCS-20	04
HPCS-27	STRUT	R-33	489	HPCS-20	04
HPCS-28	BOX	R-33	489	HPCS-20	04
HPCS-31	STRUT	R-53	533	HPCS-20	05
HPCS-32	SPRING	R-53	533	HPCS-20	05
HPCS-33	BOX	R-53	533	HPCS-20	05
HPCS-34	SPRING	R-53	533	HPCS-20	05
HPCS-35	SPRING	R-53	533	HPCS-20	05
HPCS-37	ANCHOR	R-53	533	HPCS-20	05
HPCS-38	SPRING	R-53	533	HPCS-20	05
HPCS-40	STRUT	R-53	533	HPCS-20	06
HPCS-42	SPRING	240	538	HPCS-10	01
HPCS-44	SPRING	R-23	452	HPCS-20	02
HPCS-45	SPRING	097	434	HPCS-20	02
HPCS-46	SPRING	097	437	HPCS-20	02
HPCS-47	PSA-3 SN(2)	R-13	432	HPCS-20	02
HPCS-48	STRUT	097	430	HPCS-20	02
HPCS-49	STRUT	097	429	HPCS-20	02
HPCS-52	ANCHOR	097	440	HPCS-20	01
HPCS-64	BOX HANGER	240	543	HPCS-10	01
HPCS-66	SPRING	240	541	HPCS-10	01
HPCS-7	ANCHOR	R-13	432	HPCS-20	01
HPCS-900N	STRUT	097	452	HPCS-20	01
HPCS-901N	BOX	097	444	HPCS-20	01
HPCS-903N	STRUT	R-33	483	HPCS-20	02
HPCS-904N	SPRING	270	537	HPCS-10	01
HPCS-905N	PSA-10 SNUBBER	R-53	538	HPCS-20	06
HPCS-906N	SPRING	270	537	HPCS-10	01
HPCS-907N	STRUT	240	537	HPCS-10	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
HPCS-908N	STRUT	240	537	HPCS-10	01
HPCS-909N	STRUT	R-33	489	HPCS-20	04
HPCS-911N	RIGID STRUT	240	537	HPCS-10	01
HPCS-915N	STRUT	R-33	489	HPCS-20	04
HPCS-916N	BOX	R-53	533	HPCS-20	05
HPCS-917N	STRUT	R-33	489	HPCS-20	04
HPCS-921N	STRUT	R-13	456	HPCS-20	02
HPCS-922N	STRUT	R-13	456	HPCS-20	02
HPCS-924N	PSA-3 SN(2)	R-53	538	HPCS-20	06
HPCS-925N	PSA-3 SNUBBER	R-53	538	HPCS-20	06
HPCS-P-1(CS)	PUMP BASE	R-13	422	HPCS-20	02
HPCS-P-2(CS)	PUMP BASE	H21A	441	SW-309	
LPCS-1	RIGID	066	421	LPCS-20	02
LPCS-11	SPRING	R-12	440	LPCS-20	01
LPCS-12	BOX	R-12	443	LPCS-20	03
LPCS-13	SPRING	120	536	LPCS-10	01
LPCS-14	ANCHOR	R-22	447	LPCS-20	03
LPCS-17	BOX	R-22	454	LPCS-20	03
LPCS-18	SPRING	R-22	457	LPCS-20	04
LPCS-19	ANCHOR	R-22	470	LPCS-20	04
LPCS-2	RIGID	066	436	LPCS-20	02
LPCS-20	STRUT	R-32	501	LPCS-20	04
LPCS-21	BOX	R-43	518	LPCS-20	04
LPCS-22	RIGID	R-43	518	LPCS-20	04
LPCS-23	SPRING	R-43	518	LPCS-20	04
LPCS-24	BOX	R-43	518	LPCS-20	04
LPCS-25	SPRING	R-43	518	LPCS-20	05
LPCS-28	PSA-3 SNUBBER	R-53	525	LPCS-10	01
LPCS-3	ANCHOR	066	437	LPCS-20	02
LPCS-31	BOX	R-12	424	LPCS-20	02
LPCS-32	RIGID	R-12	430	LPCS-20	01
LPCS-33	RIGID	R-12	434	LPCS-20	01
LPCS-34	RIGID	R-22	444	LPCS-20	01
LPCS-35	SPRING	R-12	435	LPCS-20	01
LPCS-36	ANCHOR	R-22	454	LPCS-20	02
LPCS-38	BOX	R-12	440	LPCS-20	01
LPCS-39	BOX	R-12	440	LPCS-20	01
LPCS-41	STRUT	R-32	501	LPCS-20	04
LPCS-42	BOX	R-43	518	LPCS-20	04
LPCS-45	RIGID	R-12	430	LPCS-20	01
LPCS-46	BOX	R-12	428	LPCS-20	02
LPCS-57	BOX	120	543	LPCS-10	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
LPCS-63	SPRING	120	541	LPCS-10	02
LPCS-64	SPRING	120	539	LPCS-10	01
LPCS-9	SPRING	R-12	425	LPCS-20	01
LPCS-900N	BOX	066	542	LPCS-20	01
LPCS-901N	ANCHOR	R-22	457	LPCS-20	03
LPCS-902N	SPRING	066	435	LPCS-20	02
LPCS-903N	ANCHOR	R-43	518	LPCS-20	05
LPCS-904N	STRUT	120	537	LPCS-10	01
LPCS-906N	SPRING	120	537	LPCS-10	01
LPCS-907N	STRUT	120	538	LPCS-10	01
LPCS-908N	STRUT	120	537	LPCS-10	01
LPCS-911N	SPRING	R-22	463	LPCS-20	02
LPCS-P-1(CS)	PUMP BASE	R-12	422	LPCS-20	02
MS-100	STRUT	T-26	494	MS-201	03
MS-1000N	BOX	T-26	494	MS-203	02
MS-1001N	PSA-35 SNUBBER	T-26	494	MS-203	02
MS-1002N	PSA-10 SN(2)	T-26	494	MS-203	02
MS-1003N	PSA-10 SN(2)	T-26	494	MS-203	01
MS-1005N	PSA-35 SNUBBER	T-23	490	MS-204	04
MS-1009N	RIGID	T-26	494	MS-204	02
MS-101	SPRING (2)	T-26	494	MS-201	02
MS-1010N	STRUT	T-26	494	MS-204	02
MS-103	BOX	T-26	494	MS-201	02
MS-114	PSA-10 SN(2)	T-26	494	MS-201	02
MS-115	SPRING (2)	T-26	494	MS-201	02
MS-117	SPRING (2)	T-26	494	MS-201	02
MS-118	STRUT	T-26	494	MS-201	02
MS-119	STRUT	T-26	494	MS-201	02
MS-120	SPRING (2)	T-26	494	MS-201	02
MS-121	SPRING (2)	T-26	494	MS-201	02
MS-123	STRUT	T-26	494	MS-201	02
MS-135	PSA-35 SNUBBER	T-36	506	MS-201	01
MS-1368-11	SPRING	R-45	502	MS-105	02
MS-1368-12	PSA-1/2 SNUBBER	013	502	MS-105	02
MS-1368-13	PSA-1/2 SNUBBER	013	502	MS-105	02
MS-1369-11	SPRING	R-44	502	MS-105	03
MS-1369-12	PSA-1/2 SNUBBER	280	502	MS-105	03
MS-1369-13	PSA-1/2 SNUBBER	280	502	MS-105	03
MS-137	SPRING	R-42	506	MS-201	01
MS-139	SPRING	T-26	484	MS-201	03
MS-140	STRUT	T-26	484	MS-201	03
MS-141	SPRING	T-23	482	MS-203	04

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-142	SPRING	T-23	482	MS-202	04
MS-144	SPRING	T-23	482	MS-202	04
MS-145	PSA-10 SNUBBER	T-23	482	MS-202	04
MS-146	SPRING (2)	T-23	489	MS-202	03
MS-147	PSA-35 SN(2)	T-23	494	MS-202	03
MS-148	PSA-10 SNUBBER	T-23	494	MS-202	03
MS-149	SPRING (2)	T-23	494	MS-202	03
MS-150	STRUT	T-23	494	MS-202	03
MS-151	PSA-3 SN(2)	T-23	494	MS-202	03
MS-152	SPRING (2)	T-23	494	MS-202	03
MS-154	RIGID	T-26	494	MS-202	03
MS-155	STRUT	T-26	494	MS-202	03
MS-157	STRUT	T-26	494	MS-202	02
MS-160	STRUT	T-26	494	MS-202	02
MS-162	PSA-10 SN(2)	T-26	494	MS-202	02
MS-163	SPRING (2)	T-26	494	MS-202	02
MS-167	PSA-10 SN(2)	T-26	494	MS-202	02
MS-168	STRUT	T-26	494	MS-202	02
MS-170	SPRING (2)	T-26	494	MS-202	02
MS-171	SPRING	T-26	494	MS-202	02
MS-173	SPRING	T-46	504	MS-202	01
MS-174	PSA-35 SNUBBER	T-36	506	MS-202	01
MS-176	SPRING	R-42	506	MS-202	01
MS-177	PSA-3 SN(2)	T-26	489	MS-202	03
MS-178	SPRING	T-26	489	MS-202	03
MS-179	STRUT(2)	T-26	489	MS-202	03
MS-180	ROD	T-26	485	MS-205	
MS-181	ROD	T-26	485	MS-205	
MS-182	ROD	T-26	485	MS-205	
MS-1C-1PS	STRUT	R-45	502	MS-105	01
MS-24	SPRING	T-23	482	MS-203	04
MS-256	STRUT	R-42	504	MS-206	
MS-26	STRUT	T-23	489	MS-203	03
MS-260	SPRING	R-42	502	MS-105	01
MS-261	SPRING	R-44	502	MS-105	01
MS-2619-11	PSA-1/4 SNUBBER	315	597	MS-106	01
MS-2619-13	PSA-1 SNUBBER	237	597	MS-106	01
MS-2619-14	STRUT	237	597	MS-106	01
MS-2619-16	STRUT	237	594	MS-106	01
MS-2619-17	SPRING	R-74	597	MS-106	01
MS-2619-21	STRUT	235	579	MS-106	02
MS-2619-210	STRUT	230	574	MS-106	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-2619-211	RIGID	R-74	581	MS-106	02
MS-2619-214	STRUT	R-74	578	MS-106	02
MS-2619-22	RIGID	R-74	575	MS-106	02
MS-2619-24	RIGID	R-74	574	MS-106	02
MS-2619-26	STRUT	222	578	MS-106	02
MS-2619-310	STRUT	215	580	MS-106	03
MS-2619-311	STRUT	200	580	MS-106	03
MS-2619-312	STRUT	205	580	MS-106	03
MS-2619-313	STRUT	181	580	MS-106	03
MS-2619-314	STRUT	180	580	MS-106	03
MS-2619-318	STRUT	139	580	MS-106	03
MS-2619-319	STRUT	140	580	MS-106	03
MS-2619-320	SPRING	121	580	MS-106	03
MS-2619-42A	STRUT	060	572	MS-106	04
MS-2619-42C	PSA-1/2 SNUBBER	060	572	MS-106	04
MS-2619-43	SPRING	R-74	580	MS-106	04
MS-2619-44	SPRING	R-74	580	MS-106	04
MS-2619-45	PSA-1/4 SNUBBER	089	580	MS-106	04
MS-2619-46	STRUT	090	580	MS-106	04
MS-266	SPRING	R-55	546	MS-301	01
MS-267	SPRING	R-55	530	MS-301	02
MS-268	SPRING	R-45	505	MS-301	03
MS-269	SPRING	R-55	546	MS-302	01
MS-27	PSA-10 SN(2)	T-23	494	MS-203	03
MS-270	SPRING	R-55	520	MS-302	02
MS-271	SPRING	R-45	516	MS-302	03
MS-272	SPRING	R-55	546	MS-303	01
MS-273	SPRING	R-55	525	MS-303	02
MS-274	SPRING	R-45	509	MS-303	03
MS-275	SPRING	R-45	505	MS-303	03
MS-276	SPRING	050	546	MS-304	01
MS-277	SPRING	050	523	MS-304	02
MS-278	SPRING	080	523	MS-304	02
MS-279	SPRING	090	510	MS-304	03
MS-28	SPRING	T-23	494	MS-203	03
MS-280	SPRING	R-55	546	MS-305	01
MS-281	SPRING	R-45	521	MS-305	02
MS-282	SPRING	R-45	510	MS-305	03
MS-283	SPRING	R-55	546	MS-307	01
MS-284	SPRING	R-44	527	MS-307	02
MS-286	SPRING	R-47	509	MS-307	03
MS-287	SPRING	R-55	546	MS-308	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-288	SPRING	R-55	539	MS-308	01
MS-289	SPRING	R-55	530	MS-308	02
MS-291	SPRING	R-47	508	MS-308	04
MS-292	SPRING	R-47	506	MS-308	04
MS-293	SPRING	300	546	MS-310	01
MS-294	SPRING	300	532	MS-310	02
MS-295	SPRING	300	514	MS-310	02
MS-296	SPRING	R-54	547	MS-311	01
MS-297	SPRING	R-54	528	MS-311	02
MS-298	SPRING	R-56	525	MS-311	02
MS-299	SPRING	R-46	508	MS-311	03
MS-30	SPRING (2)	T-26	494	MS-203	03
MS-300	SPRING	R-54	533	MS-312	01
MS-301	SPRING	R-54	533	MS-312	01
MS-302	SPRING	R-56	527	MS-312	02
MS-303	SPRING	R-56	527	MS-312	02
MS-304	SPRING	R-54	547	MS-313	01
MS-305	SPRING	R-56	528	MS-313	02
MS-306	SPRING	R-56	528	MS-313	02
MS-307	SPRING	R-56	509	MS-313	03
MS-308	SPRING	R-54	546	MS-315	01
MS-309	SPRING	R-54	530	MS-315	03
MS-31	STRUT	T-26	494	MS-203	03
MS-310	SPRING	R-44	509	MS-315	03
MS-311	SPRING	R-54	546	MS-316	01
MS-312	SPRING	R-54	524	MS-316	02
MS-313	SPRING	R-44	509	MS-316	03
MS-314	SPRING	R-54	546	MS-317	01
MS-315	SPRING	R-44	511	MS-317	02
MS-316	SPRING	R-44	511	MS-317	03
MS-317	SPRING	300	547	MS-318	01
MS-318	SPRING	300	525	MS-318	02
MS-319	SPRING	300	504	MS-318	03
MS-320	SPRING	080	546	MS-306	01
MS-321	SPRING	090	523	MS-306	02
MS-322	SPRING	090	523	MS-306	02
MS-323	SPRING	100	509	MS-306	03
MS-324	SPRING	R-66	547	MS-314	01
MS-325	SPRING	R-66	543	MS-314	01
MS-326	SPRING	R-56	539	MS-314	02
MS-327	SPRING	R-46	509	MS-314	03
MS-328	SPRING	R-57	546	MS-309	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-329	SPRING	R-57	535	MS-309	02
MS-33	SPRING (2)	T-26	494	MS-203	02
MS-330	SPRING	F-47	509	MS-309	03
MS-332	SPRING	R-45	505	MS-302	03
MS-333	SPRING	090	506	MS-304	03
MS-334	SPRING	R-45	505	MS-305	03
MS-335	SPRING	R-47	505	MS-307	03
MS-336	SPRING	300	505	MS-310	03
MS-337	SPRING	R-56	505	MS-311	03
MS-338	SPRING	R-46	505	MS-312	03
MS-339	SPRING	R-56	507	MS-313	03
MS-34	STRUT	T-26	494	MS-203	02
MS-340	SPRING	R-44	506	MS-315	03
MS-341	SPRING	R-44	505	MS-316	03
MS-342	SPRING	R-44	505	MS-317	03
MS-344	SPRING	100	505	MS-306	03
MS-345	SPRING	R-47	506	MS-309	03
MS-346	SPRING	R-46	506	MS-314	03
MS-36	STRUT	T-26	494	MS-203	02
MS-37	SPRING (2)	T-26	494	MS-203	02
MS-38	PSA-10 SN(2)	T-26	494	MS-203	02
MS-39	STRUT	T-26	494	MS-203	02
MS-40	STRUT	T-26	494	MS-203	02
MS-42	SPRING (2)	T-26	494	MS-203	02
MS-44	SPRING	T-36	506	MS-203	01
MS-45	PSA-35 SNUBBER	T-36	506	MS-203	01
MS-47	SPRING	R-42	506	MS-203	01
MS-48	PSA-3 SNUBBER	T-26	489	MS-203	03
MS-49	SPRING	T-26	489	MS-203	03
MS-50	SPRING	T-23	482	MS-204	04
MS-51	SPRING (2)	T-23	492	MS-204	04
MS-53	STRUT	T-23	494	MS-204	03
MS-54	STRUT	T-23	494	MS-204	03
MS-55	SPRING (2)	T-23	494	MS-204	03
MS-57	STRUT	T-26	494	MS-204	03
MS-58	SPRING (2)	T-26	494	MS-204	03
MS-59	STRUT	T-26	494	MS-204	02
MS-61	STRUT	T-26	494	MS-204	02
MS-62	SPRING (2)	T-26	494	MS-204	02
MS-63	SPRING (2)	T-26	494	MS-204	02
MS-65	STRUT	T-26	494	MS-204	02
MS-66	SPRING (2)	T-26	494	MS-204	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-68	STRUT	T-26	494	MS-204	02
MS-69	SPRING	T-26	494	MS-204	02
MS-71	SPRING	T-36	504	MS-204	01
MS-72	PSA-35 SNUBBER	T-36	506	MS-204	11
MS-74	SPRING	R-41	506	MS-204	01
MS-87	SPRING	T-26	489	MS-204	03
MS-88	SPRING	T-23	482	MS-201	04
MS-89	SPRING (2)	T-23	489	MS-201	04
MS-906N	STRUT(2)	T-26	494	MS-204	02
MS-91	PSA-3 SN(2)	T-23	494	MS-201	03
MS-921N	STRUT	T-26	494	MS-203	02
MS-924N	SPRING	T-23	494	MS-201	03
MS-93	SPRING (2)	T-23	494	MS-201	03
MS-94	BOX	T-23	494	MS-201	03
MS-95	STRUT	T-23	494	MS-201	03
MS-96	PSA-10 SN(2)	T-23	494	MS-201	03
MS-97	SPRING (2)	T-26	494	MS-201	03
MS-98	STRUT	T-26	494	MS-201	03
MS-992N	BOX	T-26	494	MS-201	03
MS-993N	PSA-10 SN(2)	T-26	494	MS-201	02
MS-994N	BOX	T-23	494	MS-203	03
MS-996N	PSA-10 SN(2)	T-26	494	MS-202	02
MS-997N	STRUT	T-26	494	MS-202	02
MS-998N	PSA-10 SN(2)	T-26	494	MS-202	02
MS-999N	PSA-10 SNUBBER	T-26	494	MS-203	03
MS-HA-1	SPRING (2)	072	560	MS-101	01
MS-HA-2	SPRING (2)	016	514	MS-101	02
MS-HB-1	SPRING (2)	108	562	MS-102	01
MS-HB-2	SPRING	070	543	MS-102	01
MS-HB-3	SPRING (2)	026	515	MS-102	02
MS-HC-1	SPRING (2)	252	559	MS-103	01
MS-HC-2	SPRING	300	543	MS-103	01
MS-HC-3	SPRING (2)	333	514	MS-103	02
MS-HD-1	SPRING	288	557	MS-104	01
MS-HD-2	SPRING (2)	343	515	MS-104	02
MS-SA-1	STRUT	017	534	MS-101	02
MS-SA-2	STRUT	015	505	MS-101	02
MS-SA-4	STRUT	015	505	MS-101	02
MS-SA-7	STRUT	072	550	MS-101	01
MS-SB-1	RIGID STRUT	023	501	MS-102	02
MS-SB-2	RIGID STRUT	023	501	MS-102	02
MS-SB-3	RIGID STRUT	028	538	MS-102	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MS-SB-7	RIGID STRUT	108	556	MS-102	01
MS-SB-9	RIGID STRUT	045	543	MS-102	01
MS-SC-1	PSA-100 SNUBBER	337	506	MS-103	02
MS-SC-10	PSA-35 SNUBBER	300	543	MS-103	01
MS-SC-2	PSA-100 SNUBBER	337	506	MS-103	02
MS-SC-3	PSA-35 SNUBBER	334	539	MS-103	02
MS-SC-4	PSA-35 SNUBBER	342	536	MS-103	02
MS-SC-5	PSA-35 SNUBBER	270	538	MS-103	01
MS-SC-6	PSA-35 SNUBBER	268	556	MS-103	01
MS-SC-7	PSA-35 SNUBBER	236	556	MS-103	01
MS-SC-8	PSA-35 SNUBBER	275	543	MS-103	01
MS-SC-9	PSA-35 SNUBBER	320	543	MS-103	01
MS-SD-1	STRUT	359	506	MS-104	02
MS-SD-2	STRUT	359	506	MS-104	02
MS-SD-4	STRUT	346	530	MS-104	02
MS-SD-7	STRUT	288	556	MS-104	01
MSRV-1A-3	PSA-10 SNUBBER	R-65	546	MS-301	01
MSRV-1A-4	STRUT	R-55	539	MS-301	01
MSRV-1A-7PS	RIGID	R-45	501	MS-301	03
MSRV-1B-2	PSA-10 SNUBBER	R-55	546	MS-305	01
MSRV-1B-6PS	RIGID	R-45	501	MS-305	03
MSRV-1C-1	PSA-10 SNUBBER	300	544	MS-310	01
MSRV-1C-2	PSA-35 SNUBBER	300	548	MS-310	01
MSRV-1C-3	PSA-35 SNUBBER	300	544	MS-310	01
MSRV-1C-4	PSA-10 SNUBBER	300	521	MS-310	02
MSRV-1C-5	PSA-10 SNUBBER	300	522	MS-310	02
MSRV-1C-6PS	RIGID	300	501	MS-310	03
MSRV-1C-7	PSA-10 SNUBBER	300	535	MS-310	01
MSRV-1D-3	PSA-10 SNUBBER	R-54	546	MS-315	02
MSRV-1D-7PS	RIGID	R-44	501	MS-315	03
MSRV-2A-2	PSA-10 SNUBBER	R-65	548	MS-302	01
MSRV-2A-5PS	RIGID	R-45	501	MS-302	03
MSRV-2B-2	RIGID STRUT	080	534	MS-306	01
MSRV-2B-3	PSA-35 SNUBBER	080	546	MS-306	01
MSRV-2B-6	RIGID STRUT	090	525	MS-306	02
MSRV-2B-9PS	RIGID	100	501	MS-306	03
MSRV-2C-1	PSA-10 SNUBBER	R-54	538	MS-311	01
MSRV-2C-10PS	RIGID	R-56	501	MS-311	03
MSRV-2C-2	PSA-10 SNUBBER	R-54	546	MS-311	01
MSRV-2C-3	PSA-10 SNUBBER	R-54	537	MS-311	01
MSRV-2C-4	PSA-10 SNUBBER	R-56	525	MS-311	02
MSRV-2C-5	PSA-10 SNUBBER	R-56	525	MS-311	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MSRV-2C-6	PSA-10 SNUBBER	R-56	525	MS-311	02
MSRV-2C-7	PSA-10 SNUBBER	R-56	522	MS-311	03
MSRV-2C-8	PSA-10 SNUBBER	R-54	535	MS-311	01
MSRV-2C-9	PSA-10 SNUBBER	R-54	530	MS-311	02
MSRV-2D-2	PSA-10 SNUBBER	R-54	546	MS-316	01
MSRV-2D-6PS	RIGID	R-44	501	MS-316	03
MSRV-3A-2	PSA-10 SNUBBER	R-55	546	MS-303	01
MSRV-3A-4	STRUT	R-55	527	MS-303	02
MSRV-3A-6	STRUT	R-45	520	MS-303	03
MSRV-3A-7PS	RIGID	R-45	501	MS-303	03
MSRV-3B-2	PSA-10 SNUBBER	R-55	546	MS-307	01
MSRV-3B-3	PSA-10 SNUBBER	R-55	539	MS-307	01
MSRV-3B-6	RIGID STRUT	R-57	525	MS-307	02
MSRV-3B-7	RIGID STRUT	R-57	525	MS-307	03
MSRV-3C-1	PSA-35 SNUBBER	R-54	544	MS-312	01
MSRV-3C-10	STRUT	R-46	510	MS-312	03
MSRV-3C-2	PSA-10 SNUBBER	R-54	546	MS-312	01
MSRV-3C-3	PSA-10 SNUBBER	R-54	544	MS-312	01
MSRV-3C-4	STRUT	R-56	527	MS-312	02
MSRV-3C-5	PSA-10 SNUBBER	R-56	525	MS-312	02
MSRV-3C-6	PSA-10 SNUBBER	R-56	527	MS-312	02
MSRV-3C-7	PSA-10 SNUBBER	R-56	527	MS-312	02
MSRV-3C-8	PSA-10 SNUBBER	R-54	527	MS-312	02
MSRV-3D-4	PSA-10 SNUBBER	R-54	546	MS-317	01
MSRV-3D-7	STRUT	R-44	514	MS-317	03
MSRV-3D-8PS	RIGID	R-44	501	MS-317	03
MSRV-4A-10	STRUT	080	525	MS-304	02
MSRV-4A-2	PSA-10 SNUBBER	050	546	MS-304	01
MSRV-4A-6	STRUT	090	514	MS-304	03
MSRV-4A-8PS	RIGID	090	501	MS-304	03
MSRV-4A-9	STRUT	080	523	MS-304	02
MSRV-4B-3	PSA-10 SNUBBER	R-55	546	MS-308	01
MSRV-4B-5	RIGID STRUT	R-57	528	MS-308	02
MSRV-4B-7	RIGID STRUT	R-57	528	MS-308	02
MSRV-4B-9PS	RIGID	R-47	501	MS-308	04
MSRV-4C-1	PSA-10 SNUBBER	R-54	538	MS-313	01
MSRV-4C-2	PSA-10 SNUBBER	R-54	546	MS-313	01
MSRV-4C-3	PSA-10 SNUBBER	R-54	538	MS-313	01
MSRV-4C-4	STRUT	R-56	528	MS-313	02
MSRV-4C-5	PSA-10 SNUBBER	R-56	528	MS-313	02
MSRV-4C-6	PSA-10 SNUBBER	R-56	528	MS-313	02
MSRV-4C-7	PSA-10 SNUBBER	R-56	528	MS-313	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
MSRV-4C-8	PSA-35 SNUBBER	R-56	528	MS-313	02
MSRV-4C-9	PSA-3 SN(2)	R-46	505	MS-313	03
MSRV-4D-2	PSA-10 SNUBBER	300	546	MS-318	01
MSRV-4D-5	STRUT	300	512	MS-318	03
MSRV-4D-7PS	RIGID	300	501	MS-318	03
MSRV-5B-10PS	RIGID	R-47	501	MS-309	03
MSRV-5B-3	PSA-10 SNUBBER	R-57	548	MS-309	01
MSRV-5B-7	RIGID STRUT	R-57	525	MS-309	03
MSRV-5B-8	RIGID STRUT	R-57	525	MS-309	03
MSRV-5C-1	PSA-10 SNUBBER	R-56	545	MS-314	01
MSRV-5C-2	PSA-10 SNUBBER	R-56	546	MS-314	01
MSRV-5C-3	PSA-35 SNUBBER	R-54	546	MS-314	01
MSRV-5C-4	PSA-35 SNUBBER	R-56	532	MS-314	02
MSRV-5C-5	PSA-10 SNUBBER	R-56	529	MS-314	02
MSRV-5C-6	PSA-10 SNUBBER	R-56	532	MS-314	02
MSRV-5C-7	PSA-10 SNUBBER	R-56	529	MS-314	02
MSRV-5C-8	PSA-35 SNUBBER	R-56	529	MS-314	02
MSRV-5C-9	PSA-10 SNUBBER	R-46	505	MS-314	03
RCC-255	BOX	R-42	514	RCC-201	
RCC-256	SPRING	R-42	514	RCC-201	
RCC-267	SPRING	R-45	512	RCC-301	01
RCC-269	BOX	R-35	500	RCC-301	03
RCC-274	SPRING	R-37	500	RCC-301	03
RCC-276	BOX	R-37	500	RCC-301	03
RCC-279	SPRING	R-37	500	RCC-301	03
RCC-280	ANCHOR	R-37	500	RCC-301	03
RCC-285	STRUT	R-36	500	RCC-301	03
RCC-287	ANCHOR	R-36	500	RCC-301	03
RCC-306	BOX	R-37	500	RCC-302	01
RCC-308	STRUT	R-37	500	RCC-302	01
RCC-309	STRUT	R-37	500	RCC-302	01
RCC-311	STRUT	R-37	500	RCC-302	01
RCC-312	STRUT	R-37	500	RCC-302	01
RCC-315	SPRING	R-37	500	RCC-302	01
RCC-316	ANCHOR	R-37	500	RCC-302	01
RCC-325	SPRING	R-37	500	RCC-302	01
RCC-327	STRUT	R-45	502	RCC-302	02
RCC-345	SPRING	R-45	522	RCC-302	02
RCC-389	SPRING	R-42	514	RCC-202	
RCC-434	ANCHOR	R-55	536	RCC-301	02
RCC-439	STRUT	R-55	530	RCC-301	02
RCC-440	ANCHOR	R-57	530	RCC-301	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RCC-443	ANCHOR	R-57	536	RCC-301	02
RCC-462	SPRING	R-37	500	RCC-302	01
RCC-465	SPRING	R-45	503	RCC-302	02
RCC-469	STRUT	R-36	500	RCC-301	03
RCC-472	STRUT	R-37	500	RCC-302	01
RCC-475	STRUT	R-37	500	RCC-302	01
RCC-477	STRUT	R-55	532	RCC-301	02
RCC-478	STRUT	R-57	536	RCC-301	02
RCC-487	STRUT	R-37	500	RCC-302	01
RCC-488	BOX	R-37	500	RCC-302	01
RCC-908N	BOX	R-37	500	RCC-301	03
RCC-909N	STRUT	R-36	500	RCC-301	03
RCC-912N	STRUT	R-45	529	RCC-301	01
RCC-913N	STRUT	R-55	530	RCC-301	02
RCC-935N	RIGID	R-61	556	RCC-304	01
RCC-937N	RIGID	R-61	552	RCC-304	01
RCC-938N	RIGID	R-61	553	RCC-304	02
RCC-939N	RIGID	R-61	551	RCC-304	02
RCC-940N	RIGID	R-61	551	RCC-304	01
RCC-941N	RIGID	R-61	552	RCC-304	02
RCC-945N	RIGID	R-61	557	RCC-303	01
RCC-946N	RIGID	R-61	559	RCC-303	01
RCC-947N	RIGID	R-61	561	RCC-303	02
RCC-948N	RIGID	R-61	559	RCC-303	02
RCC-949N	SPRING	R-61	556	RCC-303	02
RCC-950N	RIGID	R-61	561	RCC-303	01
RCC-951N	RIGID	R-61	561	RCC-303	01
RCC-952N	RIGID	R-61	559	RCC-303	01
RCIC-1	PSA-1 SNUBBER	R-11	425	RCIC-20	01
RCIC-10	STRUT	R-11	438	RCIC-20	02
RCIC-100	PSA-1/2 SN(2)	R-63	564	RCIC-20	6A
RCIC-102	STRUT	165	554	RCIC-10	01
RCIC-103	STRUT	165	555	RCIC-10	01
RCIC-104	SPRING	165	556	RCIC-10	01
RCIC-11	BOX	R-11	432	RCIC-20	02
RCIC-12	BOX	R-11	426	RCIC-20	02
RCIC-127	SPRING	180	586	RCIC-10	03
RCIC-129	SPRING	170	596	RCIC-10	03
RCIC-13	BOX	R-11	426	RCIC-20	01
RCIC-14	BOX	R-11	438	RCIC-20	04
RCIC-15	BOX	R-11	438	RCIC-20	04
RCIC-16	BOX	R-11	438	RCIC-20	04

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RCIC-17	BOX	R-11	438	RCIC-20	04
RCIC-19	BOX	R-13	438	RCIC-20	04
RCIC-1C-1	RIGID STRUT	114	528	RCIC-10	03
RCIC-1C-12	RIGID STRUT	114	550	RCIC-10	02
RCIC-1C-13	RIGID STRUT	061	531	RCIC-10	02
RCIC-1C-16	RIGID STRUT	114	537	RCIC-10	02
RCIC-1C-2	RIGID STRUT	114	529	RCIC-10	03
RCIC-1C-5	RIGID STRUT	063	531	RCIC-10	02
RCIC-1C-6	PSA-3 SN(2)	090	531	RCIC-10	02
RCIC-1C-7	RIGID STRUT	114	537	RCIC-10	02
RCIC-1C-9	PSA-10 SNUBBER	120	551	RCIC-10	01
RCIC-2	STRUT	R-11	429	RCIC-20	01
RCIC-20	BOX	R-13	438	RCIC-20	04
RCIC-21	STRUT	R-13	438	RCIC-20	04
RCIC-22	BOX	R-33	472	RCIC-20	05
RCIC-23	STRUT	R-21	468	RCIC-20	02
RCIC-24	STRUT	R-21	469	RCIC-20	02
RCIC-25	STRUT	R-21	465	RCIC-20	02
RCIC-26	PSA-3 SNUBBER	R-31	470	RCIC-20	03
RCIC-27	SPRING	R-31	470	RCIC-20	03
RCIC-28	BOX	R-11	443	RCIC-20	01
RCIC-29	ANCHOR	R-43	502	RCIC-20	05
RCIC-3	SPRING (2)	R-11	438	RCIC-20	01
RCIC-30	SPRING	R-11	435	RCIC-20	01
RCIC-31	SPRING	R-12	424	RCIC-20	01
RCIC-38	PSA-1 SN(2)	R-42	512	RCIC-20	01
RCIC-4	PSA-1 SNUBBER	R-11	440	RCIC-20	02
RCIC-47	BOX	R-21	452	RCIC-20	01
RCIC-5	STRUT(2)	R-21	445	RCIC-20	02
RCIC-52	ANCHOR	R-11	440	RCIC-20	03
RCIC-53	SPRING	R-11	437	RCIC-20	03
RCIC-54	SRING	R-21	447	RCIC-20	03
RCIC-56	SPRING	R-21	452	RCIC-20	01
RCIC-59	SPRING (2)	035	519	RCIC-10	03
RCIC-6	SPRING	R-21	453	RCIC-20	02
RCIC-61	SPRING	059	532	RCIC-10	02
RCIC-66	SPRING	040	531	RCIC-10	02
RCIC-67	SPRING	082	531	RCIC-10	02
RCIC-68	SPRING	102	531	RCIC-10	02
RCIC-7	ANCHOR	R-21	455	RCIC-20	02
RCIC-72	SPRING	114	540	RCIC-10	02
RCIC-74	SPRING	130	550	RCIC-10	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RCIC-75	SPRING	120	547	RCIC-10	01
RCIC-79	BOX	R-53	524	RCIC-20	05
RCIC-8	STRUT	R-21	447	RCIC-20	03
RCIC-80	STRUT	R-63	548	RCIC-20	05
RCIC-82	BOX	R-63	560	RCIC-20	05
RCIC-83	SPRING	R-63	564	RCIC-20	06
RCIC-86	SPRING	R-63	564	RCIC-20	06
RCIC-88	BOX	R-63	564	RCIC-20	06
RCIC-9	BOX	R-11	444	RCIC-20	03
RCIC-90	STRUT	R-63	564	RCIC-20	06
RCIC-901N	STRUT	R-11	433	RCIC-20	04
RCIC-902N	SPRING	R-11	435	RCIC-20	01
RCIC-903N	STRUT	R-11	435	RCIC-20	02
RCIC-904N	BOX	R-11	435	RCIC-20	02
RCIC-91	ANCHOR	R-63	564	RCIC-20	06
RCIC-916N	STRUT	R-11	435	RCIC-20	02
RCIC-927N	ANCHOR	R-11	435	RCIC-20	01
RCIC-93	BOX	R-63	564	RCIC-20	6A
RCIC-934N	STRUT	170	591	RCIC-10	03
RCIC-936N	STRUTS (2)	170	591	RCIC-10	03
RCIC-939N	STRUT	165	570	RCIC-10	02
RCIC-940N	SPRING	170	593	RCIC-10	03
RCIC-941N	SPRING	170	591	RCIC-10	03
RCIC-942N	SPRING	165	567	RCIC-10	02
RCIC-943N	PSA-10 SNUBBER	R-42	512	RCIC-20	01
RCIC-944N	PSA-3 SN(2)	R-42	512	RCIC-20	01
RCIC-945N	PSA-10 SNUBBER	R-42	512	RCIC-20	01
RCIC-946N	STRUT	R-42	512	RCIC-20	01
RCIC-948N	PSA-3 SN(2)	R-63	553	RCIC-10	01
RCIC-95	BOX	R-63	564	RCIC-20	6A
RCIC-952N	BOX	R-33	479	RCIC-20	05
RCIC-954N	BOX	R-23	458	RCIC-20	05
RCIC-955N	BOX	R-13	443	RCIC-20	05
RCIC-956N	STRUT	R-13	438	RCIC-20	04
RCIC-961N	PSA-1/4 SNUBBER	R-21	433	RCIC-20	02
RCIC-966N	STRUT	R-11	442	RCIC-20	07
RCIC-967N	STRUT(2)	R-11	438	RCIC-20	03
RCIC-97	SPRING	R-63	564	RCIC-20	6A
RCIC-971N	PSA-1 SNUBBER	R-11	440	RCIC-20	02
RCIC-973N	STRUT	R-11	438	RCIC-20	02
RCIC-98	STRUT	R-63	564	RCIC-20	6A
RCIC-99	STRUT	R-63	564	RCIC-20	6A

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RCIC-P-1(CS)	PUMP BASE	R-11	422	RCIC-20	04
RFW-146	PSA-10 SN(2)	R-45	519	RFW-101	01
RFW-148	STRUT	R-55	524	RFW-101	01
RFW-151	PSA-35 SNUBBER	R-67	543	RFW-101	03
RFW-152	SPRING	R-65	543	RFW-101	03
RFW-156	SPRING	R-65	546	RFW-101	05
RFW-157	SPRING	R-65	560	RFW-101	05
RFW-158	SPRING	R-64	559	RFW-101	04
RFW-159	SPRING	R-67	560	RFW-101	03
RFW-162	PSA-10 SN(2)	R-44	516	RFW-102	01
RFW-164	STRUT	R-54	523	RFW-102	01
RFW-171	PSA-10 SNUBBER	R-64	545	RFW-102	03
RFW-173	SPRING	R-64	543	RFW-102	03
RFW-175	SPRING	330	545	RFW-102	05
RFW-177	SPRING	R-42	514	RFW-103	
RFW-178	BOX	R-42	514	RFW-103	
RFW-179	SPRING	R-42	514	RFW-103	
RFW-180	PSA-1 SNUBBER	R-42	514	RFW-103	
RFW-181	SPRING	R-42	514	RFW-103	
RFW-182	SPRING	R-44	515	RFW-102	01
RFW-183	SPRING	R-64	560	RFW-102	03
RFW-184	SPRING	270	558	RFW-102	04
RFW-185	SPRING	330	560	RFW-102	05
RFW-186	SPRING	R-45	518	RFW-101	01
RFW-903N	SPRING	R-42	514	RFW-103	
RFW-915N	PSA-10 SNUBBER	R-64	545	RFW-102	03
RFW-929N	PSA-10 SNUBBER	R-67	545	RFW-101	03
RFW-942N	PSA-1 SN(2)	R-42	514	RFW-103	
RHR-1000N	PSA-3 SNUBBER	R-71	593	RHR-201	03
RHR-1001N	PSA-3 SN(2)	R-71	593	RHR-201	03
RHR-1002N	PSA-3 SN(2)	R-73	593	RHR-207	04
RHR-1004N	STRUT	R-52	532	RHR-201	08
RHR-1011S	PIPE CLAMP	R-62	566	RHR-201	07
RHR-1012S	PIPE CLAMP	R-62	566	RHR-201	07
RHR-1017N	SPRING	354	540	RHR-103	
RHR-1019N	STRUT	R-52	527	RHR-201	09
RHR-1020N	STRUT	R-23	465	RHR-207	05
RHR-1021N	PSA-3 SN(2)	R-12	441	RHR-210	01
RHR-1022N	PSA-35 SN(2)	R-42	512	RHR-201	11
RHR-117	SPRING	R-23	447	RHR-209	01
RHR-118	SPRING	R-13	432	RHR-209	02
RHR-119	STRUT	R-11	434	RHR-205	03

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-120	STRUT	R-11	434	RHR-205	03
RHR-121	PSA-10 SN(2)	R-11	436	RHR-206	01
RHR-122	STRUT	R-11	436	RHR-206	01
RHR-123	BOX	R-11	436	RHR-206	01
RHR-124	STRUT	R-11	436	RHR-206	01
RHR-125	STRUT	R-11	436	RHR-206	02
RHR-126	STRUT	R-11	436	RHR-206	02
RHR-127	BOX	R-12	436	RHR-206	02
RHR-128	BOX	R-12	436	RHR-206	02
RHR-129	STRUT	R-12	436	RHR-206	02
RHR-130	BOX	R-12	436	RHR-206	02
RHR-131	STRUT	R-12	436	RHR-206	03
RHR-132	ANCHOR	R-12	436	RHR-206	03
RHR-135	STRUT	R-11	441	RHR-205	04
RHR-136	STRUT	R-21	452	RHR-205	04
RHR-137	PSA-10 SN(2)	R-11	441	RHR-205	04
RHR-138	SPRING	R-21	448	RHR-205	04
RHR-139	SPRING	R-12	434	RHR-211	01
RHR-140	SPRING	R-11	434	RHR-211	02
RHR-142	PSA-1 SN(2)	R-21	468	RHR-201	04
RHR-144	SPRING	R-21	465	RHR-201	04
RHR-146	SPRING	R-21	454	RHR-201	04
RHR-148	BOX	R-21	454	RHR-201	04
RHR-149	STRUT	R-21	454	RHR-201	04
RHR-150	PSA-3 SN(2)	R-31	473	RHR-203	03
RHR-150	SPRING	R-31	473	RHR-203	03
RHR-157	SPRING	R-11	435	RHR-201	01
RHR-158	STRUT	R-11	438	RHR-201	01
RHR-159	STRUT	R-11	438	RHR-201	01
RHR-160	PSA-3 SNUBBER	R-11	438	RHR-201	01
RHR-161	SPRING	R-11	438	RHR-201	01
RHR-162	STRUT	R-11	440	RHR-201	01
RHR-163	STRUT	R-11	441	RHR-201	01
RHR-164	STRUT	R-21	458	RHR-201	02
RHR-165	STRUT	R-21	459	RHR-201	02
RHR-166	SPRING	R-13	434	RHR-205	02
RHR-167	SPRING	R-13	437	RHR-209	02
RHR-174	BOX	R-31	477	RHR-201	02
RHR-176	STRUT	R-11	421	RHR-205	03
RHR-181	SPRING	R-33	473	RHR-207	16
RHR-183	PSA-10 SN(2)	R-33	472	RHR-207	18
RHR-184	STRUT	R-33	477	RHR-207	16

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-185	SPRING	R-43	512	RHR-207	15
RHR-187	SPRING	R-21	446	RHR-201	04
RHR-188	SPRING	R-21	470	RHR-201	02
RHR-218	PSA-10 SN(2)	R-33	494	RHR-207	15
RHR-219	SPRING	R-33	492	RHR-207	17
RHR-228	ANCHOR	R-63	550	RHR-207	11
RHR-230	BOX	R-63	553	RHR-207	11
RHR-231	SPRING	004	530	RHR-101	
RHR-234	BOX	R-52	535	RHR-201	08
RHR-235	PSA-10 SNUBBER	R-52	531	RHR-201	08
RHR-237	STRUT	R-52	535	RHR-201	08
RHR-238	ANCHOR	R-62	550	RHR-201	08
RHR-240	BOX	R-42	519	RHR-201	10
RHR-243	SPRING	R-42	512	RHR-201	11
RHR-244	PSA-35 SNUBBER	R-42	512	RHR-201	11
RHR-245	BOX	R-42	502	RHR-201	11
RHR-247	SPRING	R-32	492	RHR-201	11
RHR-248	SPRING	R-62	560	RHR-202	01
RHR-249	BOX	R-62	560	RHR-202	01
RHR-251	STRUT	R-62	560	RHR-202	01
RHR-252	SPRING	R-62	560	RHR-202	01
RHR-256	PSA-35 SNUBBER	R-61	551	RHR-202	02
RHR-257	SPRING	R-63	561	RHR-202	02
RHR-260	PSA-10 SNUBBER	R-42	512	RHR-201	11
RHR-261	SPRING	R-42	512	RHR-201	11
RHR-262	SPRING	R-62	566	RHR-203	01
RHR-263	SPRING	R-61	562	RHR-201	07
RHR-264	PSA-3 SN(2)	R-61	562	RHR-201	07
RHR-265	SPRING	R-64	566	RHR-203	01
RHR-266	BOX	R-61	566	RHR-201	07
RHR-267	BOX	R-61	566	RHR-201	07
RHR-268	BOX	R-61	566	RHR-201	07
RHR-269	PSA-3 SNUBBER	R-61	566	RHR-201	07
RHR-270	PSA-3 SNUBBER	R-61	566	RHR-201	07
RHR-271	PSA-3 SN(2)	R-61	566	RHR-201	07
RHR-273	PSA-3 SNUBBER	R-61	566	RHR-203	01
RHR-274	PSA-3 SNUBBER	R-61	566	RHR-203	01
RHR-275	PSA-3 SNUBBER	R-61	566	RHR-203	01
RHR-276	PSA-3 SN(2)	R-61	566	RHR-203	01
RHR-277	PSA-3 SNUBBER	R-61	566	RHR-203	01
RHR-278	BOX	R-61	566	RHR-203	01
RHR-279	SPRING	R-61	566	RHR-203	01

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-280	SPRING	R-61	566	RHR-201	07
RHR-282	PSA-35 SNUBBER	354	561	RHR-103	
RHR-286	PSA-10 SN(2)	354	545	RHR-103	
RHR-287	PSA-35 SNUBBER	320	563	RHR-103	
RHR-295	BOX	R-22	460	RHR-210	04
RHR-296	SPRING	R-22	458	RHR-210	04
RHR-297	RIGID	R-22	458	RHR-210	04
RHR-298	BOX	R-22	447	RHR-210	01
RHR-301	PSA-3 SNUBBER	R-22	447	RHR-210	01
RHR-302	STRUT	R-22	447	RHR-210	01
RHR-303	SPRING	R-22	447	RHR-210	01
RHR-304	STRUT	R-22	447	RHR-210	01
RHR-311	PSA-3 SN(2)	R-12	444	RHR-210	01
RHR-316	SPRING	R-22	450	RHR-210	04
RHR-318	RIGID	R-22	450	RHR-210	06
RHR-319	RIGID	R-22	450	RHR-210	06
RHR-320	SPRING	R-22	463	RHR-210	06
RHR-321	SPRING	R-12	441	RHR-210	01
RHR-322	BOX	R-12	441	RHR-210	01
RHR-323	SPRING	R-12	430	RHR-210	01
RHR-324	STRUT	R-12	434	RHR-210	02
RHR-337	STRUT	R-12	435	RHR-210	02
RHR-338	SPRING	R-12	439	RHR-210	02
RHR-345	PSA-1 SN(2)	R-22	449	RHR-210	03
RHR-346	STRUT	R-22	452	RHR-210	03
RHR-347	BOX	R-22	452	RHR-210	03
RHR-348	SPRING	R-22	453	RHR-210	03
RHR-349	SPRING	R-22	458	RHR-210	03
RHR-35	SPRING	R-12	424	RHR-211	02
RHR-350	SPRING	R-52	527	RHR-201	09
RHR-351	SPRING	R-61	566	RHR-201	07
RHR-352	STRUT	R-62	564	RHR-201	07
RHR-353	STRUT	R-62	565	RHR-201	07
RHR-354	SPRING	R-61	556	RHR-201	05
RHR-355	STRUT	R-61	560	RHR-201	05
RHR-356	STRUT	R-61	560	RHR-201	05
RHR-357	PSA-10 SNUBBER	R-61	550	RHR-201	05
RHR-358	BOX	R-61	550	RHR-201	05
RHR-359	PSA-3 SNUBBER	R-61	550	RHR-201	05
RHR-360	SPRING	R-61	550	RHR-201	05
RHR-361	PSA-3 SNUBBER	R-61	550	RHR-201	05
RHR-362	STRUT	R-61	550	RHR-201	05

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-363	SPRING	R-61	550	RHR-201	05
RHR-365	STRUT	R-61	553	RHR-201	06
RHR-366	STRUT	R-61	553	RHR-201	06
RHR-367	SPRING	R-61	562	RHR-201	06
RHR-368	STRUT	R-61	556	RHR-201	06
RHR-369	STRUT	R-61	560	RHR-203	01
RHR-37	BOX	R-12	427	RHR-211	02
RHR-381	PSA-10 SN(2)	004	550	RHR-101	
RHR-382	PSA-35 SNUBBER	004	558	RHR-101	
RHR-383	PSA-35 SNUBBER	015	562	RHR-101	
RHR-388	PSA-10 SN(2)	135	557	RHR-102	
RHR-389	PSA-35 SNUBBER	135	561	RHR-102	
RHR-39	PSA-3 SN(2)	R-12	434	RHR-211	01
RHR-390	PSA-35 SNUBBER	135	563	RHR-102	
RHR-391	ANCHOR	R-21	462	RHR-212	
RHR-392	BOX	R-21	451	RHR-212	
RHR-393	BOX	R-21	448	RHR-212	
RHR-394	SPRING	R-11	440	RHR-212	
RHR-395	SPRING	R-21	462	RHR-212	
RHR-40	STRUT	R-12	434	RHR-211	01
RHR-405	PSA-3 SNUBBER	R-61	560	RHR-203	01
RHR-406	PSA-3 SNUBBER	R-61	560	RHR-203	01
RHR-407	SPRING	R-61	560	RHR-203	01
RHR-408	STRUT	R-61	557	RHR-203	02
RHR-409	BOX	R-51	547	RHR-203	02
RHR-41	BOX	R-12	435	RHR-211	01
RHR-410	ANCHOR	R-51	524	RHR-203	02
RHR-411	BOX	R-31	500	RHR-203	02
RHR-412	STRUT	R-31	494	RHR-203	02
RHR-414	PSA-3 SN(2)	R-31	494	RHR-203	02
RHR-415	STRUT	R-31	494	RHR-203	02
RHR-416	PSA-10 SN(2)	R-31	494	RHR-203	02
RHR-417	STRUT	R-31	476	RHR-203	03
RHR-419	PSA-3 SN(2)	R-31	492	RHR-203	03
RHR-42	PSA-3 SNUBBER	R-12	434	RHR-211	03
RHR-420	SPRING	R-31	485	RHR-203	03
RHR-423	SPRING	R-12	436	RHR-206	02
RHR-425	SPRING	225	510	RHR-104	
RHR-428	SPRING	225	510	RHR-104	
RHR-43	SPRING	R-12	434	RHR-211	03
RHR-431	SPRING	225	510	RHR-104	
RHR-432	SPRING	R-12	436	RHR-206	03

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-433	SPRING	R-63	563	RHR-207	07
RHR-434	BOX	R-63	553	RHR-207	07
RHR-435	STRUT	R-63	553	RHR-207	07
RHR-436	BOX	R-63	553	RHR-207	07
RHR-437	PSA-3 SN(2)	R-63	563	RHR-207	07
RHR-438	STRUT	R-63	563	RHR-207	07
RHR-459	STRUT	R-63	551	RHR-207	08
RHR-46	BOX	R-12	438	RHR-211	01
RHR-461	SPRING	R-63	557	RHR-207	06
RHR-462	SPRING	R-63	566	RHR-207	07
RHR-463	PSA-3 SNUBBER	R-63	566	RHR-207	09
RHR-464	BOX	R-63	566	RHR-207	09
RHR-465	PSA-3 SN(2)	R-63	566	RHR-207	09
RHR-466	PSA-3 SNUBBER	R-63	566	RHR-207	09
RHR-467	STRUT	R-63	566	RHR-207	09
RHR-468	SPRING	R-63	566	RHR-207	09
RHR-469	SPRING	R-63	566	RHR-207	09
RHR-47	STRUT	R-22	445	RHR-211	01
RHR-470	STRUT	R-63	561	RHR-207	09
RHR-471	SPRING	R-11	434	RHR-205	02
RHR-472	PSA-3 SNUBBER	R-63	561	RHR-207	09
RHR-473	SPRING	R-63	561	RHR-207	09
RHR-475	ANCHOR	R-63	550	RHR-207	10
RHR-476	BOX	R-63	556	RHR-207	11
RHR-478	SPRING	R-53	541	RHR-207	10
RHR-479	PSA-3 SN(2)	R-53	538	RHR-207	10
RHR-480	STRUT	R-53	538	RHR-207	10
RHR-481	PSA-35 SNUBBER	R-53	537	RHR-207	10
RHR-482	STRUT	135	525	RHR-102	
RHR-483	SPRING	135	532	RHR-102	
RHR-485	PSA-10 SNUBBER	R-43	519	RHR-207	10
RHR-486	SPRING	R-53	533	RHR-207	10
RHR-488	ANCHOR	R-43	515	RHR-207	12
RHR-49	STRUT	R-11	434	RHR-211	02
RHR-491	SPRING	R-43	517	RHR-207	12
RHR-492	PSA-3 SN(2)	R-43	517	RHR-207	12
RHR-493	SPRING	R-43	515	RHR-207	13
RHR-494	PSA-10 SNUBBER	R-43	515	RHR-207	13
RHR-495	PSA-35 SN(2)	R-43	515	RHR-207	13
RHR-496	PSA-10 SNUBBER	R-43	515	RHR-207	13
RHR-497	SPRING	R-43	515	RHR-207	13
RHR-498	SPRING	R-41	511	RHR-207	14

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-50	PSA-3 SNB/STRUT	R-11	434	RHR-211	02
RHR-500	PSA-10 SNUBBER	R-41	515	RHR-207	13
RHR-501	SPRING	R-41	511	RHR-207	14
RHR-502	PSA-35 SNUBBER	R-41	511	RHR-207	14
RHR-503	PSA-35 SNUBBER	R-41	511	RHR-207	14
RHR-504	SPRING	085	509	RHR-105	
RHR-506	SPRING	100	509	RHR-105	
RHR-51	STRUT	R-11	434	RHR-211	02
RHR-510	SPRING	080	509	RHR-105	
RHR-512	SPRING	265	509	RHR-106	
RHR-514	SPRING	280	509	RHR-106	
RHR-518	SPRING	275	509	RHR-106	
RHR-52	PSA-3 SNUBBER	R-63	551	RHR-207	08
RHR-520	RIGID	165	550	RCIC-10	01
RHR-521	SPRING	135	563	RHR-102	
RHR-522	SPRING	135	557	RHR-102	
RHR-523	SPRING	135	534	RHR-102	
RHR-524	SPRING	354	556	RHR-103	
RHR-525	SPRING	315	563	RHR-103	
RHR-526	SPRING	354	534	RHR-103	
RHR-527	SPRING	004	534	RHR-101	
RHR-528	SPRING	004	544	RHR-101	
RHR-529	SPRING	025	563	RHR-101	
RHR-53	SPRING	R-63	556	RHR-207	08
RHR-539	STRUT	R-53	522	RHR-207	03
RHR-540	STRUT	R-53	522	RHR-207	03
RHR-548	PSA-3 SN(2)	R-63	548	RHR-207	03
RHR-55	BOX	R-12	438	RHR-206	03
RHR-551	PSA-3 SN(2)	R-63	568	RHR-207	03
RHR-552	STRUT	R-73	575	RHR-207	03
RHR-553	STRUT	R-73	575	RHR-207	03
RHR-554	STRUT	R-73	575	RHR-207	04
RHR-555	SPRING	R-73	587	RHR-207	04
RHR-556	STRUT	R-73	593	RHR-207	04
RHR-557	STRUT	R-63	550	RHR-207	06
RHR-558	PSA-3 SNUBBER	R-63	550	RHR-207	06
RHR-559	SPRING	R-63	550	RHR-207	06
RHR-56	SPRING	R-11	434	RHR-205	02
RHR-560	SPRING	R-63	550	RHR-207	06
RHR-561	STRUT	R-63	550	RHR-207	06
RHR-562	PSA-3 SNUBBER	R-63	550	RHR-207	06
RHR-563	PSA-1 SN(2)	R-63	550	RHR-207	06

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-564	STRUT	R-63	560	RHR-207	06
RHR-565	STRUT	R-63	560	RHR-207	06
RHR-58	ANCHOR	R-11	434	RHR-205	02
RHR-581	STRUT	R-73	595	RHR-208	02
RHR-59	PSA-10 SNUBBER	R-13	434	RHR-205	02
RHR-597	STRUT	R-71	597	RHR-204	02
RHR-598	SPRING	R-71	593	RHR-201	03
RHR-599	STRUT	R-71	590	RHR-201	03
RHR-60	PSA-3 SNUBBER	R-13	434	RHR-205	02
RHR-600	STRUT	R-71	575	RHR-201	03
RHR-601	STRUT	R-71	575	RHR-201	03
RHR-603	STRUT	R-61	562	RHR-201	02
RHR-604	SPRING	R-61	567	RHR-201	02
RHR-605	STRUT	R-51	523	RHR-201	02
RHR-606	STRUT	R-51	512	RHR-201	02
RHR-608	SPRING	R-73	597	RHR-208	02
RHR-609	SPRING	R-63	560	RHR-207	06
RHR-61	PSA-10 SNUBBER	R-13	434	RHR-205	02
RHR-62	SPRING	R-13	434	RHR-205	02
RHR-66	SPRING	R-13	434	RHR-205	01
RHR-67	PSA-3 SNUBBER	R-13	437	RHR-205	01
RHR-68	STRUT	R-13	437	RHR-205	01
RHR-69	STRUT	R-23	462	RHR-205	01
RHR-70	STRUT	R-23	462	RHR-205	01
RHR-71	ANCHOR	R-33	483	RHR-205	01
RHR-76	SPRING	R-23	465	RHR-205	01
RHR-77	SPRING	R-33	490	RHR-205	01
RHR-78	SPRING	200	504	RHR-104	
RHR-79	SPRING	R-13	437	RHR-209	02
RHR-80	STRUT	R-13	437	RHR-209	02
RHR-81	STRUT	R-13	421	RHR-209	02
RHR-84	ANCHOR	R-13	438	RHR-209	01
RHR-87	PSA-10 SNUBBER	R-51	525	RHR-103	
RHR-90	BOX	R-52	525	RHR-210	05
RHR-900N	STRUT	R-22	450	RHR-211	01
RHR-901N	PSA-3 SN(2)	R-33	501	RHR-207	15
RHR-902N	PSA-10 SNUBBER	R-33	478	RHR-207	16
RHR-903N	PSA-3 SNUBBER	R-33	492	RHR-207	17
RHR-904N	STRUT	R-23	452	RHR-209	01
RHR-905N	STRUT	R-22	452	RHR-211	01
RHR-906N	PSA-10 SN(2)	R-33	474	RHR-207	18
RHR-907N	PSA-35 SNUBBER	R-53	525	RHR-102	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-908N	PSA-3 SN(2)	R-43	517	RHR-207	12
RHR-909N	STRUT	R-21	452	RHR-205	04
RHR-91	STRUT	R-52	525	RHR-210	05
RHR-910N	STRUT	R-41	511	RHR-207	13
RHR-911N	STRUT	R-43	509	RHR-207	13
RHR-912N	PSA-10 SNUBBER	R-33	499	RHR-207	15
RHR-913N	PSA-3 SNUBBER	R-33	492	RHR-207	17
RHR-914N	PSA-10 SNUBBER	R-33	474	RHR-207	18
RHR-915N	PSA-10 SNUBBER	R-33	479	RHR-207	16
RHR-916N	RIGID	R-12	436	RHR-206	03
RHR-917N	SPRING	R-11	430	RHR-205	03
RHR-918N	BOX	R-13	441	RHR-207	01
RHR-919N	BOX	R-23	446	RHR-207	01
RHR-920N	BOX	R-23	460	RHR-207	02
RHR-921N	BOX	R-33	486	RHR-207	02
RHR-922N	PSA-1 SNUBBER	R-23	456	RHR-207	05
RHR-923N	SPRING	R-13	434	RHR-207	01
RHR-924N	SPRING	R-23	464	RHR-207	02
RHR-925N	SPRING	R-23	465	RHR-207	05
RHR-926N	SPRING	R-13	441	RHR-207	01
RHR-927N	SPRING	R-23	465	RHR-207	05
RHR-928N	SPRING	R-23	446	RHR-207	05
RHR-929N	SPRING	R-13	441	RHR-207	01
RHR-931N	SPRING	R-33	480	RHR-207	18
RHR-932N	SPRING	R-23		RHR-207	18
RHR-934N	SPRING	R-33	475	RHR-224	
RHR-937N	RIGID	R-33	480	RHR-207	18
RHR-94	STRUT	R-42	517	RHR-210	05
RHR-940N	PSA-3 SN(2)	R-33	480	RHR-224	
RHR-941N	PSA-10 SNUBBER	R-52	527	RHR-101	
RHR-942N	PSA-1 SN(2)	R-23	454	RHR-207	05
RHR-943N	PSA-3 SNUBBER	R-13	441	RHR-207	01
RHR-944N	PSA-3 SNUBBER	R-13	441	RHR-207	01
RHR-945N	PSA-1 SN(2)	R-23	458	RHR-207	05
RHR-946N	PSA-3 SNUBBER	R-31	468	RHR-203	05
RHR-947N	PSA-3 SN(2)	R-31	473	RHR-203	03
RHR-948N	PSA-3 SN(2)	R-31	473	RHR-203	03
RHR-95	SPRING	R-42	517	RHR-210	05
RHR-952N	PSA-3 SNUBBER	R-31	486	RHR-203	04
RHR-954N	PSA-1 SN(2)	R-31	477	RHR-216	
RHR-956N	BOX	R-63	566	RHR-207	09
RHR-958N	ANCHOR	R-62	556	RHR-202	02

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-959N	PSA-3 SN(2)	R-33	480	RHR-224	
RHR-96	BOX	R-42	517	RHR-210	05
RHR-962N	PSA-10 SNUBBER	R-33	480	RHR-207	18
RHR-963N	BOX	R-32	498	RHR-201	11
RHR-964N	ANCHOR	R-42	512	RHR-201	10
RHR-965N	ANCHOR	R-52	527	RHR-201	09
RHR-966N	ANCHOR	R-12	438	RHR-211	01
RHR-967N	ANCHOR	R-23	465	RHR-207	05
RHR-968N	ANCHOR	R-33	488	RHR-207	03
RHR-97	BOX	R-42	505	RHR-210	05
RHR-970N	ANCHOR	R-31	501	RHR-201	02
RHR-971N	ANCHOR	R-21	465	RHR-201	04
RHR-972N	BOX	R-22	446	RHR-210	03
RHR-973N	ANCHOR	R-22	444	RHR-210	02
RHR-974N	PSA-3 SNUBBER	R-31	468	RHR-203	03
RHR-976N	STRUT	R-43	515	RHR-207	12
RHR-977N	PSA-3 SN(2)	R-31	486	RHR-203	04
RHR-979N	RIGID	165	550	RCIC-10	01
RHR-98	STRUT	R-42	504	RHR-210	05
RHR-980N	PSA-10 SNUBBER	R-73	593	RHR-207	04
RHR-984N	SPRING	R-71	597	RHR-204	02
RHR-986N	PSA-1 SNUBBER	R-31	476	RHR-203	04
RHR-987N	RIGID	R-31	474	RHR-232	05
RHR-99	ANCHOR	R-32	471	RHR-210	04
RHR-990N	BOX	R-21	462	RHR-212	
RHR-996N	ANCHOR	R-52	525	RHR-210	05
RHR-997N	ANCHOR	R-22	455	RHR-210	06
RHR-998N	PSA-3 SNUBBER	R-63	551	RHR-207	08
RHR-999N	STRUT	R-22	456	RHR-210	04
RHR-HX-1A(CS)	HX BASE	R-71	572	RHR-214	
RHR-HX-1B(CS)	HX BASE	R-73	572	RHR-214	
RHR-P-2A(CS)	RHR PUMP BASE	R-11	422	RHR-213	
RHR-P-2B(CS)	RHR PUMP BASE	R-13	422	RHR-213	
RHR-P-2C(CS)	RHR PUMP BASE	R-12	422	RHR-213	
RHR-SA-30	PSA-10 SN(2)	R-45	509	RRC-106	
RHR-SA-31	PSA-10 SNUBBER	R-45	509	RRC-106	
RHR-SA-32	PSA-10 SN(2)	085	510	RHR-105	
RHR-SA-33	PSA-10 SNUBBER	085	509	RHR-105	
RHR-SA-34	PSA-35 SNUBBER	080	509	RHR-105	
RHR-SA-35	PSA-10 SNUBBER	100	510	RHR-105	
RHR-SA-36	PSA-35 SNUBBER	100	509	RHR-105	
RHR-SA-37	PSA-35 SNUBBER	100	509	RHR-105	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RHR-SA-38	PSA-10 SNUBBER	100	510	RHR-105	
RHR-SA-39	PSA-10 SN(2)	085	509	RHR-105	
RHR-SA-40	PSA-10 SNUBBER	090	509	RHR-105	
RHR-SA-50	PSA-35 SNUBBER	R-46	512	RRC-105	
RHR-SA-51	PSA-35 SNUBBER	R-46	510	RRC-105	
RHR-SA-52	PSA-10 SNUBBER	R-46	510	RRC-105	
RHR-SA-53	PSA-10 SNUBBER	225	510	RHR-104	
RHR-SA-54	PSA-35 SNUBBER	225	510	RHR-104	
RHR-SA-55	PSA-100 SNUBBER	225	511	RHR-104	
RHR-SA-56	PSA-10 SNUBBER	225	514	RHR-104	
RHR-SA-57	PSA-35 SNUBBER	225	510	RHR-104	
RHR-SA-58	PSA-35 SN(2)	225	510	RHR-104	
RHR-SA-59	PSA-35 SNUBBER	225	511	RHR-104	
RHR-SB-30	PSA-10 SNUBBER	R-46	509	RRC-107	
RHR-SB-31	PSA-10 SNUBBER	R-46	509	RRC-107	
RHR-SB-32	PSA-10 SNUBBER	275	509	RHR-106	
RHR-SB-33	PSA-10 SNUBBER	275	504	RHR-106	
RHR-SB-34	PSA-10 SN(2)	280	513	RHR-106	
RHR-SB-35	PSA-10 SNUBBER	280	510	RHR-106	
RHR-SB-36	PSA-10 SNUBBER	280	509	RHR-106	
RHR-SB-37	PSA-10 SNUBBER	280	509	RHR-106	
RHR-SB-38	PSA-10 SNUBBER	280	510	RHR-106	
RHR-SB-39	PSA-3 SN(2)	265	509	RHR-106	
RHR-SB-40	STRUT	265	509	RHR-106	
RPV STAB 0	STABLIZER	R-68	570	RPV-101	
RPV STAB 135	STABLIZER	R-68	570	RPV-101	
RPV STAB 180	STABLIZER	R-68	570	RPV-101	
RPV STAB 225	STABLIZER	R-68	570	RPV-101	
RPV STAB 270	STABLIZER	R-68	570	RPV-101	
RPV STAB 315	STABLIZER	R-68	570	RPV-101	
RPV STAB 45	STABLIZER	R-68	570	RPV-101	
RPV STAB 90	STABLIZER	R-68	570	RPV-101	
RPV(CS)	SKIRT & BAS PLT	R-48	516	RPV-101	
RRC-1	SPRING	R-46	513	RRC-105	
RRC-10	SPRING	R-46	509	RRC-107	
RRC-11	SPRING	225	510	RHR-104	
RRC-12	SPRING	015	514	RRC-104	
RRC-1C-1	PSA-1 SN(2)	015	514	RRC-104	
RRC-1C-6PS	STRUT	010	500	RRC-109	
RRC-1C-8PS	STRUT	R-35	500	RRC-108	
RRC-1C-900N	PSA-1 SN(2)	R-45	514	RRC-104	
RRC-2	SPRING	R-37	500	RRC-108	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RRC-3	SPRING	R-37	500	RRC-108	
RRC-4	SPRING	R-35	500	RRC-108	
RRC-4470-31	PSA-1 SNUBBER	324	500	RRC-111	
RRC-6	SPRING	354	500	RRC-109	
RRC-9	SPRING	R-45	509	RRC-106	
RRC-900N	STRUT	135	506	RRC-103	
RRC-901N	STRUT	315	506	RRC-103	
RRC-HA-1	SPRING	180	524	RRC-101	01
RRC-HA-2	SPRING	141	528	RRC-103	
RRC-HA-3	SPRING	141	526	RRC-103	
RRC-HA-4	SPRING	141	528	RRC-103	
RRC-HA-5	SPRING	141	526	RRC-103	
RRC-HA-7	SPRING	100	506	RRC-101	02
RRC-HA-8	SPRING	082	528	RRC-101	03
RRC-HA-9	SPRING	080	528	RRC-101	03
RRC-HB-1	SPRING (2)	000	524	RRC-102	01
RRC-HB-2	SPRING	315	528	RRC-103	
RRC-HB-3	SPRING	315	526	RRC-103	
RRC-HB-4	SPRING	315	528	RRC-103	
RRC-HB-5	SPRING	315	528	RRC-103	
RRC-HB-7	SPRING	270	506	RRC-102	02
RRC-HB-8	SPRING	280	528	RRC-102	03
RRC-HB-9	SPRING	264	528	RRC-102	03
RRC-RA-1	STRUT	170	506	RRC-103	
RRC-RB-1	STRUT	315	506	RRC-103	
RRC-SA-1	PSA-35 SNUBBER	180	510	RRC-101	01
RRC-SA-11	PSA-35 SNUBBER	120	528	RRC-101	03
RRC-SA-12	PSA-35 SNUBBER	045	528	RRC-101	03
RRC-SA-13	PSA-35 SNUBBER	110	528	RRC-101	03
RRC-SA-14	PSA-35 SNUBBER	040	528	RRC-101	03
RRC-SA-15	PSA-35 SNUBBER	090	506	RRC-101	02
RRC-SA-16	PSA-35 SNUBBER	180	503	RRC-101	01
RRC-SA-17	PSA-35 SNUBBER	090	526	RRC-101	02
RRC-SA-18	PSA-35 SNUBBER	090	526	RRC-101	02
RRC-SA-19	PSA-35 SNUBBER	108	520	RRC-101	01
RRC-SA-2	PSA-35 SNUBBER	180	512	RRC-101	01
RRC-SA-20	PSA-35 SNUBBER	180	520	RRC-101	01
RRC-SA-25	PSA-35 SNUBBER	180	511	RRC-101	01
RRC-SA-3	PSA-100 SNUBBER	156	522	RRC-103	
RRC-SA-4	PSA-100 SNUBBER	135	522	RRC-103	
RRC-SA-5	PSA-100 SNUBBER	130	523	RRC-103	
RRC-SA-6	PSA-100 SNUBBER	135	503	RRC-103	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RRC-SA-65	PSA-35 SNUBBER	104	506	RRC-101	02
RRC-SA-66	PSA-35 SNUBBER	155	506	RRC-101	02
RRC-SA-7	PSA-35 SNUBBER	105	506	RRC-101	02
RRC-SA-8	PSA-35 SNUBBER	090	519	RRC-101	02
RRC-SA-9	PSA-35 SNUBBER	090	520	RRC-101	02
RRC-SB-1	PSA-35 SNUBBER	000	509	RRC-102	01
RRC-SB-11	PSA-35 SNUBBER	225	528	RRC-102	03
RRC-SB-12	PSA-35 SNUBBER	300	528	RRC-102	03
RRC-SB-13	PSA-35 SNUBBER	225	528	RRC-102	03
RRC-SB-14	PSA-35 SNUBBER	295	528	RRC-102	03
RRC-SB-15	PSA-35 SNUBBER	270	506	RRC-102	02
RRC-SB-16	PSA-35 SN(2)	000	518	RRC-102	01
RRC-SB-17	PSA-35 SNUBBER	270	526	RRC-102	02
RRC-SB-18	PSA-35 SNUBBER	270	526	RRC-102	02
RRC-SB-2	PSA-35 SNUBBER	000	508	RRC-102	01
RRC-SB-25	PSA-35 SNUBBER	000	515	RRC-102	01
RRC-SB-3	PSA-100 SNUBBER	315	523	RRC-103	
RRC-SB-4	PSA-100 SNUBBER	315	523	RRC-103	
RRC-SB-5	PSA-100 SNUBBER	315	523	RRC-103	
RRC-SB-6	PSA-100 SNUBBER	317	502	RRC-103	
RRC-SB-65	PSA-35 SNUBBER	270	506	RRC-102	02
RRC-SB-66	PSA-35 SNUBBER	R-44	506	RRC-102	02
RRC-SB-7	PSA-35 SNUBBER	270	506	RRC-102	02
RRC-SB-8	PSA-35 SNUBBER	270	518	RRC-102	02
RRC-SB-9	PSA-35 SNUBBER	270	518	RRC-102	02
RWCU-139	SPRING	150	541	RWCU-10	04
RWCU-140	SPRING	130	538	RWCU-10	04
RWCU-141	SPRING	090	538	RWCU-10	04
RWCU-142	SPRING	090	533	RWCU-10	03
RWCU-143	SPRING	045	500	RWCU-10	01
RWCU-144	SPRING	045	505	RWCU-10	01
RWCU-145	SPRING	075	500	RWCU-10	02
RWCU-146	SPRING	075	500	RWCU-10	02
RWCU-1C-1	STRUT	075	541	RWCU-10	04
RWCU-1C-16	PSA-1 SNUBBER	045	500	RWCU-10	01
RWCU-1C-17	PSA-1 SN(2)	045	508	RWCU-10	01
RWCU-1C-1PS	PIPE STOP	150	538	RWCU-10	04
RWCU-1C-2	PSA-1 SNUBBER	140	538	RWCU-10	04
RWCU-1C-2PS	STRUT	100	538	RWCU-10	04
RWCU-1C-3	PSA-3 SN(2)	090	538	RWCU-10	04
RWCU-1C-3PS	STRUT	075	532	RWCU-10	03
RWCU-1C-4PS	STRUT	075	509	RWCU-10	03

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
RWCU-1C-5	PSA-3 SNUBBER	075	513	RWCU-10	03
RWCU-1C-5PS	STRUT	075	512	RWCU-10	03
RWCU-1C-6	PSA-3 SNUBBER	075	501	RWCU-10	03
RWCU-1C-7	PSA-3 SNUBBER	075	500	RWCU-10	02
RWCU-1C-7PS	STRUT	075	500	RWCU-10	02
RWCU-1C-8	PSA-3 SNUBBER	075	501	RWCU-10	03
RWCU-1C-9PS	STRUT	045	500	RWCU-10	01
RWCU-927N	PSA-3 SNUBBER	R-53	538	RWCU-30	
RWCU-928N	PSA-10 SNUBBER	R-53	538	RWCU-30	
SDV-A(CS)	SDV BASE	R-51	524	CRD-201	
SDV-B(CS)	SDV BASE	R-52	524	CRD-202	
SLC-4453-13	RIGID	R-63	557	SLC-101	01
SLC-4453-14	RIGID	R-63	557	SLC-101	01
SLC-4453-21	RIGID	R-63	557	SLC-101	01
SLC-4453-210	RIGID	R-63	566	SLC-101	01
SLC-4453-211	RIGID	R-63	557	SLC-101	01
SLC-4453-212	RIGID	R-63	555	SLC-101	01
SLC-4453-213	RIGID	R-63	555	SLC-101	01
SLC-4453-214	RIGID	R-63	568	SLC-101	01
SLC-4453-215	RIGID	R-63	568	SLC-101	01
SLC-4453-22	RIGID	R-63	557	SLC-101	01
SLC-4453-23	RIGID	R-63	557	SLC-101	01
SLC-4453-24	RIGID	R-63	557	SLC-101	01
SLC-4453-25A	RIGID	R-63	557	SLC-101	01
SLC-4453-26B	RIGID	R-63	560	SLC-101	01
SLC-4453-29	RIGID	R-63	568	SLC-101	01
SLC-4453-31	RIGID	R-63	553	SLC-101	02
SLC-4453-32	RIGID	R-63	548	SLC-101	02
SLC-4453-33	RIGID	R-63	543	SLC-101	02
SLC-4453-35	RIGID	R-63	541	SLC-101	02
SLC-4453-36	RIGID	R-63	541	SLC-101	02
SLC-4453-38	RIGID	R-63	541	SLC-101	02
SLC-4453-41	RIGID	R-53	541	SLC-101	03
SLC-4453-42	RIGID	R-53	541	SLC-101	03
SLC-4453-43	RIGID	R-53	541	SLC-101	03
SLC-4453-44	RIGID	R-53	541	SLC-101	03
SLC-4453-45	RIGID	R-53	543	SLC-101	03
SLC-4453-46	RIGID	R-53	543	SLC-101	03
SLC-4453-55	RIGID	R-53	543	SLC-101	04
SLC-4453-56	RIGID	R-53	542	SLC-101	04
SLC-4453-57	RIGID	R-53	541	SLC-101	04
SLC-4453-63	RIGID	R-53	538	SLC-101	04

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SLC-4453-65	RIGID	R-53	538	SLC-101	04
SLC-4453-68	STRUT	R-53	540	SLC-101	04
SLC-4475-11	RIGID	200	538	SLC-101	05
SLC-4475-110	RIGID	206	515	SLC-101	06
SLC-4475-112	STRUT	206	515	SLC-101	06
SLC-4475-113	STRUT	206	518	SLC-101	06
SLC-4475-114	STRUT	206	518	SLC-101	06
SLC-4475-117	STRUT	180	519	SLC-101	06
SLC-4475-12	STRUT	200	538	SLC-101	05
SLC-4475-120	STRUT	200	538	SLC-101	05
SLC-4475-121	SPRING	206	515	SLC-101	06
SLC-4475-122	STRUT	200	538	SLC-101	05
SLC-4475-17	RIGID	205	519	SLC-101	05
SLC-4475-18	RIGID	206	517	SLC-101	05
SLC-4475-19	STRUT	206	515	SLC-101	05
SLC-4475-21	PSA-1 SNUBBER	240	550	SLC-101	05
SLC-4475-22	SPRING	240	550	SLC-101	05
SLC-4475-24	STRUT	220	545	SLC-101	05
SLC-4475-25	STRUT	200	538	SLC-101	05
SLC-TK-1(CS)	SLC TK SUPPORT			SLC-101	06
SW RING HDR A(CS)	RING HDR SUPPT	E	436	SW-307	05
SW RING HDR B(CS)	RING HDR SUPPT	E	436	SW-303	08
SW-1022N	RIGID	R-51	535	SW-313	
SW-1032N	RIGID	R-51	535	SW-313	
SW-118	SPRING	R-53	536	SW-305	04
SW-119	SPRING (2)	R-43	510	SW-305	03
SW-120	BOX	R-31	500	SW-301	05
SW-121	SPRING (2)	R-41	503	SW-301	05
SW-122	SPRING (2)	R-51	548	SW-301	06
SW-123	RIGID	R-61	549	SW-301	06
SW-124	PSA-35 SN(2)	R-61	557	SW-301	06
SW-126	STRUT	R-22	462	SW-301	04
SW-127	STRUT	R-13	432	SW-303	06
SW-128	BOX	R-13	435	SW-303	06
SW-129	BOX	R-13	435	SW-303	06
SW-13	BOX	H21A	442	SW-309	
SW-130	RIGID	R-13	435	SW-303	06
SW-131	BOX	R-13	439	SW-303	06
SW-132	STRUT	R-23	458	SW-303	06
SW-133	STRUT	R-23	460	SW-303	05
SW-134	STRUT	R-23	460	SW-303	05
SW-135	STRUT	R-23	460	SW-303	05

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SW-136	BOX	R-23	460	SW-303	05
SW-138	BOX	R-22	460	SW-303	05
SW-139	STRUT	R-22	460	SW-303	04
SW-140	BOX	R-22	460	SW-303	04
SW-141	STRUT	R-22	460	SW-303	04
SW-143	STRUT	R-21	460	SW-303	03
SW-144	BOX	R-21	460	SW-303	03
SW-145	BOX	R-21	460	SW-303	03
SW-146	STRUT	R-21	460	SW-303	03
SW-147	BOX	R-31	475	SW-303	03
SW-148	SPRING (2)	R-31	473	SW-303	03
SW-149	BOX	R-41	505	SW-303	02
SW-150	SPRING (2)	R-41	503	SW-303	02
SW-151	STRUT	R-51	542	SW-303	02
SW-153	BOX	R-61	552	SW-303	02
SW-154	STRUT	R-61	554	SW-303	01
SW-155	BOX	R-61	559	SW-303	01
SW-156	STRUT	R-61	562	SW-303	01
SW-171	STRUT	R-22	462	SW-301	04
SW-172	STRUT	R-23	458	SW-301	02
SW-173	STRUT	R-22	462	SW-301	03
SW-174	BOX	H21A	443	SW-301	01
SW-179	STRUT	R-43	502	SW-305	03
SW-180	STRUT	R-33	500	SW-307	02
SW-19	BOX	H11B	433	SW-307	04
SW-194	STRUT	R-33	472	SW-305	03
SW-195	BOX	R-33	474	SW-307	03
SW-196	STRUT	R-43	520	SW-305	03
SW-197	BOX	R-43	519	SW-307	02
SW-198	BOX	H21B	443	SW-305	01
SW-20	BOX	H11A	433	SW-303	07
SW-200	STRUT	R-21	462	SW-301	05
SW-201	STRUT	R-21	462	SW-301	05
SW-202	STRUT	R-51	523	SW-301	05
SW-207	STRUT	R-22	460	SW-303	05
SW-208	STRUT	R-21	460	SW-303	03
SW-212	BOX	R-51	527	SW-303	02
SW-22	SPRING	R-63	554	SW-305	04
SW-227	STRUT	R-13	432	SW-303	06
SW-228	STRUT	R-21	460	SW-303	03
SW-229	STRUT	R-21	464	SW-303	03
SW-23	SPRING	R-63	562	SW-305	04

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SW-230	BOX	R-23	449	SW-303	06
SW-231	BOX	D-11	448	SW-302	
SW-232	BOX	D-11	448	SW-302	
SW-233	BOX	D-11	448	SW-302	
SW-234	BOX	D-11	448	SW-302	
SW-235	BOX	D-11	448	SW-302	
SW-236	BOX	D-11	448	SW-302	
SW-237	BOX	D-11	448	SW-302	
SW-24	RIGID	R-63	556	SW-305	04
SW-243	RIGID	D-11	448	SW-302	
SW-25	RIGID	R-53	537	SW-305	04
SW-251	BOX	D-11	448	SW-308	
SW-252	BOX	D-11	448	SW-308	
SW-253	BOX	D-11	448	SW-308	
SW-254	BOX	D-11	448	SW-308	
SW-255	BOX	D-11	448	SW-308	
SW-256	BOX	D-11	448	SW-308	
SW-257	BOX	D-11	448	SW-308	
SW-258	BOX	D-11	448	SW-308	
SW-259	BOX	D-11	448	SW-308	
SW-26	BOX	R-43	521	SW-305	03
SW-266	BOX	D-11	448	SW-306	
SW-267	BOX	D-11	448	SW-306	
SW-268	BOX	D-11	442	SW-302	
SW-269	BOX	D-11	447	SW-302	
SW-27	STRUT	R-43	502	SW-305	03
SW-270	BOX	D-11	447	SW-302	
SW-273	BOX	D-11	442	SW-310	
SW-28	STRUT	R-33	472	SW-305	03
SW-280	STRUT	D-11	448	SW-310	
SW-282	BOX	D-11	445	SW-311	
SW-29	PSA-10 SN(4)	R-43	507	SW-305	03
SW-291	BOX	D-11	447	SW-311	
SW-292	BOX	D-11	448	SW-306	
SW-293	BOX	D-11	448	SW-306	
SW-294	BOX	D-11	448	SW-306	
SW-30	STRUT	R-23	462	SW-305	02
SW-301	BOX	D-11	448	SW-306	
SW-302	BOX	D-11	447	SW-306	
SW-303	BOX	D-11	447	SW-306	
SW-304	BOX	D-11	442	SW-308	
SW-306	BOX	D-11	448	SW-306	

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SW-307	BOX	D-11	448	SW-306	
SW-308	BOX	D-11	447	SW-306	
SW-31	BOX	R-23	462	SW-305	02
SW-310	BOX	D-11	448	SW-310	
SW-312	BOX	D-11	442	SW-306	
SW-315	STRUT	R-13	432	SW-303	06
SW-318	STRUT	R-13	435	SW-301	02
SW-32	BOX	R-23	452	SW-305	02
SW-33	BOX	R-23	443	SW-305	02
SW-348	BOX	D-11	448	SW-304	
SW-349	BOX	D-11	448	SW-304	
SW-35	STRUT	R-13	432	SW-305	02
SW-350	BOX	D-11	448	SW-304	
SW-351	BOX	D-11	448	SW-304	
SW-352	BOX	D-11	448	SW-304	
SW-353	BOX	D-11	447	SW-304	
SW-354	BOX	D-11	448	SW-304	
SW-355	BOX	D-11	443	SW-304	
SW-356	BOX	D-11	448	SW-304	
SW-357	BOX	D-11	448	SW-304	
SW-358	BOX	D-11	447	SW-304	
SW-36	RIGID	R-13	432	SW-305	02
SW-386	STRUT	R-53	533	SW-307	01
SW-426	BOX	D-11	448	SW-304	
SW-430	STRUT	R-51	523	SW-301	05
SW-432	STRUT	R-21	460	SW-303	03
SW-433	BOX	R-23	460	SW-303	05
SW-434	BOX	R-21	462	SW-301	05
SW-435	BOX	R-22	462	SW-301	04
SW-436	STRUT	R-13	435	SW-301	02
SW-437	STRUT	R-13	432	SW-301	02
SW-449	RIGID	D-11	445	SW-310	
SW-57	RIGID	R-13	432	SW-301	02
SW-58	BOX	R-13	435	SW-301	02
SW-59	BOX	R-13	435	SW-301	02
SW-6	BOX	H11B	433	SW-307	04
SW-61	STRUT	R-13	438	SW-301	02
SW-62	STRUT	R-23	462	SW-301	02
SW-63	BOX	R-23	462	SW-301	03
SW-64	BOX	R-23	462	SW-301	03
SW-65	STRUT	R-23	462	SW-301	03
SW-66	BOX	R-23	462	SW-301	03

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SW-68	BOX	R-22	462	SW-301	03
SW-7	BOX	H11B	433	SW-307	04
SW-70	STRUT	R-22	462	SW-301	04
SW-71	STRUT	R-23	462	SW-301	03
SW-73	STRUT	R-21	462	SW-301	04
SW-74	STRUT	R-21	462	SW-301	05
SW-76	STRUT	R-21	462	SW-301	05
SW-78	SPRING (2)	R-31	473	SW-301	05
SW-79	STRUT	R-63	562	SW-307	01
SW-8	BOX	H11A	433	SW-303	07
SW-80	BOX	R-63	559	SW-307	01
SW-81	BOX	R-63	554	SW-307	01
SW-83	STRUT	R-53	524	SW-307	02
SW-84	STRUT	R-43	503	SW-307	02
SW-86	STRUT	R-23	460	SW-307	03
SW-87	BOX	R-23	460	SW-307	03
SW-88	BOX	R-23	445	SW-307	03
SW-89	BOX	R-23	444	SW-307	03
SW-9	BOX	H11A	433	SW-303	07
SW-91	STRUT	R-13	432	SW-307	03
SW-913N	STRUT	R-13	432	SW-301	02
SW-914N	STRUT(2)	R-53	541	SW-307	01
SW-917N	SPRING	R-53	539	SW-307	01
SW-918N	STRUT	H11A	433	SW-303	07
SW-919N	BOX	E	436	SW-307	05
SW-92	RIGID	R-13	432	SW-307	03
SW-920N	BOX	E	436	SW-307	05
SW-921N	BOX	E	436	SW-307	05
SW-922N	BOX	E	436	SW-307	05
SW-923N	BOX	E	436	SW-307	05
SW-924N	BOX	E	436	SW-307	05
SW-925N	BOX	E	436	SW-307	05
SW-926N	BOX	E	436	SW-307	05
SW-927N	BOX	E	436	SW-307	05
SW-928N	BOX	E	436	SW-307	05
SW-929N	BOX	E	436	SW-307	05
SW-930N	BOX	E	436	SW-307	05
SW-931N	BOX	E	436	SW-307	05
SW-932N	BOX	E	436	SW-307	05
SW-933N	BOX	E	436	SW-307	05
SW-935N	BOX	E	436	SW-307	05
SW-936N	BOX	E	436	SW-303	08

TABLE 6.1
Component Supports

<u>Ident. No.</u>	<u>Description</u>	<u>Zone</u>	<u>Elev</u>	<u>Draw No.</u>	<u>Pg</u>
SW-938N	BOX	E	436	SW-303	08
SW-939N	BOX	E	436	SW-303	08
SW-940N	BOX	E	436	SW-303	08
SW-941N	BOX	E	436	SW-303	08
SW-942N	STRUT	R-22	462	SW-301	04
SW-943N	STRUT	H11B	433	SW-307	04
SW-946N	RIGID	R-53	548	SW-314	01
SW-948N	RIGID	R-53	535	SW-315	
SW-949N	RIGID	R-53	531	SW-315	
SW-950N	RIGID	R-53	531	SW-315	
SW-951N	RIGID	R-53	548	SW-315	
SW-953N	RIGID	R-53	537	SW-314	01
SW-954N	RIGID	R-53	531	SW-314	01
SW-955N	RIGID	R-51	535	SW-313	
SW-956N	RIGID	R-51	535	SW-313	
SW-957N	RIGID	R-51	535	SW-313	
SW-958N	RIGID	R-51	535	SW-313	
SW-959N	RIGID	R-51	535	SW-313	
SW-960N	RIGID	R-51	535	SW-313	
SW-961N	RIGID	R-51	532	SW-312	01
SW-962N	RIGID	R-51	532	SW-312	01
SW-963N	RIGID	R-51	532	SW-312	01
SW-964N	RIGID	R-51	532	SW-312	01
SW-965N	RIGID	R-51	532	SW-312	01
SW-966N	RIGID	R-51	532	SW-312	01
SW-982N	ANCHOR	R-61	549	SW-312	02
SW-983N	ANCHOR	R-63	556	SW-314	02
SW-984N	RIGID	R-61	549	SW-313	
SW-985N	RIGID	R-53	531	SW-315	
SW-P-1A(CS)	PUMP BASE	H21A	441	SW-301	01
SW-P-1B(CS)	PUMP BASE	H21B	441	SW-305	01

TOTAL COMPONENT SUPPORTS = 1627

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
HPCS-47	NORTH	PSA-3 SN(2)	HPCS-201		097	432
HPCS-47	SOUTH	PSA-3 SN(2)	HPCS-201		097	432
LPCS-28		PSA-3 SNUBBER	LPCS-101		120	525
MD-1285-11B		PSA-1/4 SNUBBER	MD-201		T-26	492
MD-1285-14A		PSA-1/2 SNUBBER	MD-201		T-26	492
MD-1285-14C		PSA-1/4 SNUBBER	MD-204		T-26	492
MD-1285-14D		PSA-1/2 SNUBBER	MD-204		T-26	492
MD-1287-11		PSA-1/4 SNUBBER	MD-202		T-26	492
MD-1287-15		PSA-1 SNUBBER	MD-202		T-26	492
MD-1288-17		PSA-1 SNUBBER	MD-203		T-26	492
MD-1288-18		PSA-1/4 SNUBBER	MD-203		T-26	492
MD-1290-11B		PSA-1/4 SNUBBER	MD-204		T-26	492
MD-1364-12A		PSA-1/4 SNUBBER	SN-MD-206		T-26	494
MD-74		PSA-1 SNUBBER	MD-205		T-26	493
MS-1001N		PSA-35 SNUBBER	MS-203	02	T-26	494
MS-1002N	NORTH	PSA-10 SN(2)	MS-203	02	T-26	494
MS-1002N	SOUTH	PSA-10 SN(2)	MS-203	02	T-26	494
MS-1003N	EAST	PSA-10 SN(2)	MS-203		T-26	494
MS-1003N	WEST	PSA-10 SN(2)	MS-203		T-26	494
MS-1005N		PSA-35 SNUBBER	MS-204	04	T-23	490
MS-114	NORTH	PSA-10 SN(2)	MS-201		T-26	494
MS-114	SOUTH	PSA-10 SN(2)	MS-201		T-26	494
MS-135		PSA-35 SNUBBER	MS-201	02	T-36	506
MS-1368-12		PSA-1/2 SNUBBER	MS-105	02	013	502
MS-1368-13		PSA-1/2 SNUBBER	MS-105		013	502
MS-1369-12		PSA-1/2 SNUBBER	MS-105		280	502
MS-1369-13		PSA-1/2 SNUBBER	MS-105	03	280	502
MS-145		PSA-10 SNUBBER	MS-202		T-23	482
MS-147	NORTH	PSA-35 SN(2)	MS-202		T-23	494
MS-147	SOUTH	PSA-35 SN(2)	MS-202	03	T-23	494
MS-148		PSA-10 SNUBBER	MS-202		T-23	494
MS-151	BOTTOM	PSA-3 SN(2)	MS-202		T-23	494
MS-151	TOP	PSA-3 SN(2)	MS-202		T-23	494
MS-162	BOTTOM	PSA-10 SN(2)	MS-202		T-26	494
MS-162	TOP	PSA-10 SN(2)	MS-202		T-26	494
MS-167	BOTTOM	PSA-10 SN(2)	MS-202		T-26	494
MS-167	TOP	PSA-10 SN(2)	MS-202	02	T-26	494
MS-174		PSA-35 SNUBBER	MS-202	01	T-36	506

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
MS-177	NORTH	PSA-3 SN(2)	MS-202		T-26	489
MS-177	SOUTH	PSA-3 SN(2)	MS-202		T-26	489
MS-255		PSA-1 SNUBBER	MS-206		R-41	504
MS-2619-11		PSA-1/4 SNUBBER	MS-106		315	597
MS-2619-13		PSA-1 SNUBBER	MS-106		237	597
MS-2619-42C		PSA-1/2 SNUBBER	MS-106		060	572
MS-2619-45		PSA-1/4 SNUBBER	MS-106	04	089	580
MS-27	BOTTOM	PSA-10 SN(2)	MS-203		T-23	494
MS-27	TOP	PSA-10 SN(2)	MS-203		T-23	494
MS-38	BOTTOM	PSA-10 SN(2)	MS-203		T-26	494
MS-38	TOP	PSA-10 SN(2)	MS-203		T-26	494
MS-4448-12		PSA-1/4 SNUBBER	MS-108		R-42	503
MS-4448-413		PSA-1/4 SNUBBER	MS-109		R-41	503
MS-4448-46		PSA-1/4 SNUBBER	MS-109		R-41	502
MS-45		PSA-35 SNUBBER	MS-203	01	T-36	506
MS-48		PSA-3 SNUBBER	MS-203		T-26	489
MS-72		PSA-35 SNUBBER	MS-204		T-36	506
MS-91	EAST	PSA-3 SN(2)	MS-201		T-23	494
MS-91	WEST	PSA-3 SN(2)	MS-201		T-23	494
MS-954N		PSA-3 SNUBBER	MS-206		R-42	504
MS-96	BOTTOM	PSA-10 SN(2)	MS-201		T-23	494
MS-96	TOP	PSA-10 SN(2)	MS-201	03	T-23	494
MS-993N	BOTTOM	PSA-10 SN(2)	MS-201		T-26	494
MS-993N	TOP	PSA-10 SN(2)	MS-201		T-26	494
MS-996N	BOTTOM	PSA-10 SN(2)	MS-202		T-26	494
MS-996N	TOP	PSA-10 SN(2)	MS-202		T-26	494
MS-998N	NORTH	PSA-10 SN(2)	MS-202		T-26	494
MS-998N	SOUTH	PSA-10 SN(2)	MS-202		T-26	494
MS-999N		PSA-10 SNUBBER	MS-203		T-26	494
MS-SC-1		PSA-100 SNUBBER	MS-103	02	337	506
MS-SC-10		PSA-35 SNUBBER	MS-103	01	300	543
MS-SC-2		PSA-100 SNUBBER	MS-103	02	337	506
MS-SC-3		PSA-35 SNUBBER	MS-103	02	334	539
MS-SC-4		PSA-35 SNUBBER	MS-103	02	342	536
MS-SC-5		PSA-35 SNUBBER	MS-103		270	538
MS-SC-6		PSA-35 SNUBBER	MS-103	01	268	556
MS-SC-7		PSA-35 SNUBBER	MS-103	01	236	556
MS-SC-8		PSA-35 SNUBBER	MS-103	01	275	543

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
MS-SC-9		PSA-35 SNUBBER	MS-103		320	543
MSLC-2821-12	BOTTOM	PSA-1/4 SN(2)	MSLC-102		R-42	503
MSLC-2821-12	TOP	PSA-1/4 SN(2)	MSLC-102		R-42	503
MSRV-1A-3		PSA-10 SNUBBER	MS-301	01	R-65	546
MSRV-1B-2		PSA-10 SNUBBER	MS-305		R-55	546
MSRV-1C-1		PSA-10 SNUBBER	MS-310	01	R-54	544
MSRV-1C-2		PSA-35 SNUBBER	MS-310		R-54	548
MSRV-1C-3		PSA-35 SNUBBER	MS-310		R-54	544
MSRV-1C-4		PSA-10 SNUBBER	MS-310		R-44	521
MSRV-1C-5		PSA-10 SNUBBER	MS-310		R-44	522
MSRV-1C-7		PSA-10 SNUBBER	MS-310		R-54	535
MSRV-1D-3		PSA-10 SNUBBER	MS-315		R-54	546
MSRV-2A-2		PSA-10 SNUBBER	MS-302		R-65	548
MSRV-2B-3		PSA-35 SNUBBER	MS-306	01	R-55	546
MSRV-2C-1		PSA-10 SNUBBER	MS-311		R-54	538
MSRV-2C-2		PSA-10 SNUBBER	MS-311		R-54	546
MSRV-2C-3		PSA-10 SNUBBER	MS-311		R-54	537
MSRV-2C-4		PSA-10 SNUBBER	MS-311		R-56	525
MSRV-2C-5		PSA-10 SNUBBER	MS-311		R-56	525
MSRV-2C-6		PSA-10 SNUBBER	MS-311		R-56	525
MSRV-2C-7		PSA-10 SNUBBER	MS-311		R-56	522
MSRV-2C-8		PSA-10 SNUBBER	MS-311		R-54	535
MSRV-2C-9		PSA-10 SNUBBER	MS-311	02	R-54	530
MSRV-2D-2		PSA-10 SNUBBER	MS-316		R-54	546
MSRV-3A-2		PSA-10 SNUBBER	MS-303		R-55	546
MSRV-3B-2		PSA-10 SNUBBER	MS-307	01	R-55	546
MSRV-3B-3		PSA-10 SNUBBER	MS-307		R-55	539
MSRV-3C-1		PSA-35 SNUBBER	MS-312	01	R-54	544
MSRV-3C-2		PSA-10 SNUBBER	MS-312		R-54	546
MSRV-3C-3		PSA-10 SNUBBER	MS-312		R-54	544
MSRV-3C-5		PSA-10 SNUBBER	MS-312		R-56	525
MSRV-3C-6		PSA-10 SNUBBER	MS-312		R-56	527
MSRV-3C-7		PSA-10 SNUBBER	MS-312		R-56	527
MSRV-3C-8		PSA-10 SNUBBER	MS-312		R-54	527
MSRV-3D-4		PSA-10 SNUBBER	MS-317		R-54	546
MSRV-4A-2		PSA-10 SNUBBER	MS-304		R-65	546
MSRV-4B-3		PSA-10 SNUBBER	MS-308		R-55	546
MSRV-4C-1		PSA-10 SNUBBER	MS-313	01	R-54	538

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
MSRV-4C-2		PSA-10 SNUBBER	MS-313		R-54	546
MSRV-4C-3		PSA-10 SNUBBER	MS-313		R-54	538
MSRV-4C-5		PSA-10 SNUBBER	MS-313		R-56	528
MSRV-4C-6		PSA-10 SNUBBER	MS-313	02	R-56	528
MSRV-4C-7		PSA-10 SNUBBER	MS-313	02	R-56	528
MSRV-4C-8		PSA-35 SNUBBER	MS-313		R-56	528
MSRV-4C-9	EAST	PSA-3 SN(2)	MS-313	03	R-46	505
MSRV-4C-9	WEST	PSA-3 SN(2)	MS-313		R-46	505
MSRV-4D-2		PSA-10 SNUBBER	MS-318		R-54	546
MSRV-5B-3		PSA-10 SNUBBER	MS-309	01	R-57	548
MSRV-5C-1		PSA-10 SNUBBER	MS-314		R-56	545
MSRV-5C-2		PSA-10 SNUBBER	MS-314	01	R-56	546
MSRV-5C-3		PSA-35 SNUBBER	MS-314	01	R-54	546
MSRV-5C-4		PSA-35 SNUBBER	MS-314	02	R-56	532
MSRV-5C-5		PSA-10 SNUBBER	MS-314		R-56	529
MSRV-5C-6		PSA-10 SNUBBER	MS-314		R-56	532
MSRV-5C-7		PSA-10 SNUBBER	MS-314		R-56	529
MSRV-5C-8		PSA-35 SNUBBER	MS-314	02	R-56	529
MSRV-5C-9		PSA-10 SNUBBER	MS-314		R-46	505
RCIC-1C-6	EAST	PSA-3 SN(2)	RCIC-101		090	531
RCIC-1C-6	WEST	PSA-3 SN(2)	RCIC-101		090	531
RCIC-1C-9		PSA-10 SNUBBER	RCIC-101		120	551
RCIC-968S		PSA-1 SNUBBER	SN-RCIC-103		R-67	554
RFW-146	NORTH/EAST	PSA-10 SN(2)	RFW-101		R-45	519
RFW-146	SOUTH/WEST	PSA-10 SN(2)	RFW-101		R-45	519
RFW-151		PSA-35 SNUBBER	RFW-101	03	R-67	543
RFW-162	EAST	PSA-10 SN(2)	RFW-102		R-44	516
RFW-162	WEST	PSA-10 SN(2)	RFW-102		R-44	516
RFW-171		PSA-10 SNUBBER	RFW-102		R-64	545
RFW-180		PSA-1 SNUBBER	RFW-103		R-42	514
RFW-915N		PSA-10 SNUBBER	RFW-102		R-64	545
RFW-929N		PSA-10 SNUBBER	RFW-101		R-67	545
RFW-942N	BOTTOM	PSA-1 SN(2)	RFW-103		R-42	514
RFW-942N	TOP	PSA-1 SN(2)	RFW-103		R-42	514
RHR-1022N	NORTH	PSA-35 SN(2)	RHR-201		R-42	512
RHR-1022N	SOUTH	PSA-35 SN(2)	RHR-201	11	R-42	512
RHR-2264-11		PSA-1/4 SNUBBER	SN-RHR-108		R-44	509
RHR-2264-21		PSA-1/4 SNUBBER	SN-RHR-108		R-44	509

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RHR-2264-22		PSA-1 SNUBBER	SN-RHR-108		R-46	509
RHR-244		PSA-35 SNUBBER	RHR-201	11	R-42	512
RHR-260		PSA-10 SNUBBER	RHR-201		R-42	512
RHR-273		PSA-3 SNUBBER	RHR-203		R-64	566
RHR-282		PSA-35 SNUBBER	RHR-103		354	561
RHR-286	EAST	PSA-10 SN(2)	RHR-103		354	545
RHR-286	WEST	PSA-10 SN(2)	RHR-103		354	545
RHR-287		PSA-35 SNUBBER	RHR-103		320	563
RHR-381	EAST	PSA-10 SN(2)	RHR-101		004	550
RHR-381	WEST	PSA-10 SN(2)	RHR-101		004	550
RHR-382		PSA-35 SNUBBER	RHR-101		004	558
RHR-383		PSA-35 SNUBBER	RHR-101		015	562
RHR-388	EAST	PSA-10 SN(2)	RHR-102		135	557
RHR-388	WEST	PSA-10 SN(2)	RHR-102		135	557
RHR-389		PSA-35 SNUBBER	RHR-102		135	561
RHR-390		PSA-35 SNUBBER	RHR-102		135	563
RHR-87		PSA-10 SNUBBER	RHR-103		354	525
RHR-907N		PSA-35 SNUBBER	RHR-102		135	525
RHR-941N		PSA-10 SNUBBER	RHR-101		004	527
RHR-SA-30	NORTH	PSA-10 SN(2)	RRC-106		R-45	509
RHR-SA-30	SOUTH	PSA-10 SN(2)	RRC-106		R-45	509
RHR-SA-31		PSA-10 SNUBBER	RRC-106		R-45	509
RHR-SA-32	EAST	PSA-10 SN(2)	RHR-105		085	510
RHR-SA-32	WEST	PSA-10 SN(2)	RHR-105		085	510
RHR-SA-33		PSA-10 SNUBBER	RHR-105		085	509
RHR-SA-34		PSA-35 SNUBBER	RHR-105		080	509
RHR-SA-35		PSA-10 SNUBBER	RHR-105		100	510
RHR-SA-36		PSA-35 SNUBBER	RHR-105		100	509
RHR-SA-37		PSA-35 SNUBBER	RHR-105		100	509
RHR-SA-38		PSA-10 SNUBBER	RHR-105		100	510
RHR-SA-39	BOTTOM	PSA-10 SN(2)	RHR-105		085	509
RHR-SA-39	TOP	PSA-10 SN(2)	RHR-105		085	509
RHR-SA-40		PSA-10 SNUBBER	RHR-105		090	509
RHR-SA-50		PSA-35 SNUBBER	RRC-105		R-46	512
RHR-SA-51		PSA-35 SNUBBER	RRC-105		R-46	510
RHR-SA-52		PSA-10 SNUBBER	RRC-105		R-46	510
RHR-SA-53		PSA-10 SNUBBER	RHR-104		150	510
RHR-SA-54		PSA-35 SNUBBER	RHR-104		150	510

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RHR-SA-55		PSA-100 SNUBBER	RHR-104		150	511
RHR-SA-56		PSA-10 SNUBBER	RHR-104		170	514
RHR-SA-57		PSA-35 SNUBBER	RHR-104		165	510
RHR-SA-58	NORTH/EAST	PSA-35 SN(2)	RHR-104		205	510
RHR-SA-58	SOUTH/EAST	PSA-35 SN(2)	RHR-104		205	510
RHR-SA-59		PSA-35 SNUBBER	RHR-104		210	511
RHR-SB-30		PSA-10 SNUBBER	RRC-107		R-46	509
RHR-SB-31		PSA-10 SNUBBER	RRC-107		R-46	509
RHR-SB-32		PSA-10 SNUBBER	RHR-106		275	509
RHR-SB-33		PSA-10 SNUBBER	RHR-106		275	504
RHR-SB-34	BOTTOM	PSA-10 SN(2)	RHR-106		280	513
RHR-SB-34	TOP	PSA-10 SN(2)	RHR-106		280	513
RHR-SB-35		PSA-10 SNUBBER	RHR-106		280	510
RHR-SB-36		PSA-10 SNUBBER	RHR-106		280	509
RHR-SB-37		PSA-10 SNUBBER	RHR-106		280	509
RHR-SB-38		PSA-10 SNUBBER	RHR-106		280	510
RHR-SB-39	BOTTOM	PSA-3 SN(2)	RHR-106		265	509
RHR-SB-39	TOP	PSA-3 SN(2)	RHR-106		265	509
RRC-1549-62		PSA-1/4 SNUBBER	SN-RRC-113		R-44	510
RRC-1946-32		PSA-1/4 SNUBBER	SN-RRC-112		R-47	501
RRC-1C-1	BOTTOM	PSA-1 SN(2)	RRC-104		015	514
RRC-1C-1	TOP	PSA-1 SN(2)	RRC-104		015	514
RRC-1C-900N	BOTTOM	PSA-1 SN(2)	RRC-104		R-45	514
RRC-1C-900N	TOP	PSA-1 SN(2)	RRC-104		R-45	514
RRC-4470-31		PSA-1 SNUBBER	RRC-111		324	500
RRC-SA-1		PSA-35 SNUBBER	RRC-101		180	510
RRC-SA-11		PSA-35 SNUBBER	RRC-101	03	120	528
RRC-SA-12		PSA-35 SNUBBER	RRC-101	03	045	528
RRC-SA-13		PSA-35 SNUBBER	RRC-101	03	110	528
RRC-SA-14		PSA-35 SNUBBER	RRC-101		040	528
RRC-SA-15		PSA-35 SNUBBER	RRC-101	02	090	506
RRC-SA-16		PSA-35 SNUBBER	RRC-101	01	180	503
RRC-SA-17		PSA-35 SNUBBER	RRC-101	02	090	526
RRC-SA-18		PSA-35 SNUBBER	RRC-101		090	526
RRC-SA-19		PSA-35 SNUBBER	RRC-101		R-47	520
RRC-SA-2		PSA-35 SNUBBER	RRC-101	01	180	512
RRC-SA-20		PSA-35 SNUBBER	RRC-101	01	180	520
RRC-SA-25		PSA-35 SNUBBER	RRC-101	01	180	511

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RRC-SA-3		PSA-100 SNUBBER	RRC-103		156	522
RRC-SA-4		PSA-100 SNUBBER	RRC-103		135	522
RRC-SA-5		PSA-100 SNUBBER	RRC-103		130	523
RRC-SA-6		PSA-100 SNUBBER	RRC-103		135	503
RRC-SA-65		PSA-35 SNUBBER	RRC-101	02	104	506
RRC-SA-66		PSA-35 SNUBBER	RRC-101	02	155	506
RRC-SA-7		PSA-35 SNUBBER	RRC-101	02	105	506
RRC-SA-8		PSA-35 SNUBBER	RRC-101	02	090	519
RRC-SA-9		PSA-35 SNUBBER	RRC-101	02	090	520
RRC-SB-1		PSA-35 SNUBBER	RRC-102	01	000	509
RRC-SB-11		PSA-35 SNUBBER	RRC-102	03	225	528
RRC-SB-12		PSA-35 SNUBBER	RRC-102		300	528
RRC-SB-13		PSA-35 SNUBBER	RRC-102	03	225	528
RRC-SB-14		PSA-35 SNUBBER	RRC-102	03	295	528
RRC-SB-15		PSA-35 SNUBBER	RRC-102	02	270	506
RRC-SB-16	EAST	PSA-35 SN(2)	RRC-102	01	000	518
RRC-SB-16	WEST	PSA-35 SN(2)	RRC-102	01	000	518
RRC-SB-17		PSA-35 SNUBBER	RRC-102	02	270	526
RRC-SB-18		PSA-35 SNUBBER	RRC-102		270	526
RRC-SB-2		PSA-35 SNUBBER	RRC-102	01	000	508
RRC-SB-25		PSA-35 SNUBBER	RRC-102	01	000	515
RRC-SB-3		PSA-100 SNUBBER	RRC-103		315	523
RRC-SB-4		PSA-100 SNUBBER	RRC-103		315	523
RRC-SB-5		PSA-100 SNUBBER	RRC-103		315	523
RRC-SB-6		PSA-100 SNUBBER	RRC-103		317	502
RRC-SB-65		PSA-35 SNUBBER	RRC-102	02	270	506
RRC-SB-66		PSA-35 SNUBBER	RRC-102	02	R-44	506
RRC-SB-7		PSA-35 SNUBBER	RRC-102	02	270	506
RRC-SB-8		PSA-35 SNUBBER	RRC-102	02	270	518
RRC-SB-9		PSA-35 SNUBBER	RRC-102	02	270	518
RWCU-1C-16		PSA-1 SNUBBER	RWCU-101		045	508
RWCU-1C-17	NORTH/WEST	PSA-1 SN(2)	RWCU-101		045	508
RWCU-1C-17	SOUTH/EAST	PSA-1 SN(2)	RWCU-101		045	508
RWCU-1C-2		PSA-1 SNUBBER	RWCU-101		140	538
RWCU-1C-3	EAST	PSA-3 SN(2)	RWCU-101		090	538
RWCU-1C-3	WEST	PSA-3 SN(2)	RWCU-101		090	538
RWCU-1C-5		PSA-3 SNUBBER	RWCU-101		075	513
RWCU-1C-6		PSA-3 SNUBBER	RWCU-101		075	501

TABLE 6.2
SNUBBER LIST

access NO

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RWCU-1C-7		PSA-3 SNUBBER	RWCU-101		075	500
RWCU-1C-8		PSA-3 SNUBBER	RWCU-101		075	501
SLC-4475-21		PSA-1 SNUBBER	SLC-101		240	550
VR-6		PSA-1 SNUBBER	SN-VR-401		R-41	510
VR-8		PSA-1 SNUBBER	SN-VR-401		R-41	510

TOTAL NO = 272

TABLE 6.2
SNUBBER LIST

access YES

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
CEP-905S		PSA-1/2 SNUBBER	SN-CEP-201		R-62	560
CEP-907S		PSA-1/2 SNUBBER	SN-CEP-201		R-62	556
CEP-908N		PSA-3 SNUBBER	SN-CEP-202		R-72	573
DE-2		PSA-3 SNUBBER	SN-DE-405	01	D-21	475
DE-23		PSA-3 SNUBBER	SN-DE-403		D-21	476
DE-2836-15		PSA-1/2 SNUBBER	SN-DE-405	02	D-11	457
DE-2837-17		PSA-1/4 SNUBBER	SN-DE-403		D-11	456
DE-2838-18		PSA-1/4 SNUBBER	SN-DE-404	02	D-11	456
DE-2839-14B		PSA-1/4 SNUBBER	SN-DE-401	02	D-11	442
DE-3	EAST	PSA-3 SN(2)	SN-DE-405		D-21	478
DE-3	WEST	PSA-3 SN(2)	SN-DE-405		D-21	478
DE-49		PSA-3 SNUBBER	SN-DE-404		D-21	474
DE-57		PSA-3 SNUBBER	SN-DE-402		D-21	474
DE-59		PSA-3 SNUBBER	SN-DE-401	01	D-21	478
DE-902N	BOTTOM	PSA-1 SN(2)	SN-DE-405		D-21	459
DE-902N	TOP	PSA-1 SN(2)	SN-DE-405		D-21	459
EDR-903N	NORTH	PSA-1/2 SN(2)	EDR-201		R-23	469
EDR-903N	SOUTH	PSA-1/2 SN(2)	EDR-201		R-23	469
EDR-905N		PSA-1 SNUBBER	EDR-201		R-23	469
FPC-227		PSA-3 SNUBBER	FPC-305		R-63	559
FPC-43		PSA-3 SNUBBER	FPC-301		R-13	434
FPC-65		PSA-1 SNUBBER	FPC-301		R-63	558
FPC-908N	EAST	PSA-1 SN(2)	FPC-301		R-13	434
FPC-908N	WEST	PSA-1 SN(2)	FPC-301		R-13	434
FPC-918N		PSA-1 SNUBBER	FPC-301		R-63	558
HPCS-905N		PSA-10 SNUBBER	HPCS-202	06	R-53	538
HPCS-924N	EAST	PSA-3 SN(2)	HPCS-202		R-53	538
HPCS-924N	WEST	PSA-3 SN(2)	HPCS-202	06	R-53	538
HPCS-925N		PSA-3 SNUBBER	HPCS-202		R-53	538
HY-4235-110		PSA-1/4 SNUBBER	SN-HY-201		R-51	527
HY-4236-110		PSA-1/4 SNUBBER	SN-HY-202		R-51	527
HY-4237-110		PSA-1/4 SNUBBER	SN-HY-203		R-51	527
RCIC-1		PSA-1 SNUBBER	RCIC-203		R-11	425
RCIC-100	EAST	PSA-1/2 SN(2)	RCIC-205		R-63	564
RCIC-100	WEST	PSA-1/2 SN(2)	RCIC-205	6A	R-63	564
RCIC-1490-13		PSA-1/2 SNUBBER	RCIC-206	01	R-31	475
RCIC-2562-25		PSA-1/2 SNUBBER	RCIC-213		R-21	467
RCIC-26		PSA-3 SNUBBER	RCIC-203	03	R-31	470

TABLE 6.2
SNUBBER LIST

access YES

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RCIC-38	EAST	PSA-1 SN(2)	RCIC-201		R-42	512
RCIC-38	WEST	PSA-1 SN(2)	RCIC-201	01	R-42	512
RCIC-4		PSA-1 SNUBBER	RCIC-203		R-11	440
RCIC-943N		PSA-10 SNUBBER	RCIC-201	01	R-42	512
RCIC-944N	BOTTOM	PSA-3 SN(2)	RCIC-201		R-42	512
RCIC-944N	TOP	PSA-3 SN(2)	RCIC-201		R-42	512
RCIC-945N		PSA-10 SNUBBER	RCIC-201		R-42	512
RCIC-948N	EAST	PSA-3 SN(2)	RCIC-102		165	553
RCIC-948N	WEST	PSA-3 SN(2)	RCIC-102	01	165	553
RCIC-961N		PSA-1/4 SNUBBER	RCIC-201		R-21	433
RCIC-971N		PSA-1 SNUBBER	RCIC-203		R-11	440
RHR-1000N		PSA-3 SNUBBER	RHR-201		R-71	593
RHR-1001N	NORTH	PSA-3 SN(2)	RHR-201		R-71	593
RHR-1001N	SOUTH	PSA-3 SN(2)	RHR-201		R-71	593
RHR-1002N	BOTTOM	PSA-3 SN(2)	RHR-207		R-73	593
RHR-1002N	TOP	PSA-3 SN(2)	RHR-207		R-73	593
RHR-1021N	EAST	PSA-3 SN(2)	RHR-210		R-12	441
RHR-1021N	WEST	PSA-3 SN(2)	RHR-210		R-12	441
RHR-121	EAST	PSA-10 SN(2)	RHR-206		R-11	436
RHR-121	WEST	PSA-10 SN(2)	RHR-206		R-11	436
RHR-137	EAST	PSA-10 SN(2)	RHR-205		R-11	441
RHR-137	WEST	PSA-10 SN(2)	RHR-205		R-11	441
RHR-142	EAST	PSA-1 SN(2)	RHR-201		R-21	468
RHR-142	WEST	PSA-1 SN(2)	RHR-201		R-21	468
RHR-150	N/W	PSA-3 SN(2)	RHR-203		R-31	473
RHR-150	S/E	PSA-3 SN(2)	RHR-203	03	R-31	473
RHR-160		PSA-3 SNUBBER	RHR-201	01	R-11	438
RHR-183	EAST	PSA-10 SN(2)	RHR-207		R-33	472
RHR-183	WEST	PSA-10 SN(2)	RHR-207		R-33	472
RHR-20		PSA-1/2 SNUBBER	RHR-208	03	R-22	455
RHR-200		PSA-1/2 SNUBBER	RHR-222		R-62	548
RHR-206		PSA-1 SNUBBER	RHR-221		R-21	558
RHR-210		PSA-1/2 SNUBBER	RHR-221	01	R-21	457
RHR-214		PSA-1/2 SNUBBER	RHR-221	01	R-23	454
RHR-218	EAST	PSA-10 SN(2)	RHR-207		R-33	494
RHR-218	WEST	PSA-10 SN(2)	RHR-207		R-33	494
RHR-23	EAST	PSA-1/4 SN(2)	RHR-228	03	R-22	445
RHR-23	WEST	PSA-1/4 SN(2)	RHR-228		R-22	445

TABLE 6.2
SNUBBER LIST

access YES

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RHR-235		PSA-10 SNUBBER	RHR-201		R-52	531
RHR-256		PSA-35 SNUBBER	RHR-202		R-62	551
RHR-264	NORTH	PSA-3 SN(2)	RHR-201		R-61	562
RHR-264	SOUTH	PSA-3 SN(2)	RHR-201		R-61	562
RHR-269		PSA-3 SNUBBER	RHR-201	07	R-61	566
RHR-270		PSA-3 SNUBBER	RHR-201		R-61	566
RHR-271	NORTH	PSA-3 SN(2)	RHR-201		R-61	566
RHR-271	SOUTH	PSA-3 SN(2)	RHR-201		R-61	566
RHR-274		PSA-3 SNUBBER	RHR-203		R-61	566
RHR-275		PSA-3 SNUBBER	RHR-203		R-61	566
RHR-276	NORTH	PSA-3 SN(2)	RHR-203	01	R-61	566
RHR-276	SOUTH	PSA-3 SN(2)	RHR-203		R-61	566
RHR-277		PSA-3 SNUBBER	RHR-203	01	R-61	566
RHR-290		PSA-1/2 SNUBBER	RHR-221	02	R-23	444
RHR-301		PSA-3 SNUBBER	RHR-210		R-22	447
RHR-311	EAST	PSA-3 SN(2)	RHR-210	01	R-12	444
RHR-311	WEST	PSA-3 SN(2)	RHR-210		R-12	444
RHR-325		PSA-1/2 SNUBBER	RHR-232		R-61	549
RHR-326	EAST	PSA-1/4 SN(2)	RHR-232		R-61	548
RHR-326	WEST	PSA-1/4 SN(2)	RHR-232	01	R-61	548
RHR-332		PSA-1 SNUBBER	RHR-232		R-31	496
RHR-333		PSA-1/2 SNUBBER	RHR-232	02	R-31	498
RHR-334		PSA-1/4 SNUBBER	RHR-232		R-31	498
RHR-345	EAST	PSA-1 SN(2)	RHR-210		R-22	449
RHR-345	WEST	PSA-1 SN(2)	RHR-210		R-22	449
RHR-357		PSA-10 SNUBBER	RHR-201		R-61	550
RHR-359		PSA-3 SNUBBER	RHR-201		R-61	550
RHR-361		PSA-3 SNUBBER	RHR-201		R-61	550
RHR-373		PSA-1 SNUBBER	RHR-232		R-31	483
RHR-39	NORTH	PSA-3 SN(2)	RHR-211		R-12	434
RHR-39	SOUTH	PSA-3 SN(2)	RHR-211		R-12	434
RHR-400		PSA-1/2 SNUBBER	RHR-233		R-33	473
RHR-401	BOTTOM	PSA-1/2 SN(2)	RHR-233		R-33	473
RHR-401	TOP	PSA-1/2 SN(2)	RHR-233	04	R-33	473
RHR-403		PSA-1 SNUBBER	RHR-233	04	R-33	472
RHR-405		PSA-3 SNUBBER	RHR-203		R-61	560
RHR-406		PSA-3 SNUBBER	RHR-203		R-61	560
RHR-414	NORTH	PSA-3 SN(2)	RHR-203		R-31	494

TABLE 6.2
SNUBBER LIST

access YES

<u>Ident. No.</u>	<u>Position</u>	<u>Description</u>	<u>Dwg. No.</u>	<u>Pg</u>	<u>Zone</u>	<u>Elev</u>
RHR-414	SOUTH	PSA-3 SN(2)	RHR-203		R-31	494
RHR-416	BOTTOM	PSA-10 SN(2)	RHR-203		R-31	494
RHR-416	TOP	PSA-10 SN(2)	RHR-203		R-31	494
RHR-419	EAST	PSA-3 SN(2)	RHR-203	03	R-31	492
RHR-419	WEST	PSA-3 SN(2)	RHR-203		R-31	492
RHR-42		PSA-3 SNUBBER	RHR-211		R-12	434
RHR-437	NORTH	PSA-3 SN(2)	RHR-207	07	R-63	563
RHR-437	SOUTH	PSA-3 SN(2)	RHR-207		R-63	563
RHR-442		PSA-1/2 SNUBBER	RHR-233	01	R-63	549
RHR-443		PSA-1/2 SNUBBER	RHR-233	01	R-63	547
RHR-448		PSA-1/2 SNUBBER	RHR-233		R-33	493
RHR-449	NORTH	PSA-1/2 SN(2)	RHR-233		R-33	493
RHR-449	SOUTH	PSA-1/2 SN(2)	RHR-233	02	R-33	493
RHR-453		PSA-1/4 SNUBBER	RHR-233	03	R-33	483
RHR-454		PSA-1/2 SNUBBER	RHR-233	03	R-33	484
RHR-4605-41A		PSA-1/4 SNUBBER	RHR-217	04	R-33	483
RHR-463		PSA-3 SNUBBER	RHR-207	09	R-63	566
RHR-465	NORTH	PSA-3 SN(2)	RHR-207	09	R-63	566
RHR-465	SOUTH	PSA-3 SN(2)	RHR-207	09	R-63	566
RHR-466		PSA-3 SNUBBER	RHR-207		R-63	566
RHR-472		PSA-3 SNUBBER	RHR-207		R-63	561
RHR-479	EAST	PSA-3 SN(2)	RHR-207		R-53	538
RHR-479	WEST	PSA-3 SN(2)	RHR-207		R-53	538
RHR-481		PSA-35 SNUBBER	RHR-207		R-53	537
RHR-485		PSA-10 SNUBBER	RHR-207	10	R-43	519
RHR-492	NORTH	PSA-3 SN(2)	RHR-207		R-43	517
RHR-492	SOUTH	PSA-3 SN(2)	RHR-207	12	R-43	517
RHR-494		PSA-10 SNUBBER	RHR-207	13	R-43	515
RHR-495	BOTTOM	PSA-35 SN(2)	RHR-207	13	R-43	515
RHR-495	TOP	PSA-35 SN(2)	RHR-207		R-43	515
RHR-496		PSA-10 SNUBBER	RHR-207		R-43	515
RHR-50	BOTTOM	PSA-3 SN(2)	RHR-211		R-11	434
RHR-50	TOP	PSA-3 SN(2)	RHR-211		R-11	434
RHR-500		PSA-10 SNUBBER	RHR-207	13	R-41	515
RHR-502		PSA-35 SNUBBER	RHR-207	14	R-41	511
RHR-503		PSA-35 SNUBBER	RHR-207		R-41	511
RHR-52		PSA-3 SNUBBER	RHR-207	08	R-63	551
RHR-548	EAST	PSA-3 SN(2)	RHR-207		R-63	548

RHR-548	WEST	PSA-3 SN(2)	RHR-207	03	R-63	548
RHR-551	EAST	PSA-3 SN(2)	RHR-207		R-63	568
RHR-551	WEST	PSA-3 SN(2)	RHR-207		R-63	568
RHR-558		PSA-3 SNUBBER	RHR-207		R-63	550
RHR-562		PSA-3 SNUBBER	RHR-207		R-63	550
RHR-563	NORTH	PSA-1 SN(2)	RHR-207		R-63	550
RHR-563	SOUTH	PSA-1 SN(2)	RHR-207		R-63	550
RHR-59		PSA-10 SNUBBER	RHR-205		R-13	434
RHR-60		PSA-3 SNUBBER	RHR-205		R-13	434
RHR-61		PSA-10 SNUBBER	RHR-205	02	R-13	434
RHR-67		PSA-3 SNUBBER	RHR-205		R-13	437
RHR-9		PSA-3 SNUBBER	RHR-228		R-22	558
RHR-901N	NORTH	PSA-3 SN(2)	RHR-207		R-33	501
RHR-901N	SOUTH	PSA-3 SN(2)	RHR-207		R-33	501
RHR-902N		PSA-10 SNUBBER	RHR-207		R-33	478
RHR-903N		PSA-3 SNUBBER	RHR-207	17	R-33	492
RHR-906N	N/W	PSA-10 SN(2)	RHR-207		R-33	474
RHR-906N	S/E	PSA-10 SN(2)	RHR-207		R-33	474
RHR-908N	BOTTOM	PSA-3 SN(2)	RHR-207		R-43	517
RHR-908N	TOP	PSA-3 SN(2)	RHR-207		R-43	517
RHR-912N		PSA-10 SNUBBER	RHR-207		R-33	499
RHR-913N		PSA-3 SNUBBER	RHR-207		R-33	492
RHR-914N		PSA-10 SNUBBER	RHR-207		R-33	474
RHR-915N		PSA-10 SNUBBER	RHR-207		R-33	479
RHR-922N		PSA-1 SNUBBER	RHR-207		R-23	456
RHR-940N	BOTTOM	PSA-3 SN(2)	RHR-224		R-33	480
RHR-940N	TOP	PSA-3 SN(2)	RHR-224		R-33	480
RHR-942N	NORTH	PSA-1 SN(2)	RHR-207		R-23	454
RHR-942N	SOUTH	PSA-1 SN(2)	RHR-207		R-23	454
RHR-943N		PSA-3 SNUBBER	RHR-207	01	R-13	441
RHR-944N		PSA-3 SNUBBER	RHR-207		R-13	441
RHR-945N	EAST	PSA-1 SN(2)	RHR-207	05	R-23	458
RHR-945N	WEST	PSA-1 SN(2)	RHR-207		R-23	458
RHR-946N		PSA-3 SNUBBER	RHR-203		R-21	468
RHR-947N	BOTTOM	PSA-3 SN(2)	RHR-203		R-31	473
RHR-947N	TOP	PSA-3 SN(2)	RHR-203		R-31	473
RHR-948N	BOTTOM	PSA-3 SN(2)	RHR-203		R-31	473
RHR-948N	TOP	PSA-3 SN(2)	RHR-203		R-31	473
RHR-952N		PSA-3 SNUBBER	RHR-203		R-31	486
RHR-954N	EAST	PSA-1 SN(2)	RHR-216		R-31	477
RHR-954N	WEST	PSA-1 SN(2)	RHR-216		R-31	477
RHR-959N	N/E	PSA-3 SN(2)	RHR-224		R-33	480
RHR-959N	S/W	PSA-3 SN(2)	RHR-224		R-33	480
RHR-962N		PSA-10 SNUBBER	RHR-207		R-33	480
RHR-974N		PSA-3 SNUBBER	RHR-203		R-21	468

RHR-977N	NORTH	PSA-3 SN(2)	RHR-203	04	R-31	486
RHR-977N	SOUTH	PSA-3 SN(2)	RHR-203		R-31	486
RHR-980N		PSA-10 SNUBBER	RHR-207	04	R-73	593
RHR-983N		PSA-1/2 SNUBBER	RHR-232	03	R-31	491
RHR-986N		PSA-1 SNUBBER	RHR-203		R-31	476
RHR-993N		PSA-1 SNUBBER	RHR-221		R-21	456
RHR-998N		PSA-3 SNUBBER	RHR-207		R-63	551
RWCU-927N		PSA-3 SNUBBER	RWCU-301		R-53	538
RWCU-928N		PSA-10 SNUBBER	RWCU-301		R-53	538
SGT-11	BOTTOM	PSA-10 SN(2)	SN-SGT-202		R-71	585
SGT-11	TOP	PSA-10 SN(2)	SN-SGT-202		R-71	585
SGT-19		PSA-3 SNUBBER	SN-SGT-201		R-71	585
SGT-23	BOTTOM	PSA-3 SN(2)	SN-SGT-202		R-71	585
SGT-23	TOP	PSA-3 SN(2)	SN-SGT-202		R-71	585
SW-124	NORTH	PSA-35 SN(2)	SW-301	06	R-61	557
SW-124	SOUTH	PSA-35 SN(2)	SW-301	06	R-61	557
SW-29	N/E	PSA-10 SN(4)	SW-305	03	R-43	507
SW-29	N/W	PSA-10 SN(4)	SW-305		R-43	507
SW-29	S/E	PSA-10 SN(4)	SW-305		R-43	507
SW-29	S/W	PSA-10 SN(4)	SW-305		R-43	507
VR-3	EAST	PSA-1/2 SN(2)	SN-VR-401	01	R-31	474
VR-3	WEST	PSA-1/2 SN(2)	SN-VR-401	01	R-31	474
VR-900N		PSA-1/2 SNUBBER	SN-VR-401		R-41	501
VR-901N		PSA-1/2 SNUBBER	SN-VR-401		R-41	513
VR-902N		PSA-1/2 SNUBBER	SN-VR-401	01	R-41	511

TOTAL YES = 222

TOTAL SNUBBERS = 494





7.0 ISI BOUNDARY DIAGRAMS

7.1 ISI BOUNDARY DIAGRAMS

The ISI Boundary Diagrams on the following pages provide schematic views of the examination requirements for each system which contains components subject to examination within the scope of the applicable Codes, standards, and regulations listed in Section 4.0, "CODE COMMITMENTS" and Section 5.0, "FSAR/NRC COMMITMENTS". The key to the symbolism used on these drawings is found on ISI-200, the first drawing in the series.

These drawings illustrate the overall piping system examination requirements, distinguishing between systems requiring volumetric, surface and visual examinations (dashed lines), those requiring surface and visual examinations but not volumetric (dash-dot-lines), and those requiring only a visual examination during pressure tests (solid lines). Examination items such as hangers, instruments, thermal wells, and leak off connections are not typically shown on the ISI Boundary Diagrams in order to maintain drawing clarity. Detailed item-by-item examination requirements for all examination items in each of these piping systems is given in the Weld Identification Drawings and Program Plan and Schedule Tables found in Section 14.0, "WELD IDENTIFICATION DIAGRAMS".

Piping and components which do not require visual examination by being exempt from pressure test requirements by IWD-5223(e) or which are not required to be included in the test boundary by IWC-5222(d), IWD-5223(d), IWD-5223(e) and IWD-5223(f) are not included on the boundary diagrams.

The Code exemptions for each system are tabulated following each ISI Boundary Diagram. The exemptions are discussed under Section 4.0.

The drawings included in this Section are:

ISI-200	Legend
ISI-217	Misc. Containment Penetrations
ISI-219	Reactor Core Isolation Cooling (RCIC)
ISI-220	High Pressure Core Spray (HPCS)
	Low Pressure Core Spray (LPCS)
ISI-221	Residual Heat Removal System (RHR)
ISI-222	Standby Liquid Control (SLC)
ISI-223	Reactor Water Clean-up (RWCU)
ISI-224	Standby Service Water System (SW)
ISI-225	Reactor Closed Cooling (RCC)
ISI-226	Fuel Pool Cooling (FPC)
ISI-228	Control Rod Drive (CRD)
ISI-229	Main Steam (MS) &
	Reactor Feedwater (RFW)
ISI-230	Reactor Recirculation (RRC)

Exemptions

ISI-217

SYSTEM: Miscellaneous Containment Penetrations

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A
(b)(2)	N/A
(c)	N/A
IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components \leq 4NPS
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	Yes All piping \leq 4NPS
(b)	No
(c)	Yes
(d)	No
IWD-1220.1	N/A
IWD-1220.2	N/A

Requests for Relief: None

Note: • All components and piping are Class 2

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-219

SYSTEM: Reactor Core Isolation Cooling (RCIC)

EXEMPTIONS APPLIED:

IWB-1220(a)	No
(b)(1)	Yes All piping and components ≤ 1 NPS
(b)(2)	Yes
(c)	No

IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components ≤ 4 NPS

IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A

IWC-1222(a)	Yes All piping ≤ 4 NPS
(b)	Yes
(c)	Yes Pump suction piping
(d)	No

IWD-1220.1	N/A No Class 3 piping
------------	-----------------------

IWD-1220.2	N/A
------------	-----

Requests for Relief: None

Note: • The steam condensing mode of RHR/RCIC will not be used at WNP-2.
Surface, volumetric and visual examinations will extend only to the first closed valve, RCIC-V-64.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-220

SYSTEM: High Pressure Core Spray (HPCS)/Low Pressure Core Spray (LPCS)

EXEMPTIONS APPLIED:

IWB-1220(a)	No
(b)(1)	Yes All piping and components \leq 1NPS
(b)(2)	Yes
(c)	No

IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components \leq 4NPS

IWC-1221(a) ²	Yes All piping \leq 4NPS
(b)	N/A ³
(c)	Yes
(d)	N/A ³
(e)	N/A ³
(f)	Yes See Note 1

IWC-1222(a)	N/A
(b)	N/A
(c)	N/A
(d)	N/A

IWD-1220.1	N/A All piping is Class 1 or Class 2
------------	--------------------------------------

IWD-1220.2	N/A
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Requests for Relief: None

Note: • 12" HPCS (3)-1-1 12" LPCS (3)-1-1
6" HPCS (4)-1-1 6" LPCS (4)-1-1

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-221

SYSTEM: Residual Heat Removal (RHR)

EXEMPTIONS APPLIED:

IWB-1220(a)	No
(b)(1)	Yes All piping and components \leq 1NPS
(b)(2)	Yes
(c)	No
IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components \leq 4NPS
IWC-1221(a) ²	Yes All piping \leq 4NPS
(b)	N/A ³
(c)	Yes
(d)	N/A ³
(e)	N/A ³
(f)	Yes See Note 2
IWC-1222(a)	N/A
(b)	N/A
(c)	N/A
(d)	N/A
IWD-1220.1	N/A All piping and components are Class 1 or Class 2
IWD-1220.2	N/A

Requests for Relief: Yes RHR pumps, see ISI-2-002

Notes: • The steam condensing mode of RHR will not be used at WNP-2. Surface, volumetric and visual examinations will extend only to the first closed valve from the RHR system main loop.

- 18" RHR (4)-1-1
18" RHR (4)-1-2
18" RHR (4)-1-3
18" RHR (28)-1-2
16" RHR (28)-1-5
16" RHR (5)-2-1 (downstream of RHR-V-17A)
16" RHR (5)-2-2 (downstream of RHR-V-17B)
10" RHR (28)-1-2
10" RHR (28)-1-5
- 8" RHR (7)-1-2
8" RHR (54)-1-1
6" RHR (6)-2-1
downstream of RHR-V-27A)
6" RHR (6)-2-2
(downstream of RHR-V-27B)
6" RHR (6)-2-3
6" RHR (7)-1-2

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

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Exemptions

ISI-222

SYSTEM: Standby Liquid Control (SLC)

EXEMPTIONS APPLIED:

IWB-1220(a)	Yes	All Class 1 SLC
(b)(1)	Yes	All SLC \leq 1NPS
(b)(2)	Yes	
(c)	No	
IWC-1220(a) ¹	No	
(b)	No	
(c)	Yes	All components \leq 4NPS
IWC-1221(a) ²	N/A	
(b)	N/A ³	
(c)	N/A	
(d)	N/A ³	
(e)	N/A ³	
(f)	N/A	
IWC-1222(a)	Yes	All piping \leq 4NPS
(b)	Yes	
(c)	Yes	Pump suction piping
(d)	No	
IWD-1220.1	N/A	
IWD-1220.2	N/A	

Requests for Relief: None

Note: • All SLC piping and components are Class 1 or Class 2

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR



Exemptions

ISI-223

SYSTEM: Reactor Water Clean-up (RWCU)

EXEMPTIONS APPLIED:

IWB-1220(a)	No
(b)(1)	Yes All piping and components \leq 1NPS
(b)(2)	Yes
(c)	No
IWC-1220(a) ¹	N/A
(b)	N/A
(c)	N/A
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	N/A
(b)	N/A
(c)	N/A
(d)	N/A
IWD-1220.1	N/A See Note 2
IWD-1220.2	N/A

Requests for Relief: None

- Notes:
- RWCU piping and components are Class 1 or Class 3.
 - Class 3 RWCU is not included in Table IWD-2500-1 and hence exempt for ISI.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-224

SYSTEM: Standby Service Water (SW)

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A
(b)(2)	N/A
(c)	N/A
IWC-1220(a) ¹	N/A
(b)	N/A
(c)	N/A
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	N/A
(b)	N/A
(c)	N/A
(d)	N/A
IWD-1220.1	Yes
IWD-1220.2	No

Requests for Relief: None

Note: • SW System is Class 3 or nonnuclear only.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-225

SYSTEM: Reactor Closed Cooling (RCC)

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A
(b)(2)	N/A
(c)	N/A
IWC-1220(a) ¹	No
(b)	Yes At containment penetration
(c)	Yes At containment penetration
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	Yes
(b)	Yes Piping between isolation valves at containment
(c)	Yes penetration
(d)	No
IWD-1220.1	Yes
IWD-1220.2	No

Requests for Relief: None

Note: • RCC is Class 3 or nonnuclear except for containment penetration which is Class 2.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-226

SYSTEM: Fuel Pool Cooling (FPC)

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A See Note 1
(b)(2)	N/A
(c)	N/A
IWC-1220(a) ¹	No
(b)	Yes FPC(7)-1, FPC(8)-1
(c)	Yes All components \leq 4NPS
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	Yes All piping \leq 4NPS
(b)	Yes
(c)	Yes FPC(7)-1, FPC(8)-1
(d)	Yes FPC(7)-1
IWD-1220.1	Yes
IWD-1220.2	Yes

Requests for Relief: None

Note: • FPC system is Class 2 and Class 3 only.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-228

SYSTEM: Control Rod Drive (CRD)

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A
(b)(2)	N/A
(c)	N/A
IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components \leq 4NPS
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	Yes All piping \leq 4NPS
(b)	Yes
(c)	No
(d)	No
IWD-1220.1	N/A
IWD-1220.2	N/A

Request for Relief: None

- Notes:
- CRD system is Class 2 or nonnuclear only.
 - Supply System will examine 10% of the welds in the scram discharge volume using a volumetric technique. Reference letter G02-83-523, G. D. Bouchey to A. Schwencer, "PSI Summary Report Clarification" dated June 15, 1983.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-229

SYSTEM: Main Steam (MS) and Reactor Feedwater (RFW)

EXEMPTIONS APPLIED:

IWB-1220(a)	Yes 2" MS(12)-4, 2" RPV instrument lines, 2" MS(9)-4, 3" MS(9)-4, 1-1/2 MS(9)-4, 1-1/2" MSLC(2)-4
(b)(1)	Yes All piping and components \leq 1NPS
(b)(2)	Yes
(c)	No
IWC-1220(a) ¹	No
(b)	No
(c)	Yes All components \leq 4NPS
IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A
IWC-1222(a)	Yes All piping \leq 4NPS
(b)	Yes
(c)	No
(d)	No
IWD-1220.1	No
IWD-1220.2	No

Requests for Relief: ISI-2-006

Note: • MSRV discharge lines in the wetwell are ASME Class 2, however, they have been upgraded from ASME Class 3 and therefore, Class 3 rules apply.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-230

SYSTEM: Reactor Recirculation (RRC)

EXEMPTIONS APPLIED:

IWB-1220(a)	No
(b)(1)	Yes All piping and components \leq 1NPS
(b)(2)	Yes
(c)	Yes 2" RRC(51)-4 RPV drain

IWC-1220(a) ¹	No
(b)	No
(c)	Yes Components \leq 4NPS

IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A

IWC-1222(a)	Yes All piping \leq 4NPS
(b)	No
(c)	No
(d)	No

IWD-1220.1	N/A
------------	-----

IWD-1220.2	N/A
------------	-----

Request for Relief: None

Note: • RRC is Class 1 except for some small miscellaneous Class 2 lines associated with floor control valve drains and pump seals.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

Exemptions

ISI-275

SYSTEM: Emergency Chilled Water (CCH)

EXEMPTIONS APPLIED:

IWB-1220(a)	N/A
(b)(1)	N/A
(b)(2)	N/A
(c)	N/A

IWC-1220(a) ¹	N/A
(b)	N/A
(c)	N/A

IWC-1221(a) ²	N/A
(b)	N/A ³
(c)	N/A
(d)	N/A ³
(e)	N/A ³
(f)	N/A

IWC-1222(a)	N/A
(b)	N/A
(c)	N/A
(d)	N/A

IWD-1220.1	Yes
------------	-----

IWD-1220.2	Yes
------------	-----

Request for Relief: None

Note: • Entire system is Class 3.

¹ Refers to W-80 all categories except C-F

² Refers to W-83 category C-F

³ Applies to PWR

