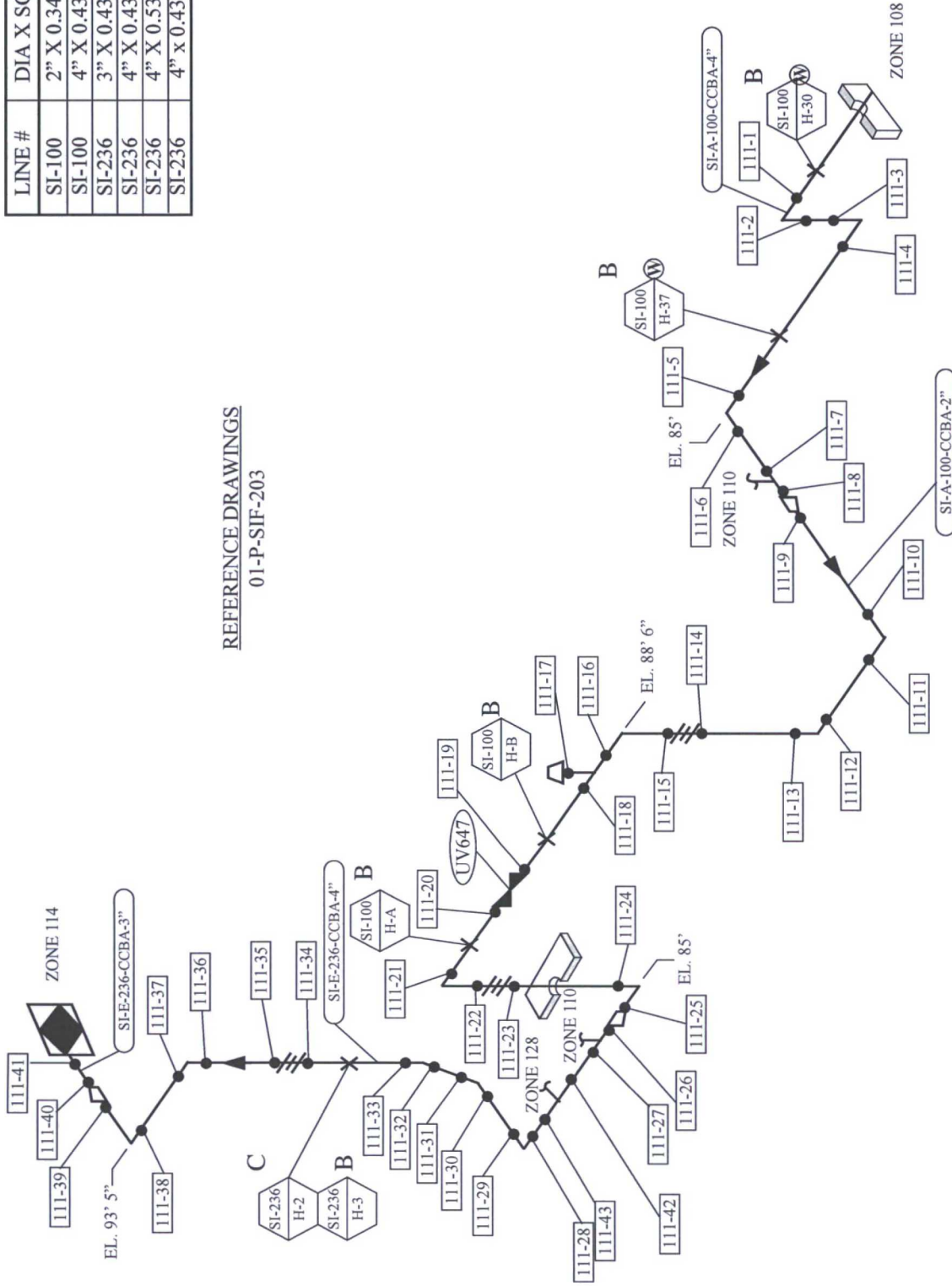


LINE #	DIA X SCH	FROM	TO
SI-100	2" X 0.344"	111-9	111-25
SI-100	4" X 0.438"	111-1	111-8
SI-236	3" X 0.438"	111-40	111-41
SI-236	4" X 0.438"	111-26	111-27
SI-236	4" X 0.531"	111-42	111-43
SI-236	4" X 0.438"	111-28	111-39

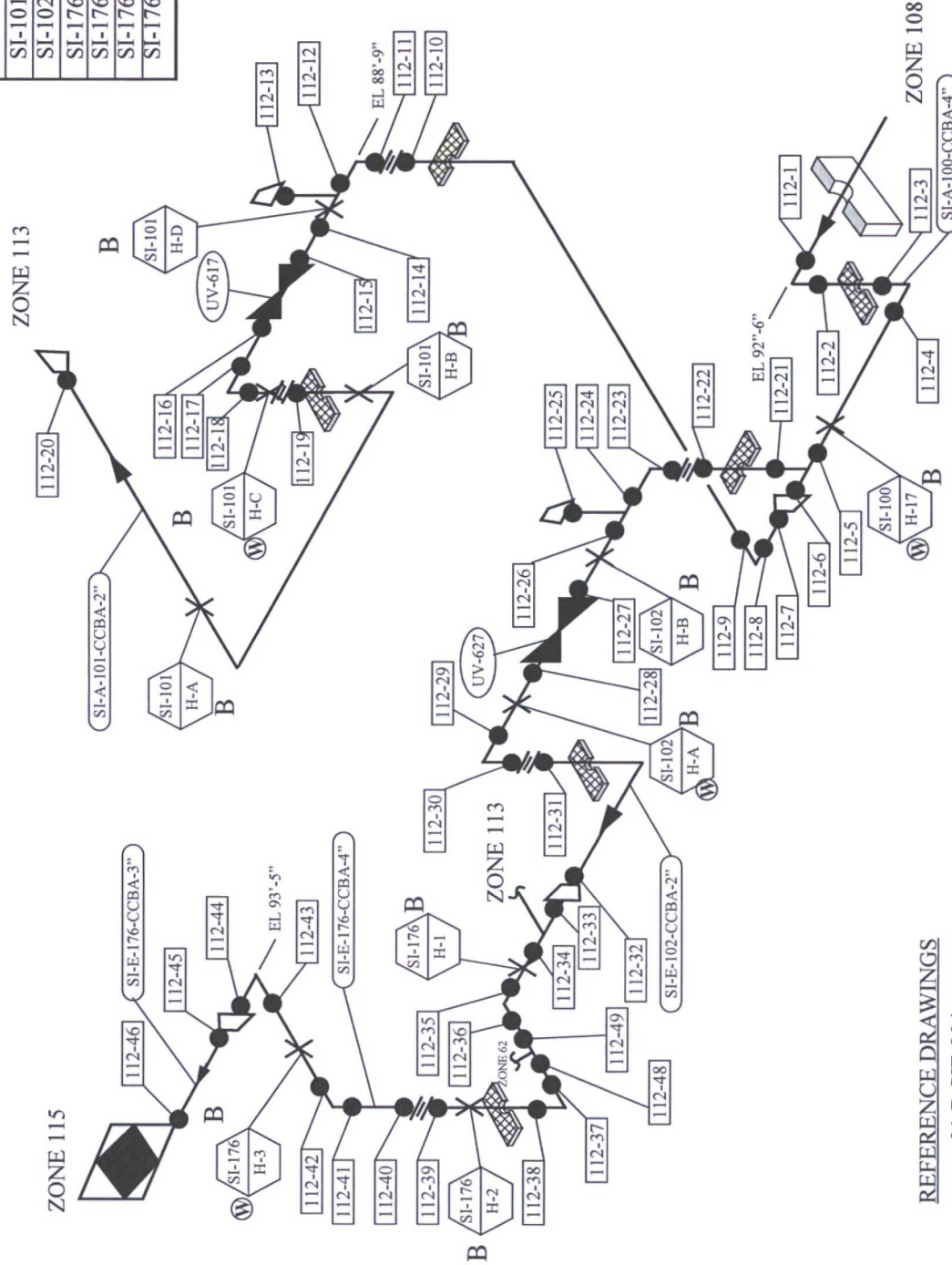
REFERENCE DRAWINGS
01-P-SIF-203



IR18 Fukushima mod
WO 4418123
EDC 2013-00537
111-42, 111-43

UNIT 1	ZONE 111
HPSI DISCHARGE WEST WRAP	

LINE #	DIA X SCH	FROM	TO
SI-100	4" X 0.438"	112-1	112-6
SI-101	2" X 0.344"	112-7	112-20
SI-102	2" X 0.344"	112-21	112-32
SI-176	4" X 0.438"	112-33	112-36
SI-176	4" X 0.531"	112-48	112-49
SI-176	4" X 0.438"	112-37	112-44
SI-176	3" X 0.438"	112-45	112-46



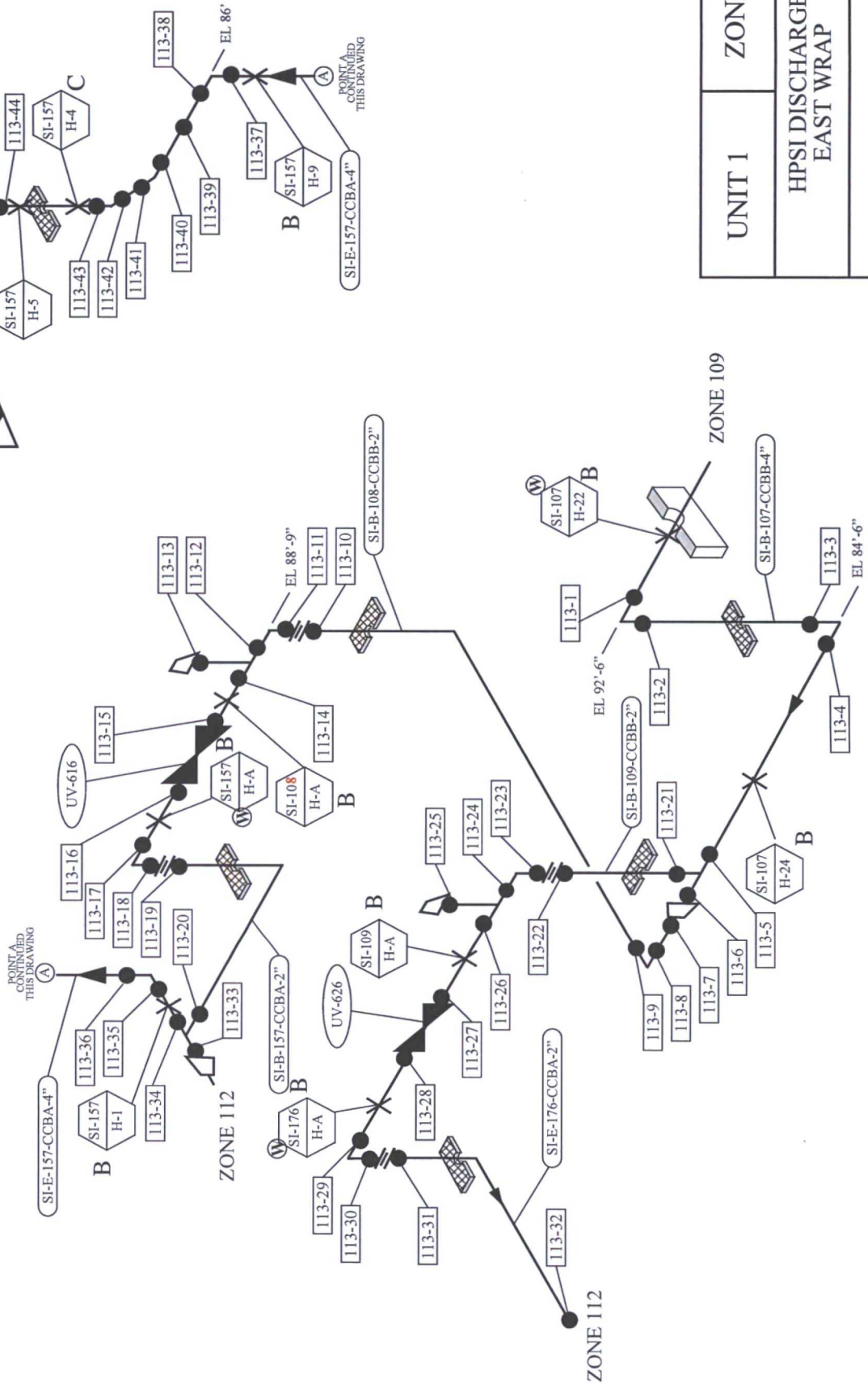
REFERENCE DRAWINGS
01-P-SIF-204

IR18 Fukushima mod
WO 4418147
EDC 2013-00538
112-48, 112-49

UNIT 1	ZONE 112
HPSI DISCHARGE EAST WRAP	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
01-P-SIF-204

LINE #	DIA X SCH	FROM	TO
SI-108	2" X 0.344"	113-7	113-15
SI-107	4" X 0.337"	113-1	113-6
SI-109	2" X 0.344"	113-21	113-27
SI-157	4" X 0.438"	113-33	113-49
SI-157	3" X 0.438"	113-50	113-51
SI-157	2" X 0.344"	113-16	113-20
SI-176	2" X 0.344"	113-28	113-32

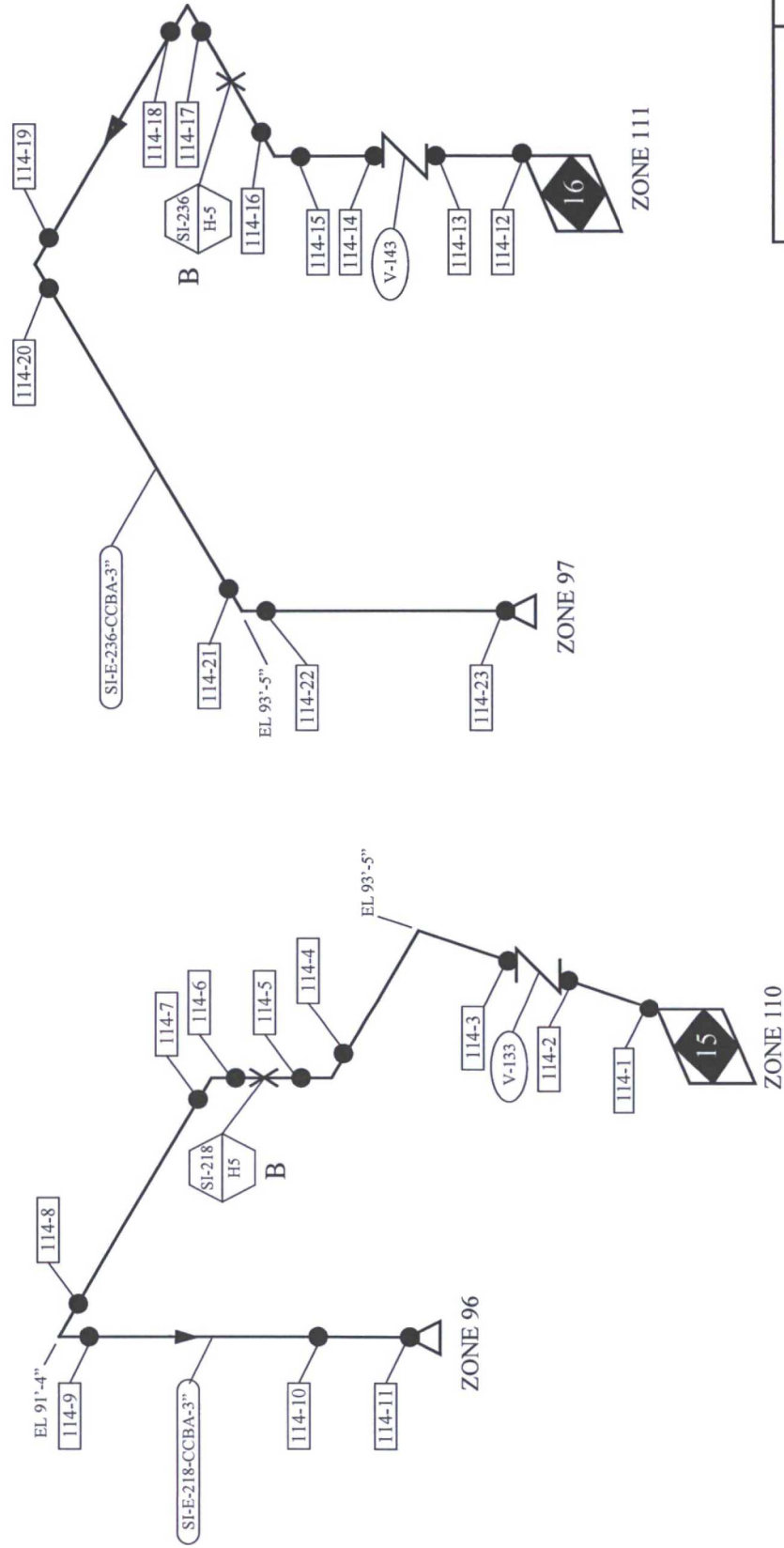


UNIT 1	ZONE 113
HPSI DISCHARGE EAST WRAP	
3INT-ISI-1, Rev. 7	

LINE #	DIA X SCH	FROM	TO
SI-218	3" X 0.438"	114-1	114-11
SI-236	3" X 0.438"	114-12	114-23

REFERENCE DRAWINGS

01-P-SIF-103

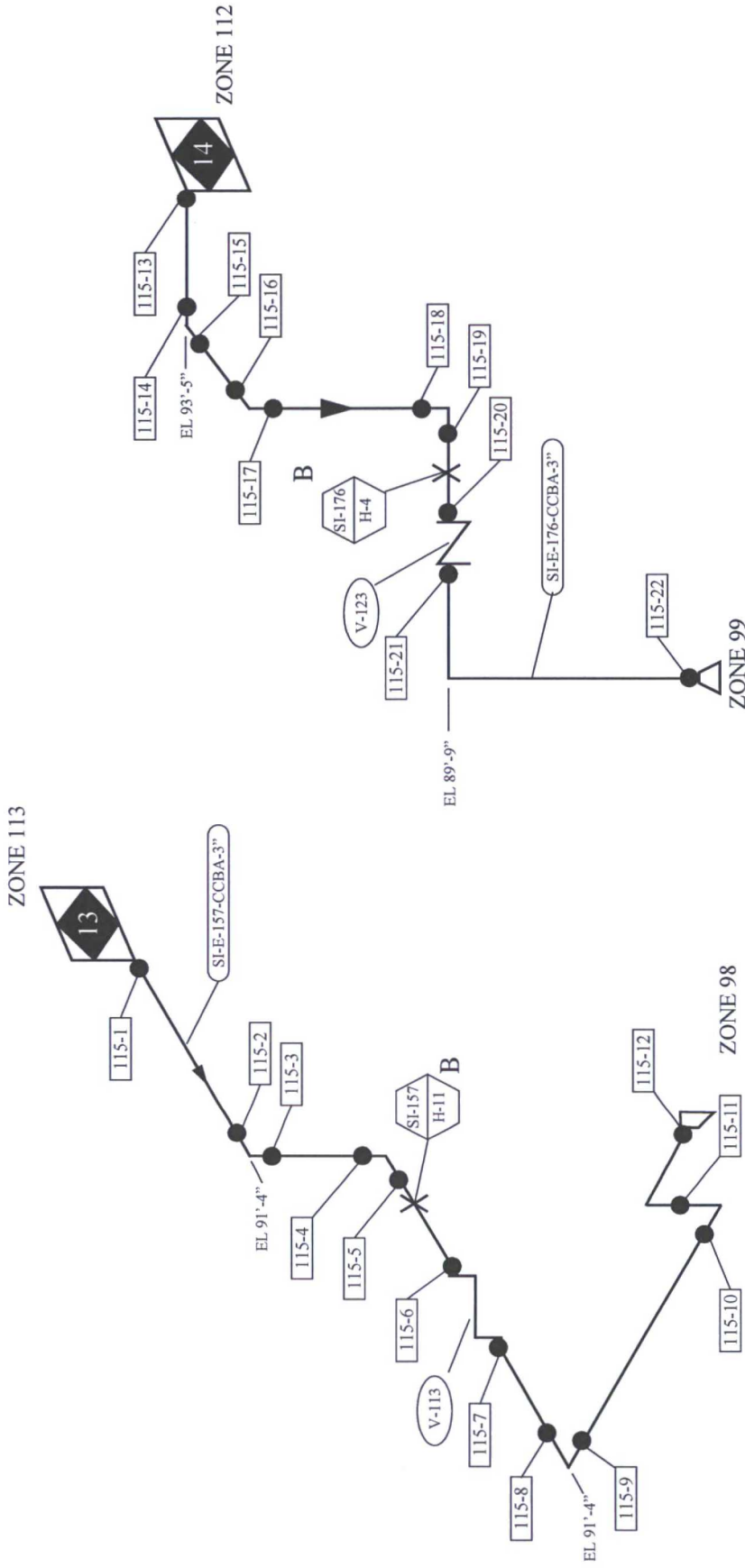


UNIT 1	ZONE 114
CONTAINMENT HPSI HEADER LOOP 1A & 1B	
3INT-ISI-1, Rev. 7	

LINE #	DIA X SCH	FROM	TO
SI-157	3" X 0.438"	115-1	115-12
SI-176	3" X 0.438"	115-13	115-22

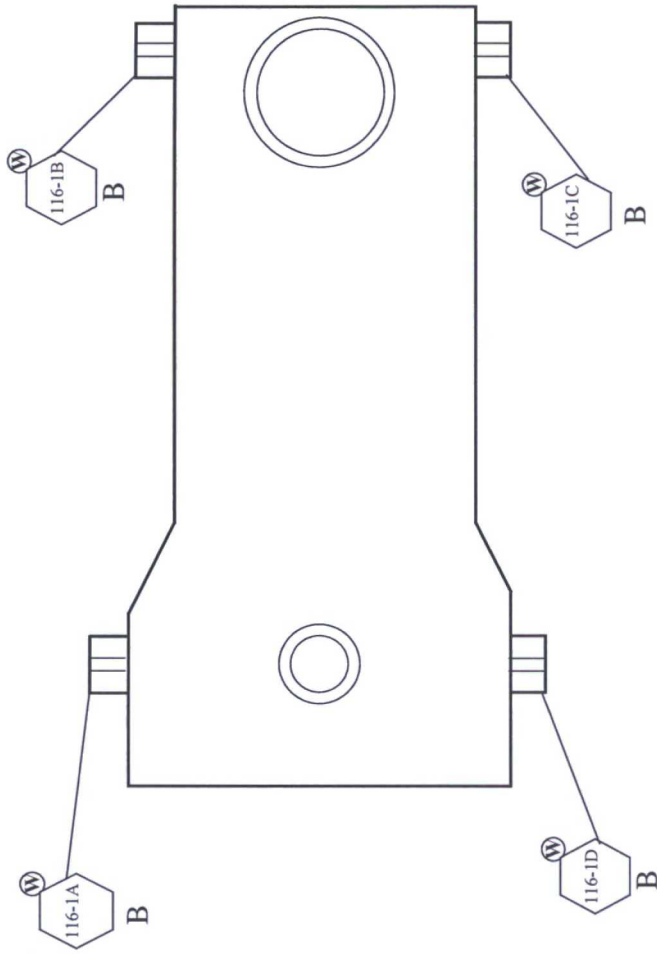
REFERENCE DRAWINGS

01-P-SIF-136

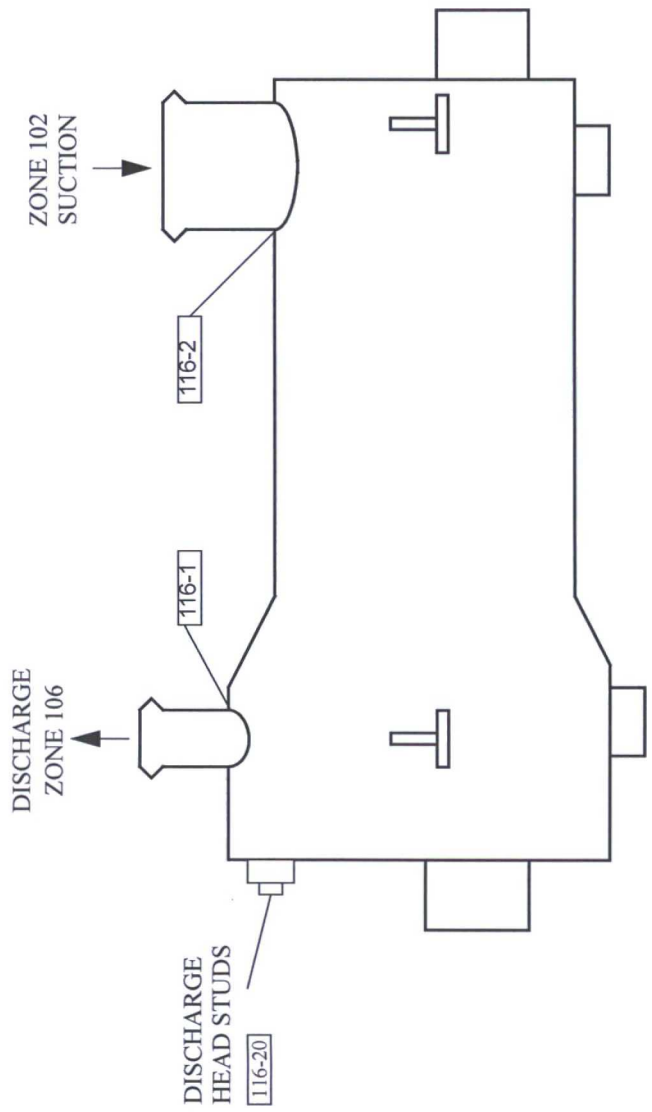


UNIT 1	ZONE 115
CONTAINMENT HPSI HEADER LOOP 2A & 2B	
3INT-ISI-1, Rev. 7	

N →

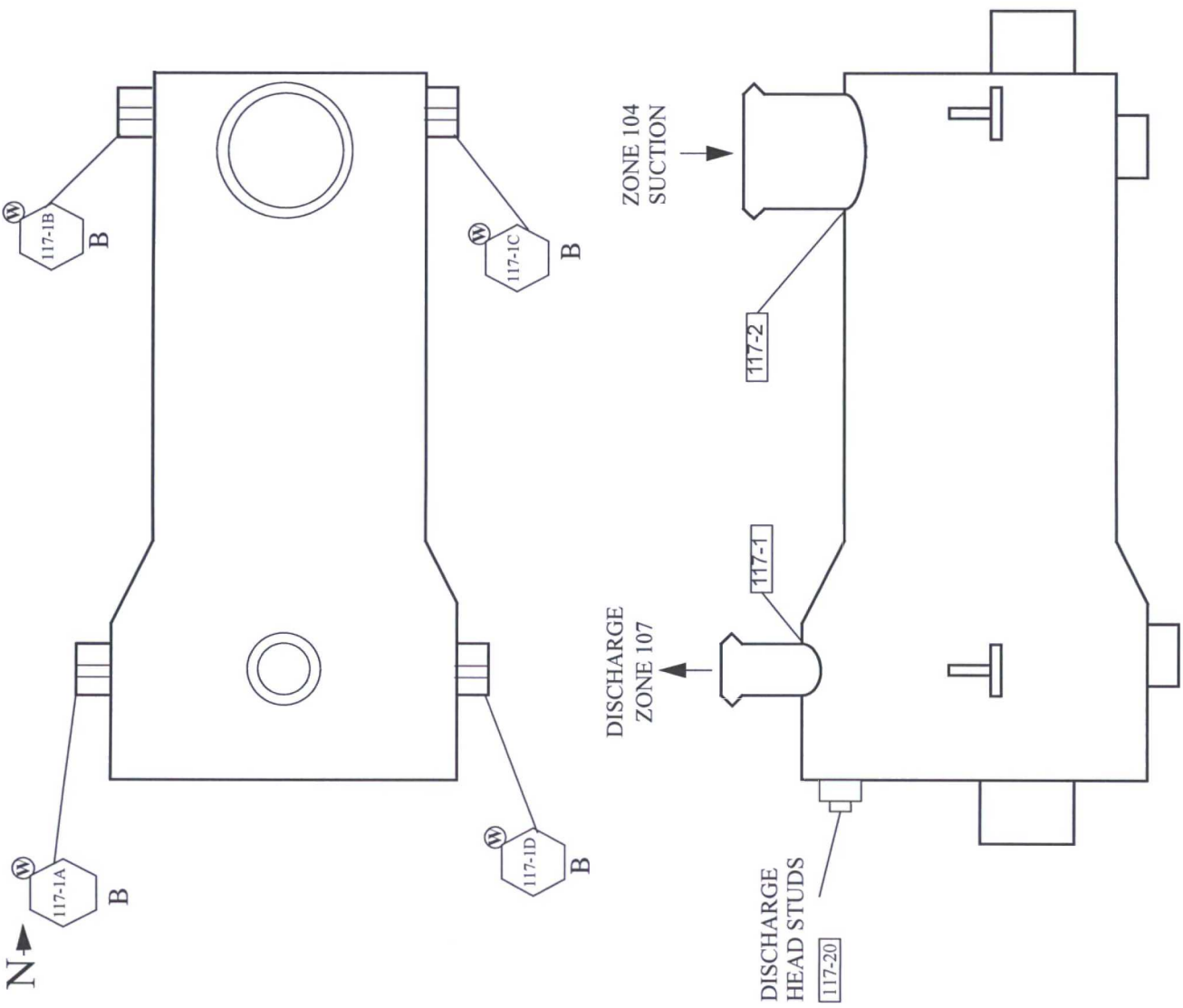


- 1) TAG NUMBER: IMSIAP02
 - 2) SERIAL NUMBER: INGERSOL RAND
S/N 0776-14
 - 3) DISCHARGE HEAD STUDS 16@ 2.25"
DIA. X 10.88"
- REFERENCE DRAWINGS
01-P-SIF-201
01-P-SIF-203



UNIT 1	ZONE 116
HPSI PUMP "A"	
3INT-ISI-1, Rev. 7	

- 1) TAG NUMBER: 1MSIBP02
 - 2) SERIAL NUMBER: INGERSOL RAND
S/N 0776-15
 - 3) DISCHARGE HEAD STUDS 16@ 2.25"
DIA. X 10.88"
- REFERENCE DRAWINGS
01-P-SIF-201
01-P-SIF-203

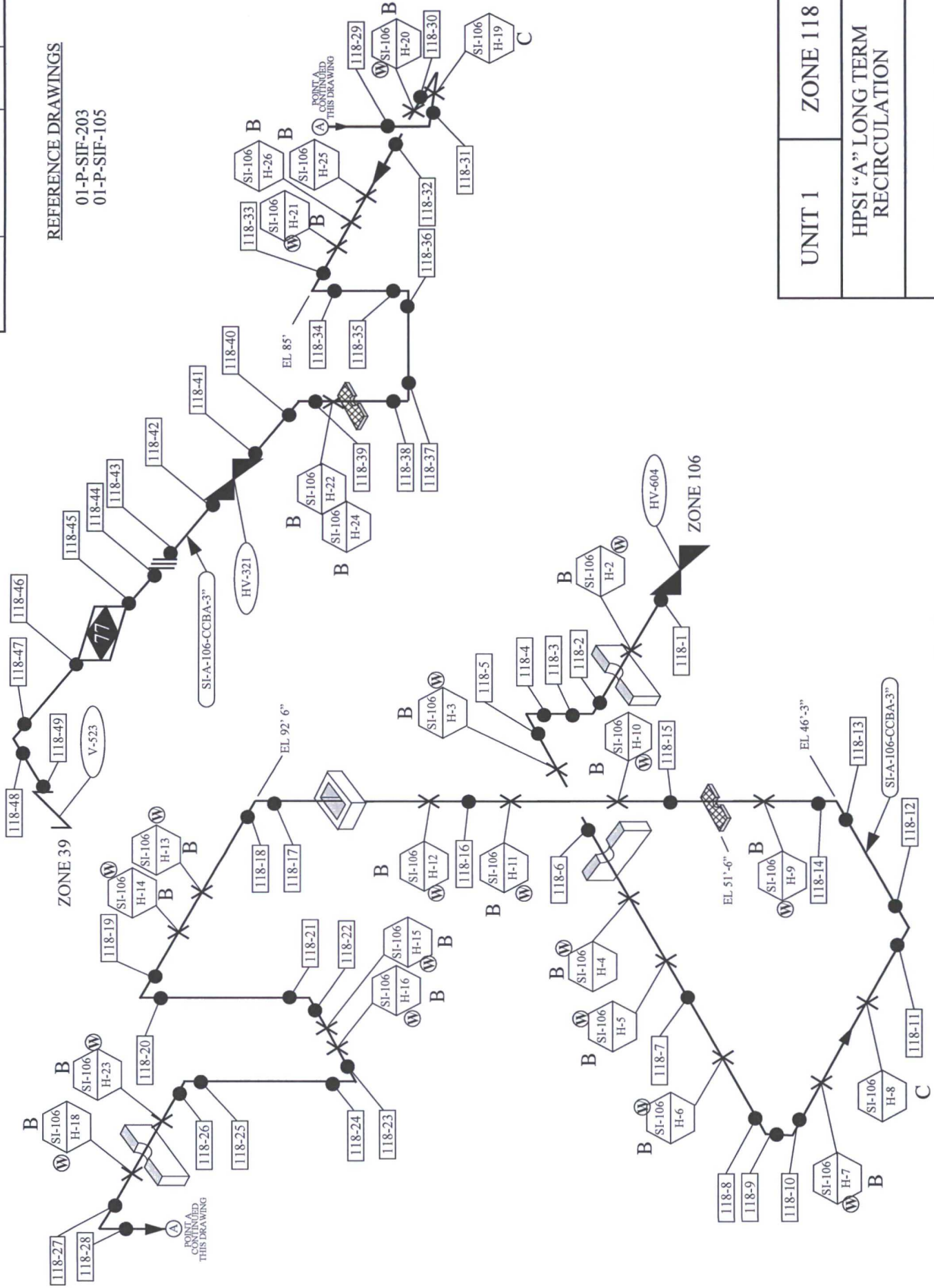


UNIT 1	ZONE 117
HPSI PUMP "B"	
3INT-ISI-1, Rev. 7	

LINE #	DIA X SCH	FROM	TO
SI-106	3" X 0.438"	118-1	118-49

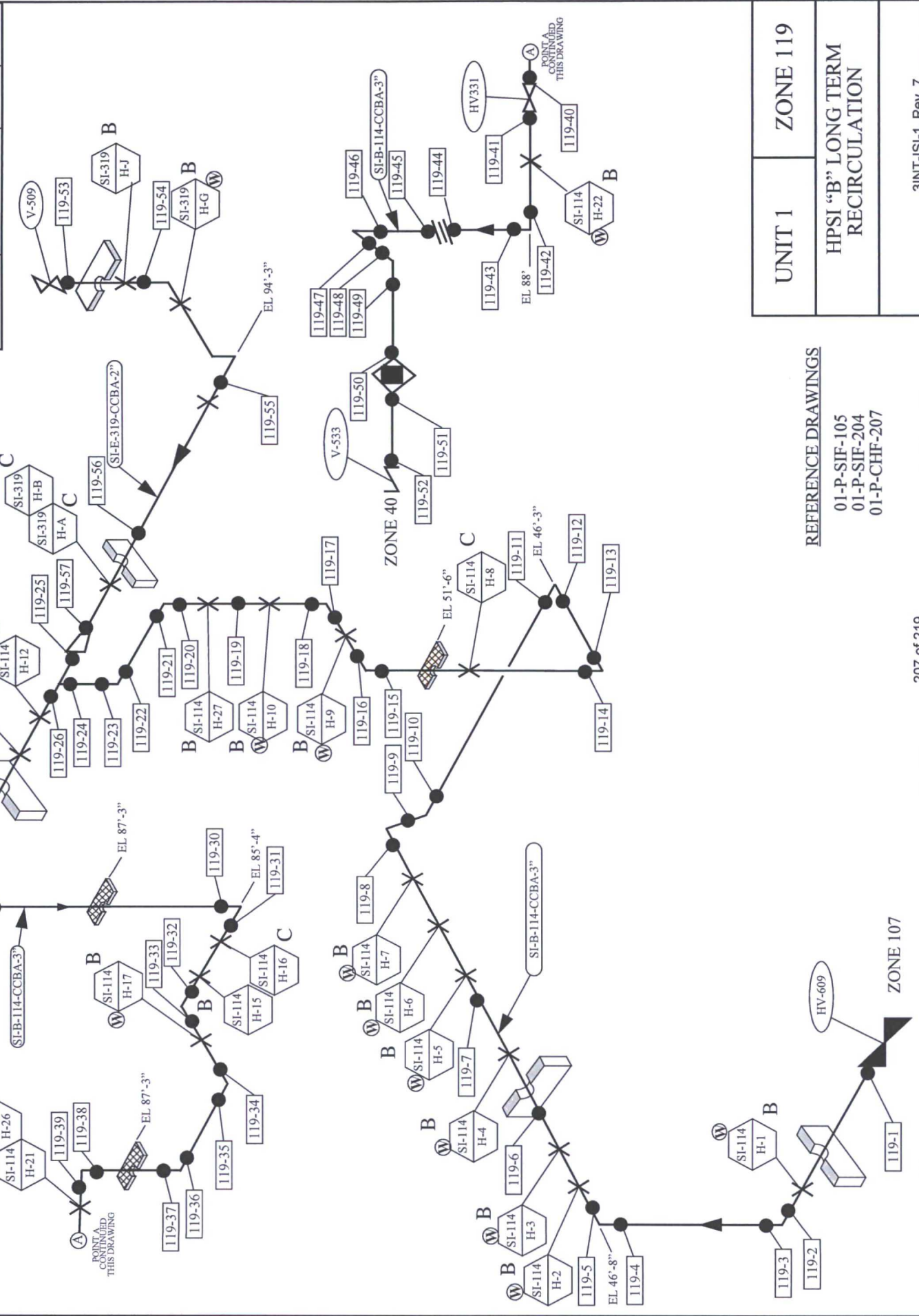
REFERENCE DRAWINGS

01-P-SIF-203
01-P-SIF-105



UNIT 1	ZONE 118
HPSI "A" LONG TERM RECIRCULATION	
3INT-ISI-1, Rev. 7	

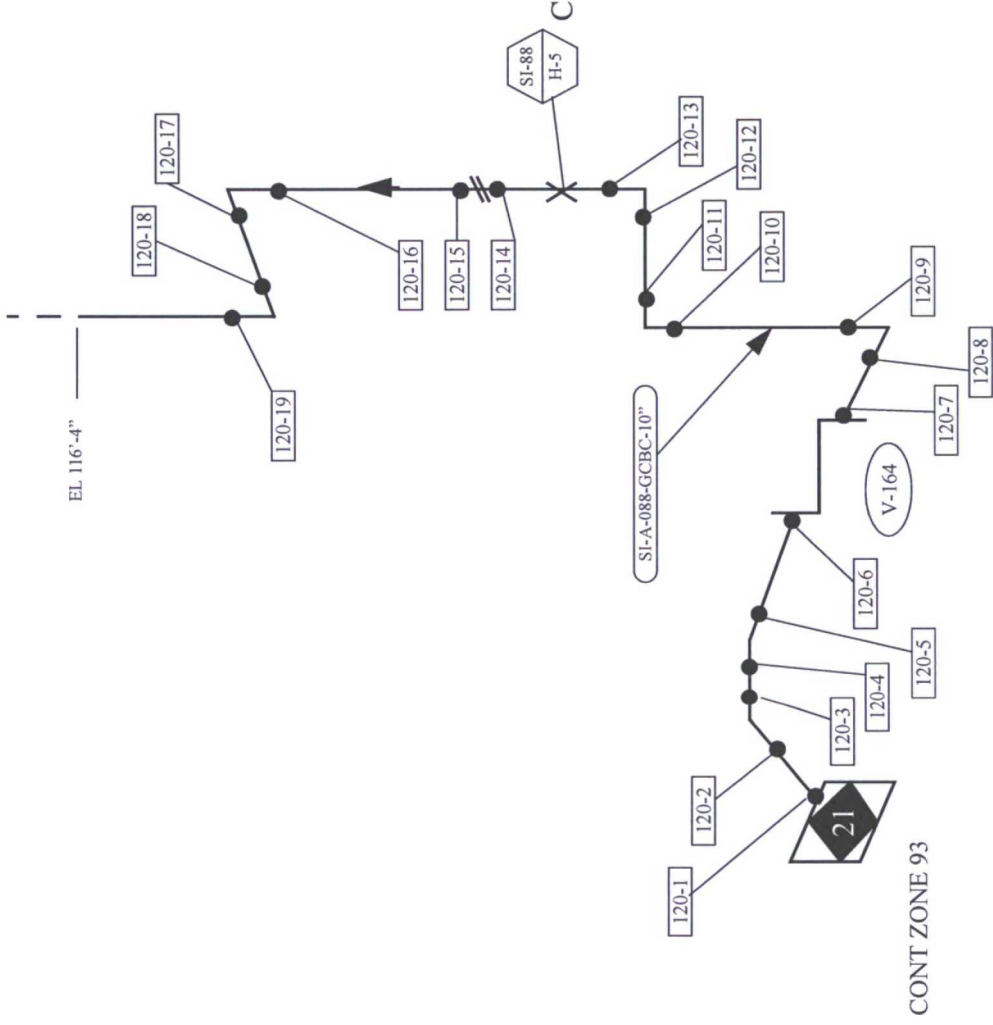
LINE #	DIA X SCH	FROM	TO
SI-114	3" X 0.438"	119-1	119-52
SI-319	2" X 0.344"	119-53	119-57



UNIT 1	ZONE 119
HPSI "B" LONG TERM RECIRCULATION	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
 01-P-SIF-105
 01-P-SIF-204
 01-P-CHF-207

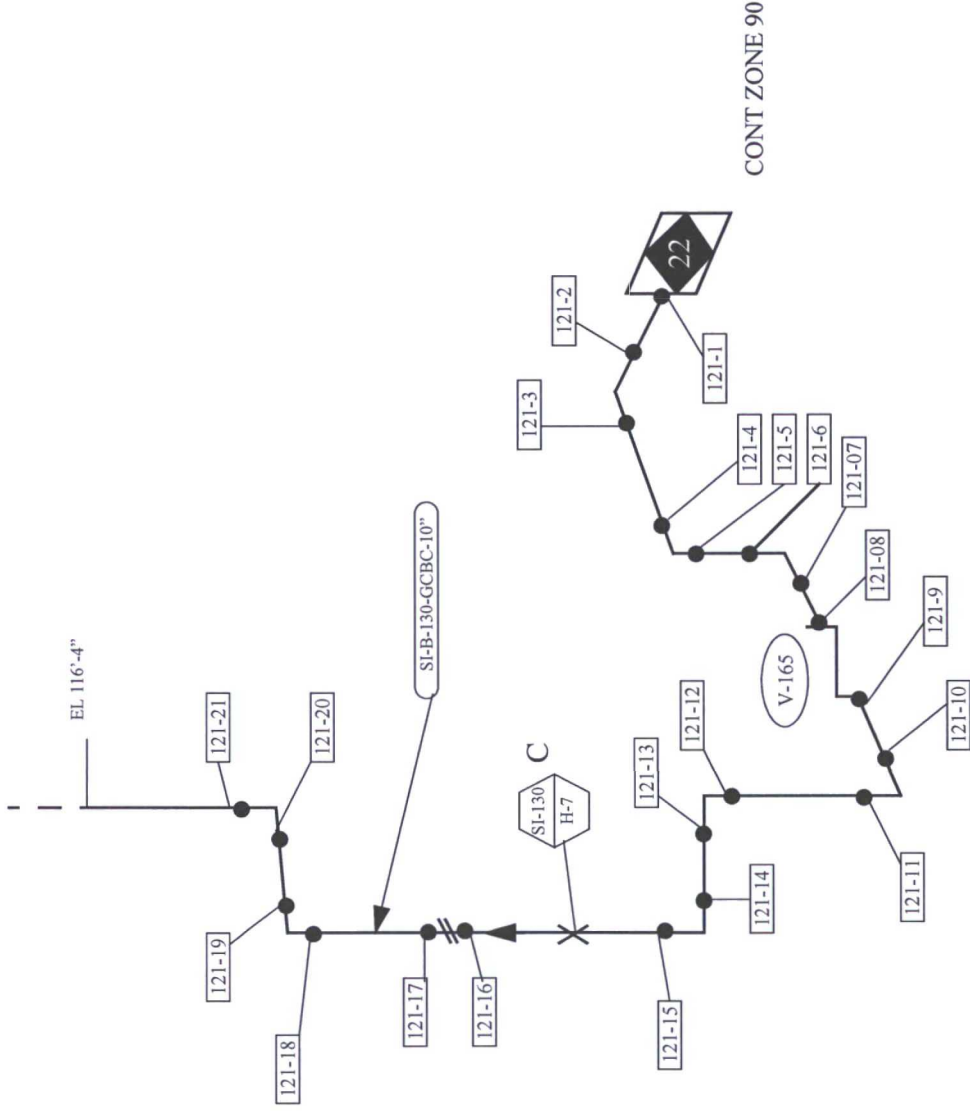
LINE #	DIA X SCH	FROM	TO
SI-088	10" X 0.250"	120-1	120-19



UNIT 1	ZONE 120
CONTAINMENT SPRAY A	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
13-P-ZCG-105

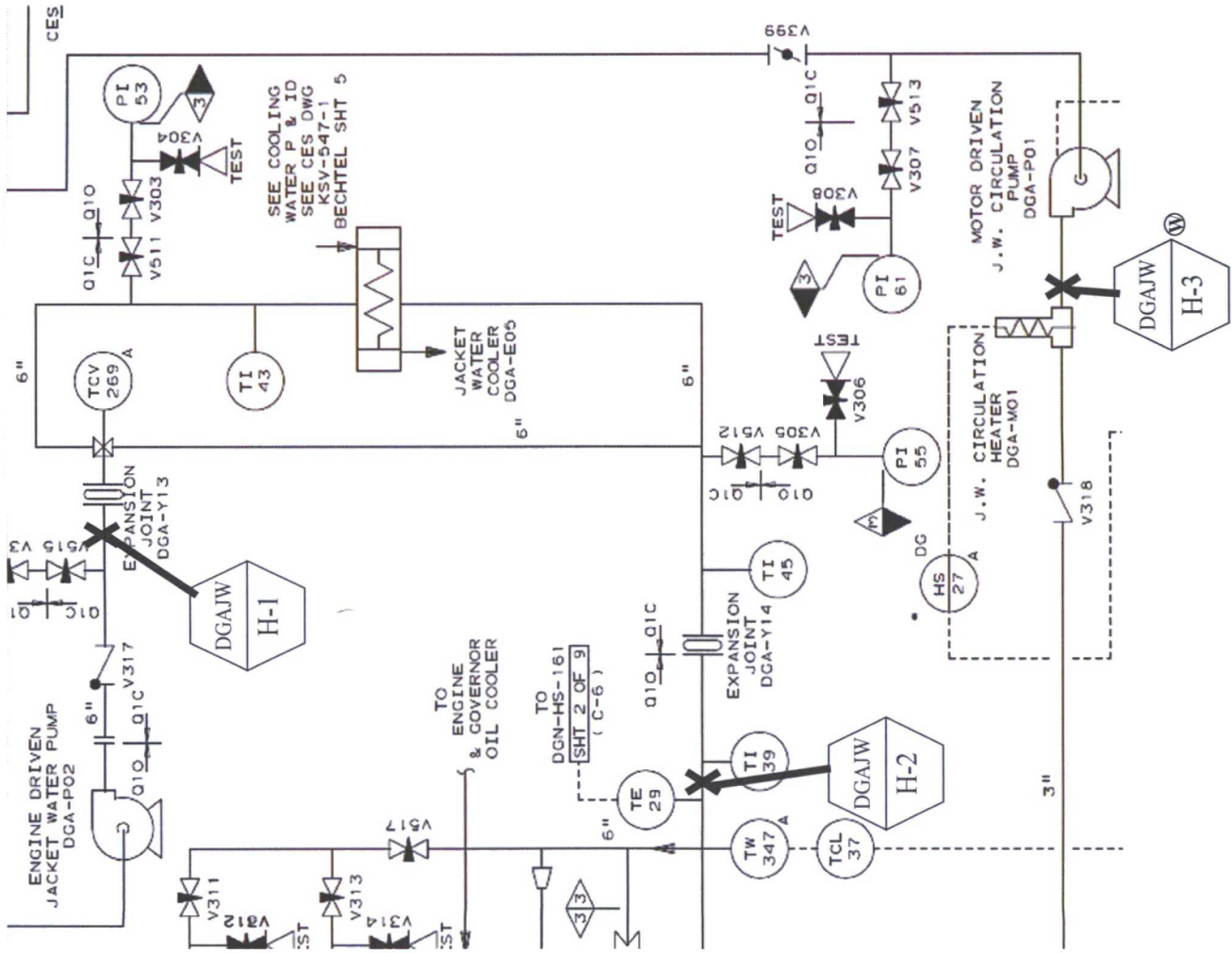
LINE #	DIA X SCH	FROM	TO
SI-130	10" X 0.250"	121-1	121-21



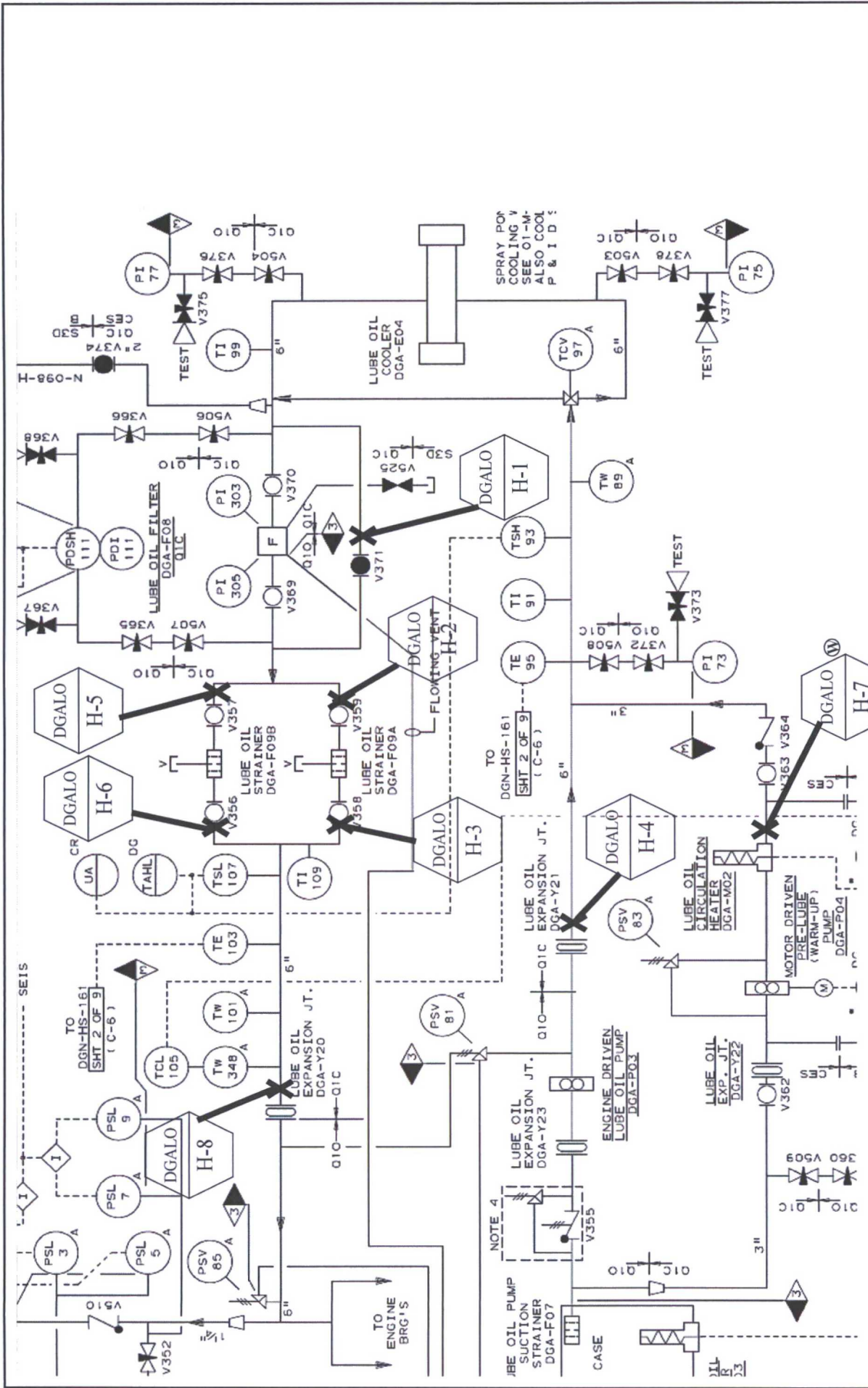
UNIT 1	ZONE 121
CONTAINMENT SPRAY B	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
13-P-ZCG-105

REFERENCE DRAWINGS
01-M-DGA-0001



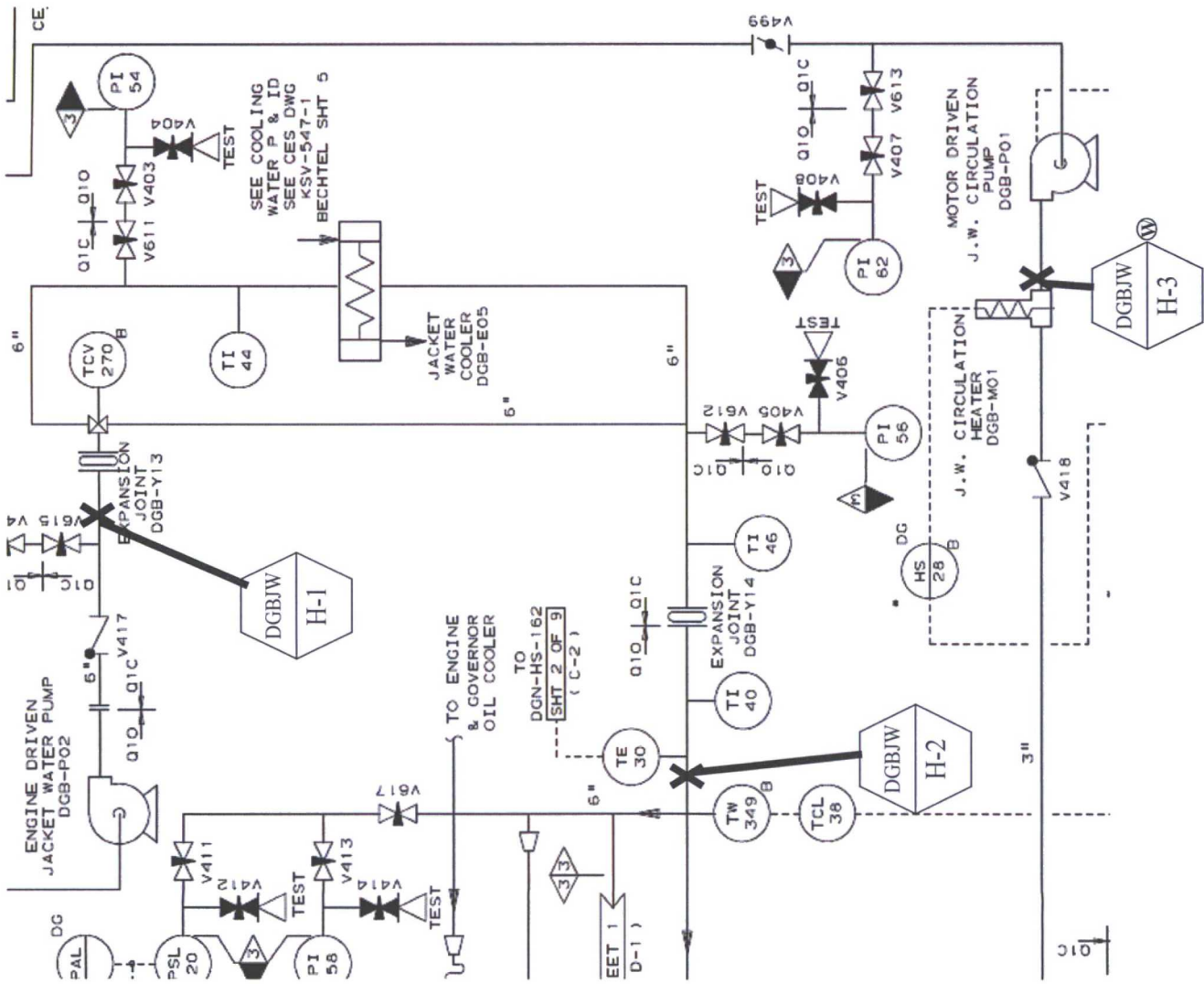
UNIT 1	ZONE 122
DG A JACKET WATER CLASS 3	
3INT-ISI-1, Rev. 7	



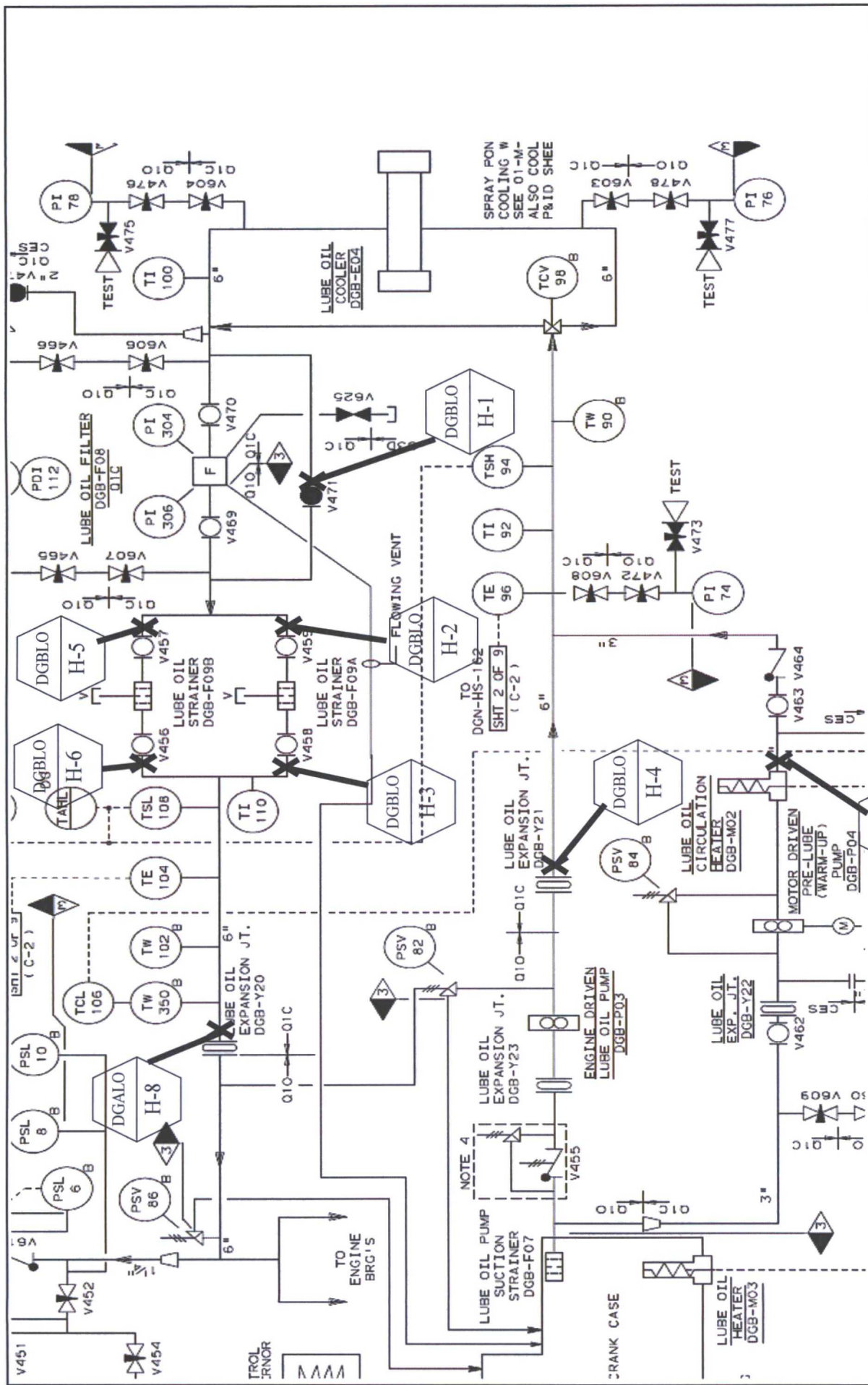
UNIT 1	ZONE 123
DG A LUBE OIL CLASS 3	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
01-M-DGA-0001

REFERENCE DRAWINGS
01-M-DGA-0001



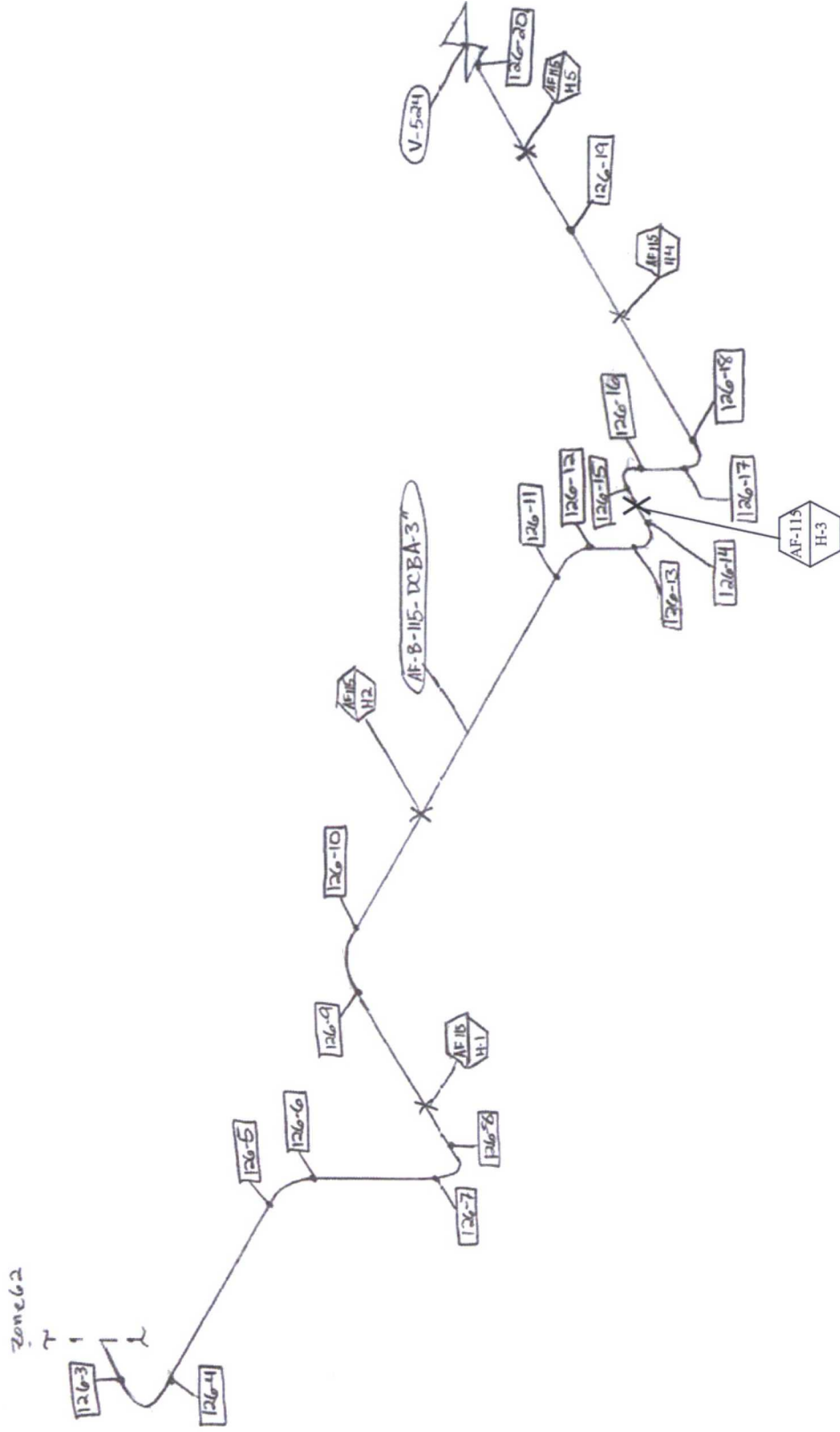
UNIT 1	ZONE 124
DGB JACKET WATER CLASS 3	
3INT-ISI-1, Rev. 7	



UNIT 1	ZONE 125
DGB LUBE OIL CLASS 3	
3INT-ISI-1, Rev. 7	

REFERENCE DRAWINGS
01-M-DGA-0001

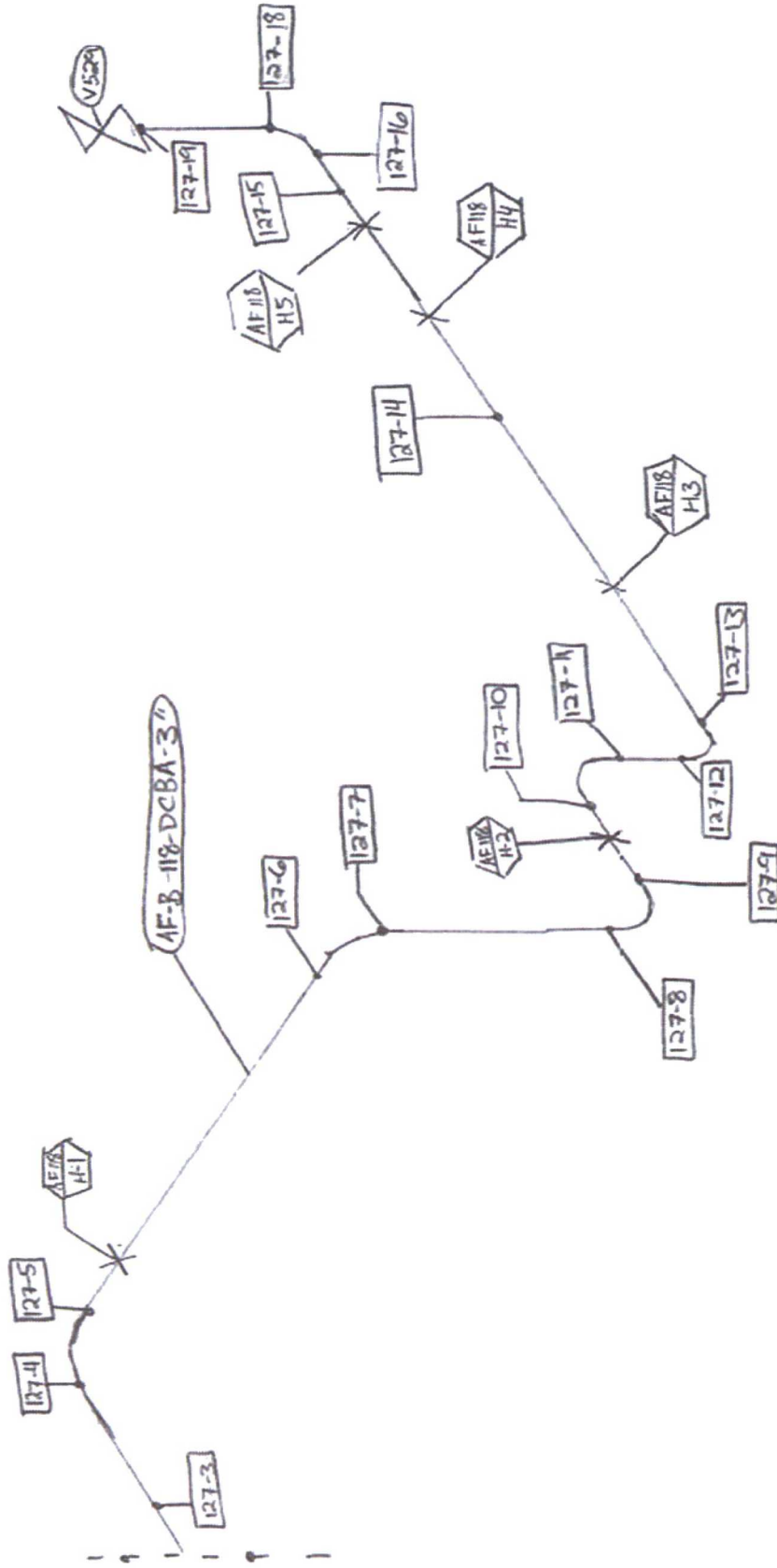
LINE #	DIA X SCH	FROM	TO
AF-115	3" X 0.438"	126-3	126-20



IR18 Fukushima mod
 WO 4418186
 EDC 2013-00545
All welds and hangers on zone

UNIT 1	ZONE 126
AF Alternate Supply	

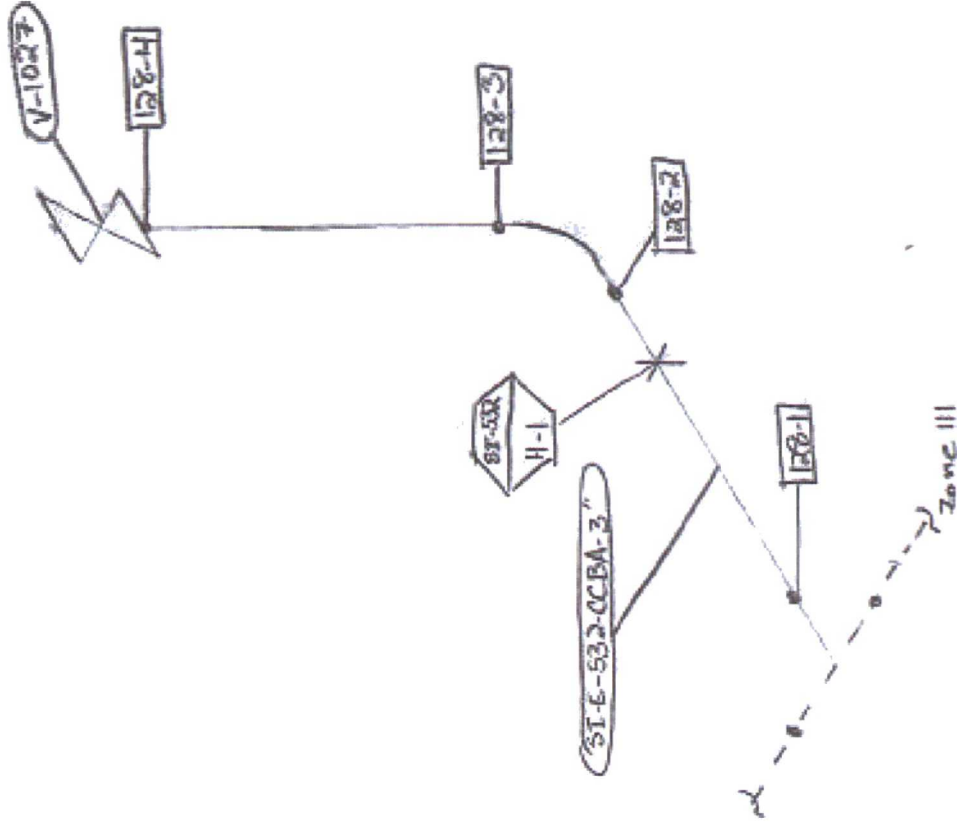
LINE #	DIA X SCH	FROM	TO
AF-118	3" X 0.438"	127-3	127-18



IR18 Fukushima mod
 WO 4418212
 EDC 2013-00544
All welds and hangers on zone

UNIT 1	ZONE 127
AF Primary	
3INT-ISI-1, Rev. 7	

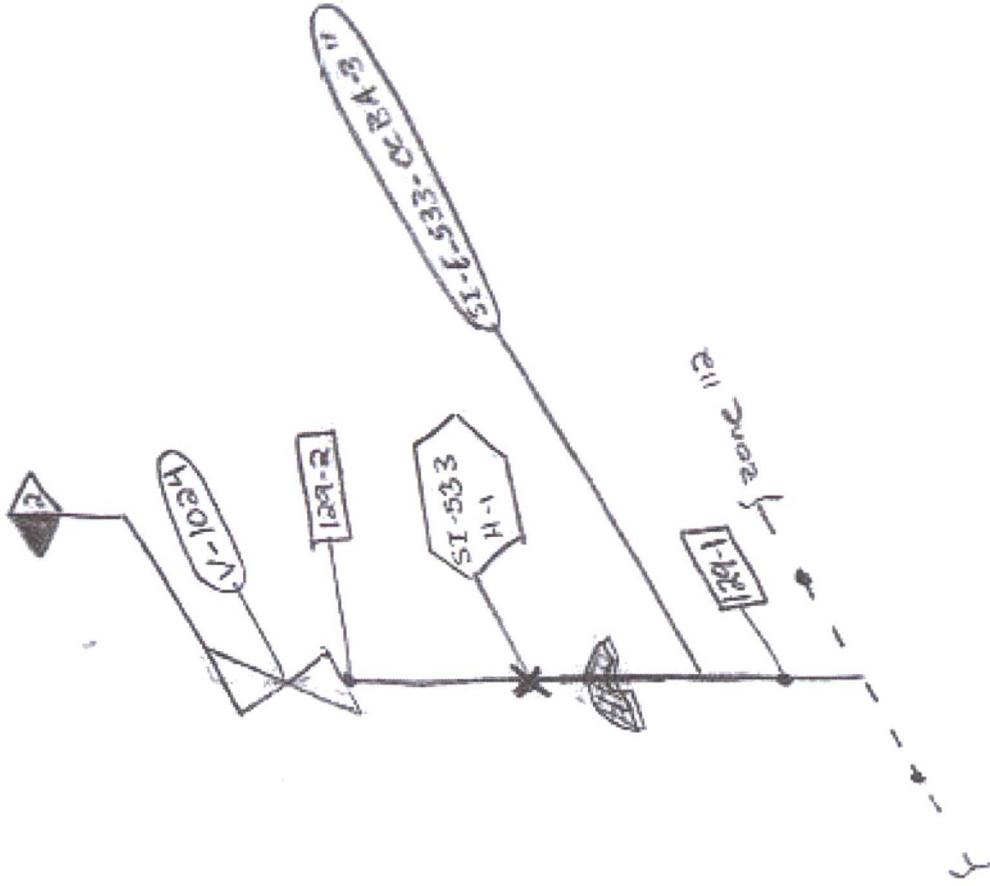
LINE #	DIA X SCH	FROM	TO
SI-532	3" X 0.438"	128-1	128-2



IR18 Fukushima mod
 WO 4418123
 EDC 2013-00537
All welds and hanger on zone

UNIT 1	ZONE 128
RCS Primary Discharge	
3INT-ISI-1, Rev. 7	

LINE #	DIA X SCH	FROM	TO
SI-533	3" X 0.438"	129-1	129-2



IR18 Fukushima mod
 WO 4418147
 EDC 2013-00538
All welds and hanger on zone

UNIT 1	ZONE 129
RCS Alternative Discharge	
3INT-ISI-1, Rev. 7	

SECTION 11.0
Terms and Definitions

AHE:	Augmented High Energy
ANII:	Authorized Nuclear Inservice Inspector
APS:	Arizona Public Service Company, et al
ASME:	American Society of Mechanical Engineers
Aux:	Auxiliary
BER:	Break Exclusion Region
CE:	Combustion Engineering
CEDM:	Control Element Drive Mechanism
CL:	Cold Leg
CRD:	Control Rod Drive
CSP:	Containment Spray Pump
DWG:	Drawing
HL:	Hot Leg
HPSI:	High Pressure Safety Injection
ICI:	In Core Instrumentation
IEB:	Inspection and Enforcement Bulletin
INPO:	Institute for Nuclear Power Operations
ISI:	Inservice Inspection
LPSI:	Low Pressure Safety Injection
NDE:	Nondestructive Examination
NRC:	Nuclear Regulatory Commission
PZR:	Pressurizer
RCP:	Reactor Coolant Pump
Recirc:	Recirculation
RPV:	Reactor Pressure Vessel
RVLMS:	Reactor Vessel Level Monitoring System
SDCHX:	Shutdown Cooling Heat Exchanger
SD:	Shutdown
SER (OE):	Significant Event Report
(NRC) SER:	(NRC) Safety Evaluation Report
SG:	Steam Generator
UFSAR:	Updated Final Safety Analysis Report

Enclosure 2

Third Inspection Interval

Inservice Inspection Program Summary Manual

PVNGS Unit 2

3INT-ISI-2, Revision 7



3rd Inspection Interval Inservice Inspection Program Summary Manual PVNGS Unit 2

Arizona Public Service Company
PO Box 52034
Phoenix, AZ 85072-2034

PVNGS
5801 S. Wintersburg Road
Tonopah, AZ 85354

Preparer: Cox, Jennifer
Y(Z06399)
Digitally signed by Cox, Jennifer
Y(Z06399)
DN: cn=Cox, Jennifer Y(Z06399)
Reason: I prepared this document...
Date: 2018.08.01 12:45:53 -07'00'

Section Leader: Schrecker,
Kenneth
D(Z99981)
Digitally signed by Schrecker, Kenneth
D(Z99981)
DN: cn=Schrecker, Kenneth D(Z99981)
Reason: I am approving this document
Date: 2018.08.01 17:06:31 -07'00'

ANII (Concurrence): Hogstrom,
Robert
YH2450)
Digitally signed by Hogstrom,
Robert (YH2450)
DN: cn=Hogstrom, Robert
(YH2450)
Date: 2018.08.01 15:26:17
-07'00'

Reviewer: Ahlstrom, Wiley
J(Z99422)
Digitally signed by Ahlstrom,
Wiley J(Z99422)
DN: cn=Ahlstrom, Wiley
J(Z99422)
Date: 2018.08.01 13:12:02 -07'00'

Department Leader: Schrecker, Kenneth
D(Z99981)
Digitally signed by Schrecker, Kenneth
D(Z99981)
DN: cn=Schrecker, Kenneth D(Z99981)
Reason: I am approving this document for
Boris Boff as his delegate
Date: 2018.08.01 17:07:22 -07'00'

Regulatory Affairs (Concurrence): Cox, Matthew
S(Z05628)
Digitally signed by Cox, Matthew
S(Z05628)
DN: cn=Cox, Matthew S(Z05628)
Date: 2018.08.02 11:10:30 -07'00'

License Renewal (Concurrence): Boyd, William
R(Z08404)
Digitally signed by Boyd, William
R(Z08404)
DN: cn=Boyd, William R(Z08404)
Date: 2018.08.01 13:18:51 -07'00'

Commercial Service Date: 09-19-1986

Program No: 3INT-ISI-2 Rev. 7

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SUMMARY OF CHANGES

Revision 7

1. Section 1.0 –
 - a. Section 1.3 – Corrected the reference from 10 CFR 50.50 to 10 CFR 50.59 [ACT 4924953].
2. Section 2.0 –
 - a. Section 2.2.3 – Updated words to match 10 CFR 50.55a.
 - b. Section 2.2.4 – Updated words to match 10 CFR 50.55a [82 FR 32934].
 - c. Section 2.2.7 – Updated words to match 10 CFR 50.55a.
 - d. Section 2.3 – Updated N-729 and N-770 revisions per 10 CFR 50.55a [AI 17-12366-012, Level 8].
3. Section 3.0 –
 - a. Section 3.1.2.2 – Updated N-729 revision per 10 CFR 50.55a [AI 17-12366-012, Level 8].
 - b. Section 3.1.2.3 – Updated N-770 revision per 10 CFR 50.55a [AI 17-12366-012, Level 8].
 - c. Section 3.5 – Added note about Relief Request 56, which extended the 3rd Interval.
 - d. Section 3.10.1 – Deleted N-666 from Section 3.10.1 and added N-666-1 to Section 3.10.2 [AI 18-00786-003, Level 8]. N-534 was removed from the program. This Code Case is applicable to the Pressure Test Program, not the ISI Program, and thus, has not been used this interval by the ISI Program.
 - e. Section 3.10.2 – Deleted N-666 from Section 3.10.1 and added N-666-1 to Section 3.10.2 [AI 18-00786-003, Level 8].
 - f. Section 3.10.1.3 – Revised reference to N-532-4 to N-532-5 in accordance 73DP-9ZZ17.
 - g. Section 3.10.2.5 – Updated N-638-4 to N-638-6 [AI 18-00786-003, Level 8].
 - h. Section 3.10.3.2 – Updated N-729 revision per 10 CFR 50.55a [AI 17-12366-012, Level 8].
 - i. Section 3.10.3.3 – Updated N-770 revision per 10 CFR 50.55a [AI 17-12366-012, Level 8].
 - j. Section 3.12 – Added revision numbers to documents that didn't previously have one listed.
4. Section 4.0 –
 - a. B2.11 – Updated program to 2/2/3 for Periods 1/2/3, respectively. This is related to Self-Assessment Unit 2 Issue 20. This action is an ENHANCEMENT since Program compliance was met as written in 3INT-ISI-2, Rev. 6.
 - b. B2.11 – Added period exam requirements.
 - c. B2.12 – Added period exam requirements.
 - d. B2.31 – Added period exam requirements.
 - e. B2.40 – Added period exam requirements.
 - f. B3.120 – Updated NDE method and clarified note allowing VT in lieu of UT based on 10 CFR 50.55a(b)(2)(xxi)(A) [AI 17-12366-012, Level 8].
 - g. B3.140 – Updated NDE method and clarified note allowing VT in lieu of UT based on 10 CFR 50.55a(b)(2)(xxi)(A) [AI 17-12366-012, Level 8].
 - h. B7.70 – Added note regarding Code footnote that exam are limited to when disassembled and one connection among a group.
 - i. B7.80 – Added 10 CFR 50.55a reference to use 1995 Code; added note bolting set counts.
 - j. B13.50 – Removed erroneous reference to Relief Request 44 [AI 18-00825-006, Level 3].
 - k. F1.40B – Clarified note to list total count versus sample size.
 - l. F1.40C – Clarified note to list total count versus sample size.
5. Section 5.0 –
 - a. C2.22 – Added 3rd period requirements to match Remarks and exams completed.
 - b. C3.30 – Revised sample size based on Code requirements and exams completed per 3rd Interval Closeout Self-Assessment; revised sample size justification per Footnote 5 of Code.
 - c. C5.11 –
 - i. Updated period requirements to address Self-Assessment Issue 6 for Unit 2.
 - ii. Noted Class 2 DM welds under Zones 54, 55, 58, 59, 82, 83, 85, and 86 [AI 18-01203-004, Level 3].
6. Section 7.0 –
 - a. Updated index to reflect the correct revisions of N-729 and N-770 [AI 17-12366-012, Level 8].
 - b. B15.215 – Updated N-770 Code Case revision [AI 17-12366-012, Level 8].
 - c. N-729 – Updated N-729 Code Case revision [AI 17-12366-012, Level 8].
 - d. B4.40 – Added notes about exam not being required until 2R25 per Relief Request 55 [AI 18-00987-003, Level 8].
 - e. N-770 – Updated N-770 Code Case revision [AI 17-12366-012, Level 8].
 - f. Inspection Item F – Changed to Item F-1 [AI 17-12366-012, Level 8].

- g. Inspection Item B – Added note that more clearly ties Item B exams with B15.215 exams; added noted that UTs must be encoded [AI 17-12366-012, Level 8].
- 7. Section 8.0 –
 - a. Updated status and applicability of Relief Request 52.
 - b. Revised applicability for Relief Request 52.
 - c. Added Relief Requests 55 [AI 18-00987-003, Level 8] through 59.
- 8. Section 10.0 –
 - a. Zone 20 – Added details to weld overlay work orders.
 - b. Zone 21 – Added details to weld overlay work order.
 - c. Zone 22 – Added details to weld overlay work order.
 - d. Zone 29 – Added details to weld overlay work order.
 - e. Zone 30- Added details for 2R17 replacements of HV-203 and HV-205.
 - f. Zone 31 – Added details to weld overlay work orders.
 - g. Zone 54 –
 - i. Corrected weld name 54-11C to 54-11B. This error was introduced in 3INT-ISI-2, Rev. 2. Verified that 54-11B is the correct weld number in the database.
 - ii. Updated 2R17 WO 3821198 weld information to show the new welds created from that WO.
 - iii. Updated 2R18 WO 4335568 weld information to show the new welds created from that WO.
 - h. Zone 58 –
 - i. Corrected material change note at weld 58-4.
 - ii. Added note about 2R18 WO 4479590. Updated weld numbers as a result of the WO.
 - i. Zone 86 – Added a note to weld 75-1 to show that it is a dissimilar metal weld.
 - j. Zone 90– Added details to WO 3187434.
 - k. Zone 93– Added details to WO 3187364.
 - l. Zone 111 – Added more information about 2R18 Fukushima modification.
 - m. Zone 112 – Added more information about 2R18 Fukushima modification.
 - n. Zone 126 – Added more information about 2R18 Fukushima modification. Removed weld numbers for tie in welds since they can be found on another zone.
 - o. Zone 127 – Added more information about 2R18 Fukushima modification. Removed weld numbers for tie in welds since they can be found on another zone.
 - p. Zone 128 – Added more information about 2R19 Fukushima modification.
 - q. Zone 129 – Added more information about 2R19 Fukushima modification. Removed weld numbers for tie in welds since they can be found on another zone.

1.0 SUMMARY

- 1.1. This document contains a detailed description of the 3rd 10 Year Interval Inservice Inspection (ISI) Program for Palo Verde Nuclear Generating Station Unit 2. This program conforms to the requirements of 10 CFR 50.55a (g), PVNGS Technical Specifications, and the PVNGS UFSAR. Exceptions that are known as of this document preparation date are included in the Requests for Relief Section 8.0.
- 1.2. This revision was prepared to the 2001 Edition including the 2003 Addenda of ASME Section XI with the exceptions noted below:
 - 1.2.1 Requests for relief from ASME Section XI requirements are included in Section 8.0. These Relief Requests are prepared in a format similar to that documented in the NEI White Paper Revision 1 dated June 2004, entitled: "Standard Format for Requests from Commercial Reactor Licensees Pursuant to 10 CFR 50.55a".
 - 1.2.2 The 2007 Edition thru the 2008 Addenda was utilized for Categories B-L-1, B-M-1, and C-G for pump and body welds requirements. (Ref. Letter 102-06454 and SER dated 09-18-2012.)
 - 1.2.3 For clarification, this Interval 3 program was prepared, as was Interval 1 and 2 programs, utilizing 40 month periods.
 - 1.2.4 To support future ISI Programs, reference to the Reactor Vessel Internals Aging Management Plan was added (Reference 3.12.3).
 - 1.2.5 This program was updated to include MRP-192 examinations of mixing tee locations (Reference 3.12.4).
- 1.3. The ISI Program is utilizing risk informed break exclusion region (RI-BER) methodology (Reference 3.12.5 and 3.12.8) but does not implement risk informed inservice inspection methodology.

The EPRI methodology being implemented has a generic safety evaluation report (SER) (Reference 3.12.8). The generic SER lists 10 site-specific requirements. These requirements are listed below, along with how Palo Verde is meeting each requirement:

Consistent with 10 CFR 50.59, if modification to the BER program may be made using the 10 CFR 50.59 process, the staff is not requesting any additional submittals... the staff expects the following list of retrievable onsite documentation... be maintained by licensees that implement a RI-BER piping inspection program.

1. *scope definition* (defined in the Augmented Summary of the ISI Program Summary Manuals),
2. *segment definition* (defined in the Augmented Summary of the ISI Program Summary Manuals),
3. *failure/damage mechanism assessment* (described in 13-NS-C068),
4. *consequence evaluation* (described in 13-NS-C068),
5. *PRA model runs for the RI-BER piping inspection program* (described in 13-NS-C069),
6. *risk evaluation* (described in 13-NS-C069),
7. *element and NDE method selection* (described in the Augmented Summary of the ISI Program Summary Manuals),
8. *change in risk evaluation* (described in 13-NS-C069),
9. *PRA quality review* (described in 70DP-0RA03, Probabilistic Risk Assessment Model Control) and

10. continual assessment forms as program changes in response to inspection results (described in 70DP-0RA03, Probabilistic Risk Assessment Model Control, and 73DP-9XI03, ASME Section XI Inservice Inspection).

- 1.4. The information presented is in a form consistent with the 1st and 2nd 10 Year Interval ISI Program, the applicable requirements of Standard Review Plan manual and procedures and the recommendations contained in NRC letter dated July 17, 1981, from Mr. R.L. Tedesco, NRC, to E. E. Van Brunt, Jr., APS, "Guidance for Preparing Preservice and Inservice Inspection Programs and Relief Requests - Palo Verde Nuclear Generating Station Units 1, 2 and 3."

2.0 CODE APPLICABILITY

- 2.1 Based on paragraph 10 CFR 50.55a(b)(2) that was published 12 months prior to the start of the 3rd 10 Year Interval (3-18-07), the 2001 Edition including the 2003 Addenda of ASME Section XI was referenced as the Code to utilize for preparation of this program.
- 2.2 Several exceptions to Section XI are documented in 10 CFR 50.55a; each of these exceptions was utilized during the preparation of this program.
- 2.2.1 10 CFR 50.55a(b)(2)(xviii)(A), the Level I and II nondestructive examination personnel shall be shall be recertified on a 3 year interval in lieu of the 5 year interval in IWA-2314(a) and IWA-2314(b).
- 2.2.2 10 CFR 50.55a(b)(2)(xviii)(C), when qualifying VT-3 personnel per IWA-2317, the proficiency of the training must be demonstrated by initial qualification examination and subsequent examinations on a 3 year interval.
- 2.2.3 10 CFR 50.55a(b)(2)(xix), the 1997 Edition must be used for IWA-2240 alternative examination methods, a combination of methods, or newly developed techniques. The use of IWA-4520(c), allowing the substitution of alternative methods, a combination of methods, or newly developed techniques for the methods specified in the Construction Code, are not approved for use.
- 2.2.4 10 CFR 50.55a(b)(2)(xxi)(A), Items B3.120 and B3.140 (nozzle inner radius examinations) of the 1998 Edition must be utilized. A visual examination with magnification that has a resolution sensitivity to resolve 0.044 inch (1.1 mm) lower case characters without an ascender or descender (*e.g.*, a, e, n, v), utilizing the allowable flaw length criteria in Table IWB-3512-1, 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (a)(1)(ii) of this section, with a limiting assumption on the flaw aspect ratio (*i.e.*, $a/l = 0.5$), may be performed instead of an ultrasonic examination.
- 2.2.5 10 CFR 50.55a(b)(2)(xxi)(B), must utilize the 1995 Edition for examination Item B7.80 per 50.55a [deleted from 10 CFR 50.55a on 12/5/2014]
- 2.2.6 10 CFR 50.55a(b)(2)(xxii), the provisions contained in IWA-2220 that allow use the ultrasonic examination method as a surface examination is prohibited.
- 2.2.7 10 CFR 50.55a(b)(2)(xxiv), the use of Appendix VIII and the supplements to Appendix VIII and Article I-3000 of ASME Section XI of the 2002 Addenda through the 2006 Addenda is prohibited.
- 2.2.8 10 CFR 50.55a(g)(4)(iii), the surface examination requirements for HPSI systems, Items B9.20, B9.21 and B9.22 are not required to be performed.
- 2.3 ASME Code Cases N-729-4, N-722-1, and N-770-2 will be implemented with the applicable limitations and modifications as identified in 10 CFR 50.55a(g)(6)(ii)(D), (E), and (F).

- 2.4 If a code required examination was considered to be impractical during the preparation of this document because of plant design, geometry, accessibility or other conditions, a Request for Relief from that requirement was prepared and included in Section 8.0. If a code required examination is identified to be impractical during the course of an inspection and the code required percentages are not met, a request for relief will be prepared and submitted after each inspection period, and the final interval closeout no later than 12 months after expiration of the Interval.
- 2.5 This ISI Program implements the ASME Section XI 2001 Edition Appendix VIII (Performance Demonstration for Ultrasonic Examination Systems) in accordance with 10 CFR 50.55a. These examinations are conducted in accordance with the Performance Demonstration Initiative (PDI). The PDI Code Comparison document (Reference 3.12.2) explains the complex relationship of regulatory requirements, ASME requirements, code editions, and the PDI program.

3.0 DESCRIPTION

3.1. Scope

- 3.1.1. This Inservice Inspection Program Summary includes all applicable nondestructive examinations required by ASME Section XI as identified below:
 - 3.1.1.1. Examination of ASME Class 1, 2, and 3 pressure retaining components and their supports are performed in accordance with TRM 5.0.500.8 (Reference 3.12.7).
 - 3.1.1.2. Items that may generally be included in an Inservice Inspection Program, but are not included are listed in Section 3.1.3.
- 3.1.2 This program also includes an augmented section that includes examinations for other items required to be examined as identified below.
 - 3.1.2.1 Examinations of welds in Class 1 components fabricated with Alloy 600/82/182 materials in accordance with 10 CFR 50.55a and Code Case N-722-1.
 - 3.1.2.2 Examination of the Reactor Vessel Closure Head in accordance with 10 CFR 50.55a and Code Case N-729-4.
 - 3.1.2.3 Examination of welds in Class 1 piping and vessel nozzle butt welds fabricated with alloy 82/182 in accordance with 10 CFR 50.55a and Code Case N-770-2.
 - 3.1.2.4 Examination of high energy line piping in accordance with UFSAR 6.6.1 (Reference 3.12.6).
 - 3.1.2.5 Examination of the Reactor Coolant Pump Flywheels in accordance with PVNGS Technical Specifications Section ITS 5.5.7.
 - 3.1.2.6 USNRC Circulars, Information Notices, Bulletins, or Orders
 - 3.1.2.7 INPO or other industry operating experiences
 - 3.1.2.8 Combustion Engineering or Westinghouse bulletins or notices
 - 3.1.2.9 Special examinations to satisfy other commitments or concerns that are based on operating experiences, USNRC. These examinations are scheduled throughout this program and reference the applicable notification documents.

- 3.1.3 Those items that may generally be included in an Inservice Inspection Program, but are not included are identified below:
 - 3.1.3.1 Pressure testing of ASME Class 1, 2, and 3 piping will be performed in accordance with the Pressure Testing Program.
 - 3.1.3.2 The inservice examination of steam generator tubing will be performed in accordance with the PVNGS Technical Specifications Section T5.5.9 under the Steam Generator Degradation Management Program.
 - 3.1.3.3 The inservice testing of snubbers will be performed in accordance with 10 CFR 50.55a under the Snubber Program.
 - 3.1.3.4 The Examination Program for the ASME Subsections IWE and IWL will be performed in accordance with 10 CFR 50.55a and the PVNGS Technical Specifications under the IWE and IWL Programs.
 - 3.1.3.5 Repair and replacements are performed under the Repair and Replacement Program (73DP-9ZZ17)

3.2. System Boundaries

- 3.2.1. A complete set of P&ID drawings indicating the Inservice Inspection boundary are maintained at the PVNGS site. These drawings illustrate the ASME Class 1, 2, and 3 systems; components; and boundaries scheduled for examinations. A referenced listing of these drawings is documented in Section 9.0.
- 3.2.2. ISI isometric (Zone Drawings) are included in Section 10.0 for ASME Class 1 and 2 components. These drawings are utilized for the planning and scheduling of specific ASME Class 1 and 2 examinations throughout the 10 Year Interval. These also document the location and number of welds, components, and supports.
- 3.2.3. ASME Class 3 components that have equipment identification numbers (EQID) can be found on plant isometric drawings. Class 3 components that were supplied as part of a skid do not have EQIDs; these components do have Zone Drawings in Section 10.0.

3.3. Accessibility

- 3.3.1. The preservice examinations were performed with examination techniques, automated or manual, similar to those planned for use during Inservice Inspections. The examination limitations noted during the preservice examinations were documented in Requests for Relief submitted with the preservice examination program. There has also been a number of additional code limitations noted during the 1st and 2nd 10 Year Intervals and Request for Relief submitted. If included in the required 3rd Interval examinations they will again be evaluated and relief requested. Note Section 8.0 identifies all the reliefs submitted during the preparation and implementation of the 3rd Interval.
- 3.3.2. All items that are scheduled for examination will be examined to the extent practical. In addition, any code limitations that are noted during the examinations will be documented. If relief is required from any of these examinations, a Request for Relief will be submitted after the relief is discovered and prior to 12 months after the interval ends.

3.4. Examination Techniques

3.4.1. The three types of examinations utilized to perform Inservice Inspections, along with the actual nondestructive examination technique, are identified in the legend below:

VT - Visual

VT - 1	(General Condition)
VT - 2	(Leakage)
VT - 3	(Mechanical and Structural Condition)
VE	(Visual Examination)

S - Surface

PT	Liquid Penetrant
MT	Magnetic Particle
ET	Eddy Current

VOL - Volumetric

UT	Ultrasonic
RT	Radiography

3.4.2. All the above nondestructive examination techniques will be performed using specific techniques and procedures that are identified in ASME Section XI, or alternative examinations that are demonstrated to be equivalent or superior to those identified. The provision for substitution of these alternative examination methods, combination of methods, or newly developed techniques will utilize the 1997 Addenda for IWA-2240. [10 CFR 50.55a(b)(2)(xix)]

3.5. Inspection Intervals

The Inservice Inspection Program was prepared in accordance with Program B of ASME Section XI. The 1st, 2nd, and 3rd 10 Year Intervals and corresponding inspection periods are defined below:

First Inspection Interval:	09/19/86 to 03/17/97
Second Inspection Interval:	03/18/97 to 03/17/07
Third Inspection Interval:	03/18/07 to 03/17/17
Period One:	03/18/07 to 07/17/10
Period Two:	07/18/10 to 11/17/13
Period Three:	11/18/13 to 10/31/18*

It should be noted that the intervals/periods may change to allow for extended outage durations per IWA-2400 of ASME Section XI.

*The Third Interval was extended until October 31, 2018 per Relief Request 56. The SER can be found under ADAMS Accession Number ML18067A073.

3.6. Examination Categories

The examination categories of ASME Section XI were utilized to develop this program for all systems, components, and supports. The program summary tables contained in Sections 4.0 and 5.0 are organized by examination category for ASME Class 1 and 2 systems, respectively. For each examination category, these tables identify the system or identification, nondestructive examination method, total number of items, and required examination amount for each inspection period (by ASME item number). For ASME Class 3 systems, the examinations categories are identified in Section 6.0.

3.7. Evaluation and Repair

3.7.1. The evaluation of all examination results will be performed in accordance with ASME Section XI Articles IWx-3000. In addition, all applicable repairs and replacements will be performed in accordance with ASME Section XI Articles IWA-4000. Pressure tests will be performed on welded and mechanical joint repairs or replacements, in accordance with IWA-4000, IWx-5000, and 10 CFR 50.55a. Both the evaluations and repair or replacement will be performed in accordance with the 2001 Edition including the 2003 Addenda of ASME Section XI, or later editions and addenda of ASME Section XI referenced in 10 CFR 50.55a. Later editions and addenda will be documented with the NRC.

3.7.2. It should be noted that a relief was requested (Relief Request 36) to perform repair and replacement of all three PVNGS units to the 2001 Edition including the 2003 Addenda. This request was documented in conjunction with the relief to perform full structural weld metal overlays. (APS letter to the USNRC 102-05641 dated 2-8-2007).

3.7.3. All repairs and replacements will be documented in accordance with the Work Control program, and are maintained at Palo Verde for review.

3.8. System Pressure Tests

3.8.1. ASME Class 1, 2, and 3 components will be pressure tested per the requirements of IWB-5000, IWC-5000 and IWD-5000, in accordance with the Pressure Test Program, except where relief has been requested.

3.8.2. Pressure tests will also be performed on repairs and replacements per ASME Section XI, 10 CFR 50.55a, and the PVNGS Repair and Replacement program.

3.9. Exemptions

3.9.1. The exemption criteria identified in the 2001 Edition including the 2003 Addenda of ASME Section XI was utilized for all ASME Class 1, 2, and 3 components and systems. The only exception is that required by 10 CFR 50.55a for the ASME Class 1 piping exemptions. These are in accordance with the 1989 Edition of ASME XI.

3.9.2. A thorough review of all the systems and components was performed in accordance with the above exemptions and a complete set of color coded Inservice Inspection Exemption drawings was prepared at the beginning of the interval. These generic Interval 3 boundary drawings are available at the PVNGS site for review.

3.10. Code Cases

3.10.1. The following Code Cases are accepted for use in Regulatory Guide 1.147 and may be utilized during Interval 3 where applicable:

3.10.1.1. N-460

Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1

3.10.1.2. N-526

Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels, Section XI, Division 1

3.10.1.3. N-532-5

Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1

3.10.1.4. N-537

Location of Ultrasonic Depth-Sizing Flaws, Section XI, Division 1

3.10.1.5. N-566-2

Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1

3.10.1.6. N-586-1

Alternative Additional Examination Requirements for Classes 1, 2, and 3 Piping, Components, and Supports, Section XI, Division 1

3.10.1.7. N-613-1

Ultrasonic Examination of Penetration Nozzles in Vessels, Examination Category B-D, Item Nos. B3.10 and B3.90, Reactor Nozzle-to-Vessel Welds, Figs. IWB-2500-7(a), (b), and (c), Section XI, Division 1

3.10.1.8. N-624

Successive Inspections, Section XI, Division 1

3.10.1.9. N-652-1

Alternative Requirements to Categorize B-G-1, B-G-2, and C-D Bolting Examination Methods and Selection Criteria, Section XI, Division 1

3.10.1.10. N-663

Alternative Requirements for Classes 1 and 2 Surface Examinations, Section XI, Division 1

3.10.1.11. N-685

Lighting Requirements for Surface Examination, Section XI, Division 1

3.10.1.12.N-695

Qualification Requirements for Dissimilar Metal Piping Welds,
Section XI Division 1

3.10.1.13.N-700

Alternative Rules for Selection of Classes 1, 2, and 3 Vessel Welded
Attachments for Examination, Section XI, Division 1

3.10.1.14.N-705

Evaluation Criteria for Temporary Acceptance of Degradation in
Moderate Energy Class 2 or 3 Vessels and Tanks, Section XI, Division
1

3.10.1.15.N-733

Mitigation of Flaws in NPS 2 (DN 50) and Smaller Nozzles and
Nozzle Partial Penetration Welds in Vessels and Piping by Use of a
Mechanical Connection Modification, Section XI, Division 1

3.10.1.16.N-753

Vision Tests, Section XI, Division 1

3.10.2. The following Code Cases are conditionally accepted for use in Regulatory Guide
1.147 may be utilized with the specified conditions during Interval 3 where
applicable:

3.10.2.1. N-508-4

Rotation of Serviced Snubbers and Pressure Retaining Items for the
Purpose of Testing, Section XI, Division 1

RG 1.147 documents the following condition:

*When Section XI requirements are used to govern the examination
and testing of snubbers and the ISI Code of Record is earlier than
Section XI, 2006 Addenda, Footnote 1 shall not be applied.*

3.10.2.2. N-513-3

Evaluation Criteria for Temporary Acceptance of Flaws in Moderate
Energy Class 2 or 3 Piping

RG 1.147 documents the following condition:

*The repair or replacement activity temporarily deferred under the
provisions of this Code Case shall be performed during the next
scheduled outage.*

3.10.2.3. N-561-2

Alternative Requirements for Wall Thickness Restoration of Class 2 and High Energy Class 3 Carbon Steel Piping, Section XI, Division 1

RG 1.147 documents the following conditions:

- 1) *Paragraph 5(b): for repairs performed on a wet surface, the overlay is only acceptable until the next refueling outage.*
- 2) *Paragraph 7(c): if the cause of the degradation has not been determined, the repair is only acceptable until the next refueling outage.*
- 3) *The area where the weld overlay is to be applied must be examined using ultrasonic methods to demonstrate that no crack-like defects exist.*
- 4) *Piping with wall thickness less than the diameter of the electrode shall be depressurized before welding.*

3.10.2.4. N-562-2

Alternative Requirements for Wall Thickness Restoration of Class 3 Moderate Energy Carbon Steel Piping, Section XI, Division 1

RG 1.147 documents the following conditions:

- 1) *Paragraph 5(b): for repairs performed on a wet surface, the overlay is only acceptable until the next refueling outage.*
- 2) *Paragraph 7(c): if the cause of the degradation has not been determined, the repair is only acceptable until the next refueling outage.*
- 3) *The area where the weld overlay is to be applied must be examined using ultrasonic methods to demonstrate that no crack-like defects exist.*
- 4) *Piping with wall thickness less than the diameter of the electrode shall be depressurized before welding.*

3.10.2.5. N-638-6

Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique, Section XI, Division 1

RG 1.147 documents the following condition:

Demonstration for ultrasonic examination of the repaired volume is required using representative samples which contain construction type flaws. (Note: the above condition is identical to the condition on the use of Code Case N 638-4, RG 1.147, Rev. 17)

3.10.2.6. N-648-1

Alternative requirements for inner radius examinations of reactor vessel nozzles

RG 1.147 documents the following condition:

In lieu of a UT examination, licensees may perform a VT-1 examination in accordance with the code of record for the Inservice Inspection Program utilizing the allowable flaw length criteria of Table IWB-3512-1 with limiting assumptions on the flaw aspect ratio.

3.10.2.7. N-661-2

Alternative Requirements for Wall Thickness Restoration of Classes 2 and 3 Carbon Steel Piping for Raw Water Service, Section XI, Division 1

RG 1.147 documents the following conditions:

- (1) *Paragraph 4(b): for repairs performed on a wet surface, the overlay is only acceptable until the next refueling outage.*
- (2) *Paragraph 7(c): if the cause of the degradation has not been determined, the repair is only acceptable until the next refueling outage.*
- (3) *The area where the weld overlay is to be applied must be examined using ultrasonic methods to demonstrate that no crack-like defects exist.*
- (4) *Piping with wall thickness less than the diameter of the electrode shall be depressurized before welding.*

3.10.2.8. N-666-1

Weld Overlay of Class 1, 2, and 3 Socket Welded Connections, Section XI, Division 1

RG 1.147 documents the following condition:

A surface examination (magnetic particle or liquid penetrant) must be performed after installation of the weld overlay on Class 1 and 2 piping socket welds. Fabrication defects, if detected, must be dispositioned using the surface examination acceptance criteria of the Construction Code identified in the Repair/Replacement Plan. (Note: Code Case N-666 was unconditionally approved in Rev. 17, RG 1.147.)

3.10.3. The following Code Cases are required to be utilized by 10 CFR 50.55a with additional specified conditions as noted in Section 2.3:

3.10.3.1. N-722-1

Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated With Alloy 600/82/182 Materials

3.10.3.2. N-729-4

Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds

3.10.3.3. N-770-2

Alternative Examination Requirements and Acceptance Standards for Class 1 PWR Piping and Vessel Nozzle Butt Welds Fabricated With UNS N06082 or UNS W86182 Weld filler Material With or Without Application of Listed Mitigation Activities (See Reference 3.12.1)

3.11. Outage Plan Table

The outage plan table, controlled by procedure 73DP-9XI03, identifies the components scheduled for examination including successive examinations from prior periods. The examination procedures and a listing of calibration blocks are also identified.

3.12. References

- 3.12.1. SDOC N001-0604-00903 (Supplier Dwg No. PV23Q405), "Design Report for Preemptive Weld Overlay Repairs Pressurizer and Hot Leg Dissimilar Metal Welds Palo Verde Nuclear Generating Station Units 1, 2, and 3 For Arizona Public Service, Rev. 1, dated 05/25/2011.
- 3.12.2. EPRI 2012 Technical Report 1026510, "Nondestructive Evaluation: Performance Demonstration Initiative (PDI) Comparisons to ASME Section XI, Appendix VIII 2007 Edition with 2008 Addendum, and 10 CFR 50.55a, Year 2011," dated November 2012.
- 3.12.3. SDOC MN755-A00003, "PWR Internals AMP for Palo Verde," Rev. 0, dated May 20, 2013.
- 3.12.4. EPRI 2012 Technical Report 1024994, "Materials Reliability Program: Assessment of Residual Heat Removal Mixing Tee Thermal Fatigue in PWR Plants," dated August 2012.
- 3.12.5. 13-NS-C069, "Risk-Informed In-Service Inspection Break Exclusion Region (BER) Weld Selection Impact Assessment," Rev. 1, April 20, 2015.
- 3.12.6. UFSAR 6.6.1, "Augmented Inservice Inspection to Protect Against Postulated Piping Failures," Rev. 19B, dated June 2018.
- 3.12.7. TRM 5.0.500.8, "Inservice and Inspection Testing Programs," Rev. 66, May 15, 2018.
- 3.12.8. ITS 5.5.7, "Reactor Coolant Pump Flywheel Inspection Program," Rev. 66, May 15, 2018.
- 3.12.9. EPRI Technical Report 1006937, Extension of the EPRI Risk-Informed Inservice Inspection (RI-ISI) Methodology to Break Exclusion Region (BER) Programs, Rev. 0-A, August 2002.
- 3.12.10. SDOC MN591-A00001, "Degradation Mechanism Evaluation for Class 1, Class 2, and BER Program Piping Welds for Palo Verde Units 1, 2, and 3," Rev. 1.

**SECTION 4.0
ASME CLASS 1
EXAMINATION SUMMARY**

INDEX

EXAM CATEGORIES

B-A	Pressure Retaining Welds in Reactor Vessel
B-B	Pressure Retaining Welds in Vessels Other than Reactor Vessels
B-D	Full Penetration Welded Nozzles in Vessels
B-F	Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles
B-G-1	Pressure Retaining Bolting, Greater Than 2 Inches in Diameter
B-G-2	Pressure Retaining Bolting, 2 Inches and Less in Diameter
B-J	Pressure Retaining Welds in Piping
B-K	Welded Attachments for Vessels, Piping, Pumps and Valves
B-L-1 & B-M-1	Pressure Retaining Welds in Pump and Valve Bodies
B-L-2 & B-M-2	Pump Casings and Valve Bodies
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B-N-3	Removable Core Support Structures
B-O	Pressure Retaining Welds in Control Rod Housings
B-P	All Pressure Retaining Components
B-Q	Steam Generator Tubing
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ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-A; PRESSURE RETAINING WELDS IN REACTOR VESSEL							*Auto exam with core barrel removed
B1.10	SHELL WELDS							*RR 40 exam by 2027
B1.11	CIRCUMFERENTIAL 1-Reactor Vessel	welds	79173	Vol	3	0	1	
						0	2	
						3*	3	
B1.12	LONGITUDINAL 1-Reactor Vessel	welds	79173	Vol	9	0	1	
						0	2	
						9*	3	
B1.20	HEAD WELDS							
B1.21	CIRCUMFERENTIAL							
B1.22	MERIDIONAL 1-Reactor Vessel Bottom Head	weld	79173	Vol	1	0	1	
						0	2	
						1*	3	
	2-Closure Head	weld	N05065-CHA-01	Vol	0	0	0	RVH Replaced R15
B1.30	SHELL-TO-FLANGE WELD 1-Reactor Vessel	weld	79173	Vol	1	0	1	
						0	2	
						1*	3	
B1.40	HEAD-TO-FLANGE WELD 2-Closure Head	weld	N05065-CHA-01	S & Vol	0	0	0	RVH Replaced R15

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-B; PRESSURE RETAINING WELDS VESSELS OTHER THAN REACTOR VESSELS	-	-	-	-	2	1	
						2	2	
						3	3	
	PRESSURIZER							
B2.10	SHELL -TO-HEAD WELDS							
B2.11	CIRCUMFERENTIAL							
	5- Pressurizer	weld	79373	Vol	2	1	1	
						1	2	
B2.12	LONGITUDINAL **							
	5- Pressurizer	weld	79373	Vol	4	1	1	***1' of one weld per head, 2 heads total
						1	2	
	STEAM GENERATORS ***							
B2.30	HEAD WELDS							
B2.31	CIRCUMFERENTIAL							*** Multiple Vessels
	3- Steam Generator 1	weld	212	Vol	1	1	3	
	4- Steam Generator 2	weld	211	Vol	1			
B2.40	TUBESHEET TO HEAD							
	3- Steam Generator 1	weld	212	Vol	2	2	3	
	4- Steam Generator 2	weld	211	Vol	2			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-D; FULL PENETRATION WELDED NOZZLES IN VESSELS- INSPECTION PROGRAM B							
	REACTOR VESSEL							*RR 40 exam by 2027
B3.90	NOZZLE-TO-VESSEL WELDS							
	1- Reactor Vessel	Outlets - 2 Inlets - 4	79173	Vol	6	6*	3	*Auto exam with core barrel removed
B3.100	NOZZLE INSIDE RADIUS SECTION							
	1- Reactor Vessel	Outlets - 2 Inlets - 4	79173	Vol or EVT-1**	6	6*	3	*Auto exam with core barrel removed **EVT-1 allowed per N-648-1
	PRESSURIZER							
B3.110	NOZZLE-TO-VESSEL WELDS							
	5- Pressurizer	Surge - 1 Spray - 1 Safeties - 4	79373	Vol	6	1 2 3	1 2 3	
B3.120	NOZZLE INSIDE RADIUS SECTION**							**Use 1998 ed. per 50.55a (b)(2)(xxi)(A).
	5- Pressurizer	Surge - 1 Spray - 1 Safeties - 4	79373	Vol or VT*	6	1 2 3	1 2 3	*Can use VT in lieu of UT per 10 CFR 50.55a(b)(2)(xxi)(A).
	STEAM GENERATORS							
B3.130	NOZZLE-TO-VESSEL WELDS							
	3- Steam Generator 1	Inlet - 1 Outlet - 2	212	Vol	3	1 2	1 2	
	4- Steam Generator 2	Inlet - 1 Outlet - 2	211	Vol	3	1 2	1 3	

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B3.140	NOZZLE INSIDE RADIUS SECTION**							**Use 1998 ed. per 50.55a (b)(2)(xxi)(A).
	3- Steam Generator 1	Inlet - 1 Outlet - 2	212	Vol or VT*	3	1 2	1 2	*Can use VT in lieu of UT per 10 CFR 50.55a(b)(2)(xxi)(A).
	4- Steam Generator 2	Inlet - 1 Outlet - 2	211	Vol or VT*	3	1 2	1 3	
	EXAM CATEGORY B-F; PRESSURE RETAINING DISSIMILAR METAL WELDS IN VESSEL NOZZLES							
	PRESSURIZER							
B5.40	NOMINAL PIPE SIZE \geq 4 INCH NOZZLE TO SAFEEND BUTT WELDS							
	20- Surge	butt welds	RC-028-12"	S & Vol	6	*	*	Mitigated with FSWO
	29- Spray	butt welds	RC-018-4"	S & Vol				Moved to augmented
	31- Safeties (4)	butt welds	RC-001-6"	S & Vol				
			RC-003-6"	S & Vol				
			RC-005-6"	S & Vol				
			RC-007-6"	S & Vol				

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-G-1; PRESSURE RETAINING BOLTING GREATER THAN 2 IN. IN DIAMETER							Surface exams may be substituted for volumetric exams on bolts or studs as per IWB-2500, B-G-1, Footnote (7)
	REACTOR VESSEL							
B6.10	CLOSURE HEAD NUTS							
	2- Closure Head	nuts	7.237" x 7.91"	VT-1	54	18	1	
						18	2	
						18	3	
B6.20	CLOSURE STUDS							
	2- Closure Head	studs	7.380" x 76.37"	Vol	54	18	1	
						18	2	
						18	3	
B6.40	THREADS IN FLANGE							
	1- Reactor Vessel	Stud Holes	79173	Vol	54	0	0	
						0	0	
						54	3	
B6.50	CLOSURE WASHERS BUSHINGS							
	2- Closure Head	Washers	7.50" x 1.27"	VT-1	54	18	1	
						18	2	
						18	3	
	PUMPS							
B6.180	BOLTS AND STUDS							
	16- Reactor Coolant Pump 1A	Flange Studs	4.33" x 32.87"	Vol	1	1	1	* Multiple pumps
	17- Reactor Coolant Pump 1B	Flange Studs	4.33" x 32.87"	Vol	1	*	*	B6.180 Completed 1st period
	18- Reactor Coolant Pump 2A	Flange Studs	4.33" x 32.87"	Vol	1	*	*	16 studs per pump
	19- Reactor Coolant Pump 2B	Flange Studs	4.33" x 32.87"	Vol	1	*	*	

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B6.190	FLANGE SURFACE WHEN CONNECTION DISASSEMBLED							** VT-1 exams on 1 pump per interval (with B12.XX exams)
	16- Reactor Coolant Pump 1A	surface	1110-1A	VT-1	1	**	**	B6.190 Completed 1st period
	17- Reactor Coolant Pump 1B	surface	1110-1B	VT-1	1	**	**	
	18- Reactor Coolant Pump 2A	surface	1110-2A	VT-1	1	**	**	
	19- Reactor Coolant Pump 2B	surface	1110-2B	VT-1	1	**	**	
B6.200	NUTS, BUSHINGS, AND WASHERS							** VT-1 exams on 1 pump per interval (with B12.XX exams)
	16- Reactor Coolant Pump 1A	nuts & ring	1110-1A	VT-1	1	**	**	B6.200 Completed 1st period
	17- Reactor Coolant Pump 1B	nuts & ring	1110-1B	VT-1	1	**	**	16 sets of nuts & rings per pump
	18- Reactor Coolant Pump 2A	nuts & ring	1110-2A	VT-1	1	**	**	
	19- Reactor Coolant Pump 2B	nuts & ring	1110-2B	VT-1	1	**	**	
	EXAM CATEGORY B-G-2; PRESSURE RETAINING BOLTING 2 IN. AND LESS IN DIAMETER							
								*** VT-1 exams on 1 vessel per interval (with B2.XX exams)
B7.20	PRESSURIZER BOLTS, STUDS AND NUTS							
	5- Pressurizer Manway	Studs & Nuts	1.31" x 14.5"	VT-1	1	1	***	20 studs and 20 nuts
B7.30	STEAM GENERATOR BOLTS, STUDS AND NUTS							
	3- Steam Generator 1 MANWAYS	Studs & Nuts	1.31" x 14.5"	VT-1	1	1	***	40 studs and 40 nuts
	4- Steam Generator 2 MANWAYS	Studs & Nuts	1.31" x 14.5"	VT-1	1	1	***	40 studs and 40 nuts

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B7.50	PIPING BOLTS, STUDS AND NUTS							**** When disassembled and only once per interval. One bolted connection among a group of similar bolted connections.
	31- Pressurizer Safeties	Flange Bolting	RC-001-6"	VT-1	1	1	****	8 sets of studs and nuts per line
		Flange Bolting	RC-003-6"	VT-1	1	1	****	
		Flange Bolting	RC-005-6"	VT-1	1	1	****	
		Flange Bolting	RC-007-6"	VT-1	1	1	****	
	37- Charging Line	Flange V435	CH-005-2"	VT-1	1	1	****	8 sets of studs and nuts
	PUMPS							
B7.60	BOLTS, STUDS AND NUTS							
	16- Reactor Coolant Pump 1A	seal cover	1.1" x 8.27"	VT-1	1	1	**	**VT-1 exams required once per interval (B-L-2)
	17- Reactor Coolant Pump 1B	seal cover	1.1" x 8.27"	VT-1	1	1	**	
	18- Reactor Coolant Pump 2A	seal cover	1.1" x 8.27"	VT-1	1	1	**	
	19- Reactor Coolant Pump 2B	seal cover	1.1" x 8.27"	VT-1	1	1	**	16 sets of studs and nuts per line

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B7.70	VALVES BOLTS, STUDS AND NUTS							When disassembled and only once per interval. One bolted connection among a group of similar bolted connections.
	30- Aux Pressurizer Spray	HV-203 HV-205	CH-521-2" CH-520-2"	VT-1 VT-1	1 1	1 1	** **	**VT-1 exams required once per interval
								4 sets of studs and nuts per line
	31- Pressurizer Safeties (Body Bolts)	PSV-200 PSV-201 PSV-202 PSV-203	RC-001-6" RC-003-6" RC-005-6" RC-007-6"	VT-1 VT-1 VT-1 VT-1	1 1 1 1	1 1 1 1	**** **** **** ****	During VENDOR disassembly (B-M-2) 12 sets of studs and nuts per line
	CRD HOUSING							**** When disassembled and only once per interval
B7.80	BOLTS, STUDS AND NUTS							Use 1995 ed. Per
	2-Closure Head RVLMS Locations	Grayloc Clamps	CEDM 92 CEDM 96	VT-1 VT-1	4 4	4 4	**** ****	50.55a (b)(2)(xxi)(B). 4 sets of bolting per clamp
								B7.80 Completed in Second Period

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-J; PRESSURE RETAINING WELDS IN PIPING							
B9.10	NPS 4 OR LARGER							
B9.11	* CIRCUMFERENTIAL WELDS				220	19	1	*Surface exams are optional per N-663 and supported by MN591-A00001
						19	2	
						19	3	
	6- RCS Primary Piping							
	HL 1**	butt welds	RC-032-42" ID	S* & Vol	62			** AUTO EXAM OF NOZZLE TO EXT AND EXT TO PIPE WELDS
	HL 2**	butt welds	RC-063-42" ID					
	CL 1A to RCP	butt welds	RC-033-30" ID					
	CL 1B to RCP	butt welds	RC-030-30" ID					
	CL 2A to RCP	butt welds	RC-073-30" ID					
	CL 2B to RCP	butt welds	RC-084-30" ID					
	CL 1A to RPV**	butt welds	RC-034-30" ID					
	CL 1B to RPV**	butt welds	RC-031-30" ID					
	CL 2A to RPV**	butt welds	RC-079-30" ID					
	CL 2B to RPV**	butt welds	RC-093-30" ID					
	20- Pressurizer Surge Line	butt welds	RC-028-12"	S* & Vol	11			DM MOVED TO AUG
	21- Shutdown Cooling Loop 1	butt welds	RC-051-16"	S* & Vol	24			DM MOVED TO AUG
			SI-240-16"					
	22- Shutdown Cooling Loop 2	butt welds	RC-068-16"	S* & Vol	18			DM MOVED TO AUG
			SI-193-16"					
	23- Safety Injection 1A	butt welds	SI-207-14"	S* & Vol	18			DM MOVED TO AUG
			SI-203-12"					
	24- Safety Injection 1B	butt welds	SI-223-14"	S* & Vol	18			DM MOVED TO AUG
			SI-221-12"					
	25- Safety Injection 2A	butt welds	SI-160-14"	S* & Vol	22			DM MOVED TO AUG
			SI-156-12"					
	26- Safety Injection 2B	butt welds	SI-179-14"	S* & Vol	18			DM MOVED TO AUG
			SI-175-12"					

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	28 & 29- Pressurizer Spray	butt welds	RC-018-4"	S* & Vol	13			
	31- Pressurizer Safeties	butt welds	RC-001-6" RC-003-6" RC-005-6" RC-007-6"	S* & Vol	12			
	36- Letdown Line (delay coil)	butt welds	RC-091-16"	S* & Vol	4			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B9.22	CIRCUMFERENTIAL WELDS OF PWR HPSI SYSTEMS				77	3	1	
						12	2	
						8	3	
	39- HPSI Long Term Recirculation 1	butt welds	SI-248-3"	Vol	52			
	40- HPSI Long Term Recirculation 2	butt welds	SI-199-3"	Vol	25			
B9.30	BRANCH PIPE CONNECTION WELDS							
B9.31	NPS 4 OR LARGER	-	-	-		1	1	*Surface exams are optional per N-663 and supported by MN591-A00001
						1	3	
	6- RCS Primary Piping							
	Surge	branch weld	RC-032-42" ID	S* & Vol	1			
	SD Cooling 1	branch weld	RC-032-42" ID	S* & Vol	1			
	SD Cooling 2	branch weld	RC-063-42" ID	S* & Vol	1			
	SI 1A	branch weld	RC-034-30" ID	S* & Vol	1			
	SI 1B	branch weld	RC-031-30" ID	S* & Vol	1			
	SI 2A	branch weld	RC-079-30" ID	S* & Vol	1			
	SI 2B	branch weld	RC-093-30" ID	S* & Vol	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B9.32	LESS THAN NPS 4	-	-	-	14	1	1	
						1	2	
						2	3	
	6- RCS Primary Piping							
	Drain 1A	branch weld	RC-033-30" ID	S	1			
	PZR Spray 1A	branch weld	RC-034-30" ID	S	1			
	Drain 1B	branch weld	RC-030-30" ID	S	1			
	PZR Spray 1B	branch weld	RC-031-30" ID	S	1			
	Drain 2A	branch weld	RC-073-30" ID	S	1			
	Charging	branch weld	RC-079-30" ID	S	1			
	Letdown	branch weld	RC-084-30" ID	S	1			
	21- Shutdown Cooling Loop 1	branch weld	RC-051-16"	S	2			
	2" Drain & 3" HPSI							
	22- Shutdown Cooling Loop 2	branch weld	RC-068-16"	S	1			
	3" HPSI							
	36- Letdown Line	branch weld	RC-091-16"	S	4			
B9.40	SOCKET WELDS	-	-	-	17	2	1	
						2	2	
						2	3	
	30- Aux PZR Spray	socket weld	CH-520-2"	S	2			
			CH-521-2"	S	2			
	32- Drain Line Loop 1A	socket weld	RC-060-2"	S	3			
	33- Drain Line Loop 1B	socket weld	RC-058-2"	S	3			
	34- Drain Line Loop 2A	socket weld	RC-096-2"	S	3			
	35- Drain Line Loop 2B	socket weld	RC-089-2"	S	3			
	38- Drain Line Loop 1	socket weld	RC-070-2"	S	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-K; WELDED ATTACHMENTS FOR VESSELS, PIPING, PUMPS AND VALVES							
	PRESSURE VESSELS							
B10.10	WELDED ATTACHMENTS							**Accessible Side
	3- Steam Generator 1 *	support skirt	212	S**	1	1	2	* Multiple vessels
	4 -Steam Generator 2 *	support skirt	211	S**	1			
	5- Pressurizer	support skirt	79373	S**	1	1	1	
	PIPING							
B10.20	WELDED ATTACHMENTS	-	-	-	13	1	1	
						1	3	
	22- Shutdown Cooling 2	attachment	SI-193-16" RC-068-16"	S S	1 1			
	27- PZR Spray 1A	attachment	RC-062-3"	S	1			
	28- PZR Spray 1B	attachment	RC-017-3"	S	1			
	29- Combined PZR Spray	attachment	RC-18-3"	S	1			
	36- Letdown Line	attachment	RC-091-16"	S	4			
	37- Charging Line	attachment	CH-005-3"	S	3			
	40- HPSI Long Term 2	attachment	SI-199-3"	S	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-L-1, PRESSURE RETAINING WELDS IN PUMP CASINGS; B-M-1, PRESSURE RETAINING WELDS IN VALVE BODIES; B-L-2, PUMP CASINGS; B-M-2, VALVE BODIES							EXAM CATEGORIES B-L-1 and B-M-1 deleted in the 2007 Ed., 2008 Add. See letter 102-06454 and SER dated 09/18/2012.
B12.20	PUMP CASING							
	16- Reactor Coolant Pump 1A	casing	1110-1A	VT-3	4	1	*	
	17- Reactor Coolant Pump 1B	casing	1110-1B	VT-3				
	18- Reactor Coolant Pump 2A	casing	1110-2A	VT-3				
	19- Reactor Coolant Pump 2B	casing	1110-2B	VT-3				
B12.50	VALVE BODY, EXCEEDING NPS 4							
	16" Borg Warner Gate Valves Utilizing Forged Construction							
	Zone 21	UV-651	RC-051-16"	VT-3	4	1	*	Exam required when valve is disassembled
		UV-653	SI-240-16"	VT-3				
	Zone 22	UV-652	RC-068-16"	VT-3				
		UV-654	SI-193-16"	VT-3				
	14" Borg Warner Gate Valves Utilizing Forged Construction							
	Zone 23	UV-634	SI-207-14"	VT-3	4	1	*	Exam required when valve is disassembled
	Zone 24	UV-644	SI-223-14"	VT-3				
	Zone 25	UV-614	SI-160-14"	VT-3				
	Zone 26	UV-624	SI-179-14"	VT-3				
	12" Borg Warner Check Valves Utilizing Cast Construction							
	Zone 23	V-542	SI-203-12"	VT-3	4	1	*	Exam required when valve is disassembled
	Zone 24	V-543	SI-221-12"	VT-3				
	Zone 25	V-540	SI-156-12"	VT-3				
	Zone 26	V-541	SI-175-12"	VT-3				

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	14" Borg Warner Check Valves							
	Utilizing Cast Construction							
	Zone 23	V-235	SI-207-14"	VT-3	8	1	*	Exam required when valve is disassembled
		V-237	SI-207-14"	VT-3				
	Zone 24	V-245	SI-223-14"	VT-3				
		V-247	SI-223-14"	VT-3				
	Zone 25	V-215	SI-160-14"	VT-3				
		V-217	SI-160-14"	VT-3				
	Zone 26	V-225	SI-179-14"	VT-3				
		V-227	SI-179-14"	VT-3				
	Dresser PSV							
	Utilizing Forged Construction							
	Zone 31	PSV-200	RC-001-6"	VT-3	4	1	*	Exam required when valve is disassembled
		PSV-201	RC-003-6"	VT-3				
		PSV-202	RC-005-6"	VT-3				
		PSV-203	RC-007-6"	VT-3				

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-N-1, INTERIOR OF REACTOR VESSEL; B-N-2, WELDED CORE SUPPORT STRUCTURES AND INTERIOR ATTACHMENTS TO REACTOR VESSELS; B-N-3, REMOVABLE CORE SUPPORT STRUCTURES							
B13.10	VESSEL INTERIOR							
	1- Reactor Vessel	accessible areas	79173	VT-3	1	1	1	At 3 year intervals R14, R16, R18, and R19
						1	2	
						1	3	
B13.50	INTERIOR ATTACHMENTS WITHIN BELTLINE REGION							
	1- Reactor Vessel	accessible welds	79173	VT-1	1	1*	3	
B13.60	INTERIOR ATTACHMENTS BEYOND BELTLINE REGION							
	1- Reactor Vessel	accessible welds	79173	VT-3	1	1*	3	*RR 44 exam by 2027
B13.70	CORE SUPPORT STRUCTURE							
	1- Reactor Vessel	accessible areas	79173	VT-3	1	1*	3	*RR 44 exam by 2027

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY B-O; PRESSURE	-	-	-	126	0	1	*Replaced RV Head
						0	2	R15
						10	3	
B14.10	WELDS IN CRD HOUSING							32 peripheral
	2- Reactor Vessel	Lower Housing	66 thru 97	Vol	32			
	Closure Head							
	CEDM Housings							
	2- Reactor Vessel	Upper Housing	66 thru 97	Vol	32			
	Closure Head							
	CEDM Housings							
	2- Reactor Vessel	Lower Tube	66-91,93-95,97	Vol	32			
	Closure Head	RVLMS	92 and 96					
	CEDM Housings							
	2- Reactor Vessel	Upper Tube	66-91,93-95,97	Vol	30			
	Closure Head							
	CEDM Housings							
	EXAM CATEGORY B-P; ALL PRESSURE RETAINING COMPONENTS							Note Augmented for VT-2 of insulated bolting
B15.10	PRESSURE RETAINING COMPONENTS	Class 1	IWB-5222a	VT-2	*	*	*	*NOTE Pressure Test Program
B15.10	PRESSURE RETAINING COMPONENTS	Class 1	IWB-5222b	VT-2	*	*	*	
	EXAM CATEGORY B-Q; STEAM GENERATOR TUBING							*Governed by Plant Tech Specifications
B16.20	STEAM GENERATOR TUBING IN U-TUBE DESIGN	*	*	*	*	*	*	
	EXAM CATEGORY F-A; SUPPORTS							
F1.10A	CLASS 1 PIPING SUPPORTS							
	A-ONE DIRECTIONAL RESTRAINT	NONE						

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
F1.10B	CLASS 1 PIPING SUPPORTS	-	-	-	87	10	1	
	B-MULTIDIRECTIONAL RESTRAINTS					8	2	
						8	3	
	20- Pressurizer Surge Line	supports	RC-28-12"	VT-3	1			
	21- Shutdown Cooling 1	supports	RC-51-16"	VT-3	13			
			SI-240-16"					
	22- Shutdown Cooling	supports	SI-193-16"	VT-3	5			
			RC-068-16"					
	23- Safety Injection 1A	supports	SI-207-14"	VT-3	2			
	24- Safety Injection 1B	supports	SI-223-14"	VT-3	1			
	25- Safety Injection 2A	supports	SI-156-12"	VT-3	1			
	26- Safety Injection 2B	supports	SI-179-14"	VT-3	2			
			SI-175-12"					
	27- Pressurizer Spray 1A	supports	RC-62-3"	VT-3	8			
			RC-16-3"					
	28- Pressurizer Spray 1B	supports	RC-17-3"	VT-3	10			
			RC-18-3"					
			RC-18-4"					
	30- Aux Pressurizer Spray	supports	CH-521-2"	VT-3	1			
	32- Drain Line 1A	supports	RC-60-2"	VT-3	1			
	33- Drain Line 1B	supports	RC-58-2"	VT-3	1			
	36- Letdown Line	supports	RC-91-2"	VT-3	15			
			CH-001-2"					
			RC-91-16"					
	37- Charging Line	supports	CH-5-3"	VT-3	16			
	39- HPSI Long Term Recirculation 1	supports	SI-248-3"	VT-3	7			
	40- HPSI Long Term Recirculation 2	supports	SI-199-3"	VT-3	3			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
F1.10C	CLASS 1 PIPING SUPPORTS	-	-	-	37	5	1	
	C-SUPPORTS THAT ALLOW					4	2	
	THERMAL MOVEMENT (SPRING)					4	3	
	20- Pressurizer Surge Line	supports	RC-28-12"	VT-3	3			
	21- Shutdown Cooling 1	supports	SI-240-16"	VT-3	2			
	22- Shutdown Cooling	supports	RC-68-16"	VT-3	3			
	23- Safety Injection 1A	supports	SI-207-14"	VT-3	1			
	24- Safety Injection 1B	supports	SI-223-14"	VT-3	2			
	25- Safety Injection 2A	supports	SI-160-14"	VT-3	1			
	26- Safety Injection 2B	supports	SI-179-14"	VT-3	2			
			SI-175-12"					
	27- Pressurizer Spray 1A	supports	RC-62-3"	VT-3	3			
	28- Pressurizer Spray 1B	supports	RC-17-3"	VT-3	3			
	29- Combined Pressurizer Spray	supports	RC-18-4"	VT-3	3			
	30- Aux Pressurizer Spray	supports	CH-521-2"	VT-3	1			
	37- Charging Line	supports	CH-5-3"	VT-3	9			
	39- HPSI Long Term Recirculation 1	supports	SI-248-3"	VT-3	3			
	40- HPSI Long Term Recirculation 2	supports	SI-199-3"	VT-3	1			
F1.40B	SUPPORTS OTHER THAN	-	-	-	39	4	1	**39 Total, 14 REQ'D due to
	PIPING SUPPORTS					5	2	multiple components
						5	3	
	1 - Reactor Vessel	columns	79173	VT-3	4			
	3 - Steam Generator 1*	skirt	212	VT-3	1			*multiple comp
	4 - Steam Generator-2*	skirt	211	VT-3	1			
	5 - Pressurizer	skirt	79373	VT-3	1			
	16- Reactor Coolant Pump 1A**	columns	1110-1A	VT-3	8			**multiple comp
	17- Reactor Coolant Pump 1B**	columns	1110-1B	VT-3	8			
	18- Reactor Coolant Pump 2A**	columns	1110-2A	VT-3	8			
	19- Reactor Coolant Pump 2B**	columns	1110-2B	VT-3	8			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
F1.40C	SUPPORTS OTHER THAN PIPING SUPPORTS	-	-	-	8*	2	1	*8 Total, 2 REQ'D due to multiple components
16-	Reactor Coolant Pump 1A**	snubbers	1110-1A	VT-3	2			**multiple comp
17-	Reactor Coolant Pump 1B**	snubbers	1110-1B	VT-3	2			
18-	Reactor Coolant Pump 2A**	snubbers	1110-2A	VT-3	2			
19-	Reactor Coolant Pump 2B**	snubbers	1110-2B	VT-3	2			

**SECTION 5.0
ASME CLASS 2
EXAMINATION SUMMARY**

INDEX

EXAM CATEGORY

C-A	Pressure Retaining Welds in Pressure Vessels
C-B	Pressure Retaining Nozzle Welds in Vessels
C-C	Welded Attachments for Vessels, Piping, Pumps, and Valves
C-D	Pressure Retaining Bolting Greater than 2 Inch in Diameter
C-F-1	Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping
C-F-2	Pressure Retaining Welds in Carbon or Low Alloy Steel Piping
C-G	Pressure Retaining Welds in Pumps and Valves
C-H	All Pressure Retaining Components
F-A	Class 2 Supports

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-A; PRESSURE RETAINING WELDS IN PRESSURE VESSELS				23**	4	1	**23 Total, 17 REQ'D
						8	2	*multiple vessels, see similar Zones for grouping
						5	3	
C1.10	SHELL CIRCUMFERENTIAL WELDS							
	41- Steam Generator 1*	welds	212	Vol	2			
	42- Steam Generator 2*	welds	211	Vol	2			
	68- Regenerative Heat Exchanger	welds	79313	Vol	3			
	69- Letdown Heat Exchanger	welds	N2373	Vol	1			
	84- SDCHX A*	welds	S-18343	Vol	1			
	87- SDCHX B*	welds	S-18344	Vol	1			
C1.20	HEAD CIRCUMFERENTIAL WELDS							
	41- Steam Generator 1*	welds	212	Vol	1			
	42- Steam Generator 2*	welds	211	Vol	1			
	68- Regenerative Heat Exchanger	welds	79313	Vol	2			
C1.30	TUBESHEET-TO-SHELL WELDS							
	41- Steam Generator 1*	welds	212	Vol	1			
	42- Steam Generator 2*	welds	211	Vol	1			
	68- Regenerative Heat Exchanger	welds	79313	Vol	4			
	69- Letdown Heat Exchanger	welds	N2373	Vol	1			
	84- SDCHX A*	welds	S-18343	Vol	1			
	87- SDCHX B*	welds	S-18344	Vol	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-B; PRESSURE RETAINING NOZZLE WELDS IN VESSELS							
C2.20	NOZZLES WITHOUT REINFORCING PLATE IN VESSELS >1/2 IN. NOMINAL THICKNESS							
C2.21	NOZZLE-TO-SHELL (NOZZLE TO HEAD OR NOZZLE TO NOZZLE) WELD	-	-	-	20**	2	1	** 20 Total, 10 REQ'D
						4	2	*multiple vessels, see
						4	3	similar Zones for grouping
	41- Steam Generator 1*	welds	212	S & Vol	8			
	42- Steam Generator 2*	welds	211	S & Vol	8			
	84- SDCHX A*	welds	S-18343	S & Vol	2			
	87- SDCHX B*	welds	S-18344	S & Vol	2			
C2.22	NOZZLE INSIDE RADIUS SECTION	-	-	-	12**	2	1	** 12 Total, 6 REQ'D
						2	2	*multiple vessels, see
						2	3	similar Zones for grouping
	41- Steam Generator 1*	welds	212	Vol	4			
	42- Steam Generator 2*	welds	211	Vol	4			
	84- SDCHX A*	welds	S-18343	Vol	2			
	87- SDCHX B*	welds	S-18344	Vol	2			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-C; WELDED ATTACHMENTS FOR VESSELS, PIPING, PUMPS, AND VALVES							
C3.10	PRESSURE VESSELS	-	-	-	6**	1	1	** 6 Total; 4 REQD
	WELDED ATTACHMENTS					1	2	*Multiple Vessels
						2	3	
	41- Steam Generator 1*	lugs	212	S	2			
	42- Steam Generator 2*	lugs	211	S	2			
	68- Regenerative Heat Exchanger	supports	79313	S	2			
	PIPING							
C3.20	WELDED ATTACHMENTS	-	-	-	299	11	1	
						12	2	
						14	3	
	43- Main Steam SG 1 East	attachment	SG-036	S	2			
	44- Main Steam SG 1 West	attachment	SG-033	S	2			
	45- Main Steam SG 2 East	attachment	SG-042	S	2			
	46- Main Steam SG 2 West	attachment	SG-045	S	2			
	54- Feedwater SG No. 1	attachment	SG-002	S	6			
	55- Feedwater SG No. 2	attachment	SG-005	S	6			
	56- Feedwater SG No. 1	attachment	SG-202	S	1			
	57- Feedwater SG No. 2	attachment	SG-205	S	1			
	58- Aux Feed S/G 1	attachment	SG-008	S	1			
	59- Aux Feed S/G 2	attachment	SG-011	S	2			
	62- Auxiliary Feedwater SG 1	attachment	AF-018	S	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
63-	Auxiliary Feedwater SG 1	attachment	AF-016	S	1			
64-	Blowdown SG 1	attachment	SG-039 SG-053	S	7			
65-	Blowdown SG 2	attachment	SG-048 SG-052	S	7			
70-	LPSI Pump Room A Suction	attachment	SI-067 SI-241 SI-307	S	3			
71-	LPSI Pump Room A Discharge	attachment	SI-078 SI-087	S	4			
73-	LPSI Pump Room B Suction	attachment	SI-034 SI-308	S	2			
74-	LPSI Pump Room B Discharge	attachment	SI-129	S	3			
76-	CS Pump Room A Suction	attachment	SI-009 SI-067	S	2			
77-	CS Pump Room A Discharge	attachment	SI-079 SI-082	S	6			
79-	CS Pump Room B Suction	attachment	SI-033 SI-034	S	1			
80-	CS Pump Room B Discharge	attachment	SI-119	S	4			
82-	SDCHX Room A	attachment	SI-078 SI-079	S	3			
83-	SDCHX Room B	attachment	SI-070 SI-082 SI-087 SI-089 SI-090	S	11			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	85- SDCHX Room B	attachment	SI-119 SI-123	S	6			
	86- SDCHX Room B	attachment	SI-072 SI-129 SI-134 SI-135	S	12			
	88- East Wrap	attachment	SI-072 SI-073	S	4			
	89- East Wrap	attachment	SI-173 SI-194	S	3			
	90- East Wrap	attachment	SI-134	S	1			
	91- West Wrap	attachment	SI-070	S	4			
	92- West Wrap	attachment	SI-002 SI-239 SI-241	S	4			
	93- West Wrap	attachment	SI-089	S	1			
	94- A Train Pipe Chase & 88'	attachment	SI-070 SI-089 SI-241	S	9			
	95- B Train Pipe Chase & 88'	attachment	SI-072 SI-134 SI-194	S	9			
	96- Containment LPSI to 1A	attachment	SI-202	S	1			
	97- Containment LPSI to 1B	attachment	SI-220	S	3			
	98- Containment LPSI to 2A	attachment	SI-155	S	2			
	99- Containment LPSI to 2B	attachment	SI-174	S	3			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	100- Containment LPSI A Suction	attachment	SI-007 SI-369	S	2			
	101- Containment LPSI B Suction	attachment	SI-030 SI-194 SI-368	S	3			
	102- SI Pump Suction A	attachment	SI-008 SI-009 SI-307	S	12			
	103- Refueling Water Suction A	attachment	CH-142 CH-424	S	9			
	104- SI Pump Suction B	attachment	SI-031 SI-033 SI-308	S	10			
	105- Refueling Water Suction B	attachment	CH-149 CH-425	S	15			
	106- HPSI Room Discharge A	attachment	SI-099 SI-100 SI-105 SI-106	S	20			
	107- HPSI Room Discharge B	attachment	SI-107 SI-112	S	14			
	108- HPSI 88' Pipechase	attachment	SI-100 SI-118	S	14			
	109- HPSI 88' Pipechase	attachment	SI-107	S	9			
	110- HPSI Discharge West Wrap	attachment	SI-103 SI-107 SI-218 SI-236	S	6			
	111- HPSI Discharge West Wrap	attachment	SI-100	S	3			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	112- HPSI Discharge East Wrap	attachment	SI-100	S	4			
			SI-101					
			SI-102					
			SI-176					
	113- HPSI Discharge	attachment	SI-107	S	4			
			SI-157					
			SI-176					
	118- HPSI Long Term	attachment	SI-106	S	18			
	119- HPSI Long Term	attachment	SI-114	S	12			
			SI-319		1			
	121- Containment Spray B	attachment	SI-130	S	1			
	PUMPS							
C3.30	WELDED ATTACHMENTS	-	-	-	20**	2	2	**20 Total, 2 REQ'D 10% of IWF pump supports with welded attachments, per Footnote 5
	72- LPSI Pump A	lugs	0876-40	S	3			
	75- LPSI Pump B	lugs	0876-41	S	3			
	78- Containment Spray A	lugs	0876-42	S	3			
	81- Containment Spray B	lugs	0876-43	S	3			
	116- HPSI A	lugs	0776-16	S	4			
	117- HPSI B	lugs	0776-17	S	4			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-D; PRESSURE RETAINING BOLTING GREATER THAN 2 in. IN DIAMETER	-	-	-	10**	1	1	**10 total 3 required
						1	2	*multiple vessels, see
						1	3	similar Zones for grouping
	PUMPS							
C4.30	BOLTS AND STUDS							
	116- HPSI A*	16 studs	0776-14	VOL	1			
	117- HPSI B*	16 studs	0776-15	VOL	1			
	VALVES							
C4.40	BOLTS AND STUDS							
	47- Main Steam SG 1 West *	20 studs	UV-170	VOL	1			
	48- Main Steam SG 1 East*	20 studs	UV-180	VOL	1			
	49- Main Steam SG 2 East*	20 studs	UV-171	VOL	1			
	50- Main Steam SG 2 West*	20 studs	UV-181	VOL	1			
	56- Feedwater SG No. 1 *	20 studs	UV-132 UV-174	VOL	1			
	57- Feedwater SG No. 2 *	20 studs	UV-137 UV-177	VOL	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	83 & 86 SDC Heat Exch Room A & B	14" x 0.375"	SI-90	S** & Vol	56			2 DM Welds: 74-1, 75-1
		16" x 0.375"	SI-135					
			SI-70					
			SI-72					
		20" x 0.500"	SI-70					
			SI-72					
	88 & 91 Safety Injection East and West Wraps	12" x 0.375"	SI-72	S** & Vol	75			
			SI-73					
			SI-70					
			SI-71					
		12" x 1.125"	SI-155					
			SI-174					
			SI-72					
			SI-73					
			SI-70					
			SI-71					
			SI-202					
			SI-220					
		20" x 0.500"	SI-72					
			SI-70					
	90 & 93 Safety Injection East and West Wraps	24" x 0.375"	SI-30	S** & Vol	10			
			SI-7					
		24" x 0.562"	SI-308					
			SI-307					
	94 & 95 Safety Injection A & B	20" x 0.500	SI-70	S** & Vol	15			
			SI-72					
	96, 97, 98, 99 Containment LPSI Loop 1A, 1B, 2A & 2B	12" x 1.125"	SI-202	S** & Vol	105			
			SI-220					
			SI-155					
			SI-174					
		12" x 1.312"	SI-202					
			SI-220					
			SI-155					
			SI-174					

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	100 & 101 Containment LPSI Loop A & B, Suction	16" x 1.594	SI-241 SI-194 SI-7 SI-30	S** & Vol	8			
	102- Safety Injection A Suction	24" x 0.562" 20" x 0.375"	SI-307 SI-307	S** & Vol	18			
	103- Refueling Water Tank Suction A	20" x 0.375" 20" x 0.375"	CH-424 CH-142	S** & Vol	37			
	104- Safety Injection B Suction	24" x 0.562" 20" x 0.375"	SI-308 SI-308	S** & Vol	19			
	105- Refueling Water Tank B Suction	20" x 0.375" 20" x 0.375"	CH-425 CH-149	S** & Vol	47			
C5.20	PIPING WELDS > 1/5 IN NOMINAL WALL THICKNESS FOR PIPING ≥ NPS 2 AND ≤ NPS 4							
C5.21	CIRCUMFERENTIAL WELD	-	-	-	626	10 14 18	1 2 3	**Surface exams are optional per N-663 and supported by MN591-A00001 (with the exception of the Fukushima tie-in welds on Zones 111 & 112)
	104 SI B Train Suction	3" X 0.216"	CH-150	S** & Vol	4			
	106 & 107 HPSI Room Discharge A and B	4" x 0.438" 4" x 0.337"	SI-100 SI-99 SI-107	S** & Vol	137			
		3" x 0.438"	SI-106					
		2" x 0.344"	SI-105 SI-112					
	108 & 109 HPSI 88' Pipechase	4" x 0.438" 2" x 0.344" 4" x 0.377"	SI-100 SI-118 SI-107	S** & Vol	86			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	110 & 111 HPSI Discharge West Wrap	4" x 0.337" 4" x 0.438"	SI-107 SI-218 SI-100 SI-236	S** & Vol	108			
		3" x 0.438"	SI-218					
		2" x 0.344"	SI-236 SI-103 SI-107					
			SI-110					
			SI-218					
			SI-236					
			SI-100					
	112 & 113 HPSI Discharge East Wrap	4" x 0.337" 4" x 0.438"	SI-107 SI-100 SI-176 SI-157	S** & Vol	101			
		3" x 0.438"	SI-176					
		2" x 0.344"	SI-157 SI-101 SI-102					
			SI-108					
			SI-109					
			SI-157					
			SI-176					
	114 & 115 HPSI Header Loop 1A, 1B, 2A & 2B	3" x 0.438"	SI-218 SI-236 SI-157 SI-176	S** & Vol	44			
	118 & 119 HPSI Long Term	3" x 0.438"	SI-106 SI-114	S** & Vol	106			
		2" x 0.344"	SI-319					
	126 AF Alternative Supply	3" x 0.438"	AF-115	S & Vol	18			
	127 AF Primary	3" x 0.438"	AF-118	S & Vol	16			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	128 RCS Primary Discharge	3" x 0.438"	SI-532	S & Vol	4			
	129 RCS Alternative Discharge	3" x 0.438"	SI-533	S & Vol	2			
C5.30	SOCKET WELDS							
	106 & 107 HPSI Room Discharge A and B	2" x 0.344"	SI-105	S	3	1	3	
			SI-112	S	3			
C5.41	CIRCUMFERENTIAL	-	-	-	27	1	1	*Surface exams are optional per N-663 and supported by MN591-A00001
						1	2	
						1	3	
	82 & 85 SDC Heat Exch Room A & B	20" x 10"	SI-78	S*	2			
			SI-123	S*	2			
	83 & 86 SDC Heat Exch Room A & B	20" x 6"	SI-70	S*	4			
		20" x 10"	SI-72	S*	4			
		20" x 14"						
	88 & 91 Safety Injection East and West Wraps	20" x 12"	SI-70	S*	1			
			SI-72	S*	1			
	89 & 92 SDC Suction East and West Wraps	18" x 12"	SI-194	S*	1			
			SI-241	S*	1			
	96, 97, 98, 99 Containment LPSI Loop 1A, 1B, 2A & 2B	12" x 3"	SI-202	S*	1			
			SI-220	S*	1			
			SI-155	S*	1			
			SI-174	S*	1			
	102-Safety Injection A Suction	24" x 10"	SI-307	S*	3			
		24" x 18"						
		24" x 20"						
	104-Safety Injection B Suction	24" x 10"	SI-308	S*	4			
		24" x 18"						
		24" x 20"						
		24" x 3"						

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-F-2; PRESSURE RETAINING WELDS IN CARBON OR LOW ALLOY STEEL PIPING							
C5.50	PIPING WELDS \geq 3/8 IN NOMINAL WALL THICKNESS FOR PIPING > NPS 4							
C5.51	CIRCUMFERENTIAL WELD	-	-	-	370	11	1	*Surface exams are optional per N-663 and supported by MN591-A00001
						12	2	
						13	3	
								** Note exam items are in Aug Summary (AHE 5.51)
	43- Main Steam SG 1 East	Butt Welds	SG-36-28"	S* & Vol	19			
			SG-36-32"					
	44- Main Steam SG 1 West	Butt Welds	SG-33-28" SG-33-32"	S* & Vol	21			
	45- Main Steam SG 2 East	Butt Welds	SG-42-28" SG-42-32"	S* & Vol	19			
	46- Main Steam SG 2 West	Butt Welds	SG-45-28" SG-45-32"	S* & Vol	21			
	47- Main Steam SG 1 West	Butt Welds	**	S* & Vol	**			
	48- Main Steam SG 1 East	Butt Welds	**	S* & Vol	**			
	49- Main Steam SG 2 East	Butt Welds	**	S* & Vol	**			
	50- Main Steam SG 2 West	Butt Welds	**	S* & Vol	**			
	51- Atmospheric Dump No. 1	Butt Welds	**	S* & Vol	**			
	52- Atmospheric Dump No. 2	Butt Welds	**	S* & Vol	**			
	53- Steam to Aux Feedwater	Butt Welds	**	S* & Vol	**			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
54-	Feedwater SG No. 1	Butt Welds	SG-2-24" SG-2-16" SG-2-14" SG-13-16" SG-13-14"	S* & Vol	45			
55-	Feedwater SG No. 2	Butt Welds	SG-5-24" SG-5-16" SG-5-14" SG-14-16" SG-14-14"	S* & Vol	44			
56-	Feedwater SG No. 1	Butt Welds	SG-201-24" SG-202-24"	S* & Vol	**			
57-	Feedwater SG No. 2	Butt Welds	SG-204-24" SG-205-24"	S* & Vol	**			
58-	Aux & Downcomer FW SG 1	Butt Welds	SG-8-6" SG-8-8"	S* & Vol	23			
59-	Aux & Downcomer FW SG 2	Butt Welds	SG-11-6" SG-11-8"	S* & Vol	18			
60-	Downcomer Feedwater SG 1	Butt Welds	SG-200-8" SG-008-8"	S* & Vol	**			
61-	Downcomer Feedwater SG 2	Butt Welds	SG-203-8" SG-11-8"	S* & Vol	**			
64-	Blowdown SG 1	Butt Welds	SG-39-6" SG-53-6" SG-522-6"	S* & Vol	75			
65-	Blowdown SG 2	Butt Welds	SG-48-6" SG-52-6" SG-523-6"	S* & Vol	85			
66-	Blowdown SG 1	Butt Welds	SG-39-6"	S* & Vol	**			
67-	Blowdown SG 2	Butt Welds	SG-48-6"	S* & Vol	**			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY C-G; PRESSURE RETAINING WELDS IN PUMPS AND VALVES							EXAM CATEGORY C-G deleted in the 2007 Ed., 2008 Add. See letter 102- 06454 and SER dated 09/18/2012. (ACT 4343138)
	EXAM CATEGORY C-H; ALL PRESSURE RETAINING COMPONENTS							
C7.10	PRESSURE RETAINING COMPONENTS	Class 2	IWC-5222	VT-2	*	*	*	*NOTE Pressure Test Program
	EXAM CATEGORY F-A; SUPPORTS							
F1.20A	CLASS 2 PIPING SUPPORTS	-	-	-	3	1	2	
	A-ONE DIRECTIONAL (RODS)							
	83- SDCHX Room A	supports	SI-87	VT-3	1			
	106- HPSI Room Discharge A	supports	SI-100	VT-3	1			
	107- HPSI Room Discharge B	supports	SI-107	VT-3	1			
F1.20B	CLASS 2 PIPING SUPPORTS	-	-	-	428	18	1	
	B-MULTIDIRECTIONAL RESTRAINTS					23	2	
						29	3	
	43- Main Steam SG 1 East	supports	SG-36	VT-3	2			
	44- Main Steam SG 1 West	supports	SG-33	VT-3	1			
	45- Main Steam SG 2 East	supports	SG-42	VT-3	2			
	46- Main Steam SG 2 West	supports	SG-45	VT-3	1			
	54- Feedwater SG No. 1	supports	SG-002	VT-3	5			
	55- Feedwater SG No. 2	supports	SG-005	VT-3	5			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	58- Aux & Downcomer FW SG 1	supports	SG-8	VT-3	5			
	59- Aux & Downcomer FW SG 2	supports	SG-11	VT-3	6			
	62- Auxiliary Feedwater SG 1	supports	AF-018	VT-3	1			
	63- Auxiliary Feedwater SG 2	supports	AF-006 AF-016	VT-3	3			
	64- Blowdown SG 1	supports	SG-39 SG-53	VT-3 VT-3	11			
	65- Blowdown SG 2	supports	SG-48 SG-52	VT-3 VT-3	12			
	70- LPSI Pump Room A Suction	supports	SI-067 SI-241 SI-307	VT-3	3			
	71- LPSI Pump Room A Discharge	supports	SI-87 SI-78	VT-3	5			
	73- LPSI Pump Room B Suction	supports	SI-034 SI-308	VT-3	3			
	74- LPSI Pump Room B Discharge	supports	SI-129	VT-3	3			
	76- CS Pump Room A Suction	supports	SI-9 SI-67	VT-3	4			
	77- CS Pump Room A Discharge	supports	SI-79 SI-82	VT-3	8			
	79- CS Pump Room B Suction	supports	SI-033 SI-034	VT-3	3			
	80- CS Pump Room B Discharge	supports	SI-119	VT-3	5			
	82- SDCHX Room A	supports	SI-78 SI-79	VT-3	2			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	83- SDCHX Room A	supports	SI-70	VT-3	13			
			SI-82	VT-3				
			SI-87	VT-3				
			SI-89	VT-3				
			SI-90	VT-3				
	85- SDCHX Room B	supports	SI-119	VT-3	8			
			SI-123					
	86- SDCHX Room B	supports	SI-72	VT-3	10			
			SI-129	VT-3				
			SI-134	VT-3				
			SI-135	VT-3				
			SI-147	VT-3				
	88- East Wrap	supports	SI-72	VT-3	5			
			SI-73	VT-3				
	89- East Wrap	supports	SI-38	VT-3	4			
			SI-173	VT-3				
			SI-194	VT-3				
	90- East Wrap	supports	SI-130	VT-3	3			
			SI-134					
	91- West Wrap	supports	SI-70	VT-3	7			
			SI-71	VT-3				
	92- West Wrap	supports	SI-2	VT-3	5			
			SI-241	VT-3				
	93- West Wrap	supports	SI-89	VT-3	3			
	94- A Train Pipe Chase & 88'	supports	SI-70	VT-3	14			
			SI-89	VT-3				
			SI-241	VT-3				
	95- B Train Pipe Chase & 88'	supports	SI-194	VT-3	14			
			SI-72	VT-3				
			SI-134	VT-3				

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	96- Containment LPSI to 1A	supports	SI-202	VT-3	10			
	97- Containment LPSI to 1B	supports	SI-220	VT-3	16			
	98- Containment LPSI to 2A	supports	SI-155	VT-3	4			
	99- Containment LPSI to 2B	supports	SI-174	VT-3	5			
	100- Containment LPSI A Suction	supports	SI-7 SI-369	VT-3 VT-3	2			
	101- Containment LPSI B Suction	supports	SI-30 SI-194 SI-368	VT-3 VT-3 VT-3	4			
	102- SI Pump Suction A	supports	SI-8 SI-9 SI-307	VT-3 VT-3 VT-3	14			
	103- Refueling Water Suction A	supports	CH-142 CH-424	VT-3 VT-3	13			
	104- SI Pump Suction B	supports	SI-31 SI-33 SI-308	VT-3 VT-3 VT-3	12			
	105- Refueling Water Suction B	supports	CH-149 CH-425	VT-3 VT-3	19			
	106- HPSI Room Discharge A	supports	SI-100 SI-105 SI-106	VT-3	18			
	107- HPSI Room Discharge B	supports	SI-107 SI-112	VT-3	14			
	108- HPSI 88' Pipechase	supports	SI-100 SI-118	VT-3	15			
	109- HPSI 88' Pipechase	supports	SI-107	VT-3	11			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
110-	HPSI Discharge West Wrap	supports	SI-103	VT-3	13			
			SI-107					
			SI-110					
			SI-218					
			SI-236					
111-	HPSI Discharge West Wrap	supports	SI-100	VT-3	6			
			SI-236					
112-	HPSI Discharge East Wrap	supports	SI-100	VT-3	10			
			SI-101					
			SI-102					
			SI-176					
113-	HPSI Discharge	supports	SI-107	VT-3	9			
			SI-108					
			SI-109					
			SI-157					
			SI-176					
114	HPSI Header Loop 1A & 1B	supports	SI-218	VT-3	2			
			SI-236					
115	HPSI Header Loop 2A & 2B	supports	SI-157	VT-3	2			
			SI-176					
118 -	HPSI Long Term	supports	SI-106	VT-3	22			
119 -	HPSI Long Term	supports	SI-114	VT-3	19			
			SI-319					
126 -	AF Alternative Supply	supports	AF-115	VT-3	5			
127 -	AF Primary	supports	AF-118	VT-3	5			
128 -	RCS Primary Discharge	supports	SI-532	VT-3	1			
129 -	RCS Alternative Discharge	supports	SI-533	VT-3	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
F1.20C	CLASS 2 PIPING SUPPORTS	-	-	-	168	9	1	
	C-SUPPORTS THAT ALLOW					11	2	
	THERMAL MOVEMENT (SPRING)					10	3	
	43- Main Steam SG 1 East	supports	SG-36	VT-3	1			
	44- Main Steam SG 1 West	supports	SG-33	VT-3	2			
	45- Main Steam SG 2 East	supports	SG-42	VT-3	1			
	46- Main Steam SG 2 West	supports	SG-45	VT-3	2			
	47- Main Steam SG 1 West	supports	SG-206	VT-3	1			
	48- Main Steam SG 1 East	supports	SG-207	VT-3	1			
	49- Main Steam SG 2 East	supports	SG-208	VT-3	1			
	50- Main Steam SG 2 West	supports	SG-209	VT-3	1			
	51- Atmospheric Dump No. 1	supports	SG-59 SG-70	VT-3	2			
	52- Atmospheric Dump No. 2	supports	SG-84 SG-103	VT-3	2			
	54- Feedwater SG No. 1	supports	SG-002 SG-013	VT-3 VT-3	10			
	55- Feedwater SG No. 2	supports	SG-005 SG-014	VT-3	10			
	56- Feedwater SG No. 1	supports	SG-202	VT-3	1			
	57- Feedwater SG No. 2	supports	SG-205	VT-3	1			
	58- Aux & Downcomer FW SG 1	supports	SG-8 AF-4	VT-3 VT-3	11			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	59- Aux & Downcomer FW SG 2	supports	SG-11 AF-6	VT-3 VT-3	11			
	60- Downcomer Feedwater SG 1	supports	SG-200	VT-3	2			
	61- Downcomer Feedwater SG 2	supports	SG-203	VT-3	2			
	62- Auxiliary Feedwater SG 1	supports	AF-018 AF-4	VT-3 VT-3	2			
	63- Auxiliary Feedwater SG 2	supports	AF-006	VT-3	2			
	64- Blowdown SG 1	supports	SG-39	VT-3	6			
	65- Blowdown SG 2	supports	SG-48	VT-3	5			
	71- LPSI Pump Room A Discharge	supports	SI-78	VT-3	1			
	74- LPSI Pump Room B Discharge	supports	SI-129	VT-3	3			
	77- CS Pump Room A Discharge	supports	SI-79	VT-3	2			
	79- CS Pump Room B Suction	supports	SI-034	VT-3	1			
	80- CS Pump Room B Discharge	supports	SI-119 SI-147	VT-3	5			
	82- SDCHX Room A	supports	SI-78	VT-3	1			
	83- SDCHX Room A	supports	SI-70 SI-87 SI-90	VT-3 VT-3 VT-3	5			
	85- SDCHX Room B	supports	SI-119 SI-123	VT-3	2			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	86- SDCHX Room B	supports	SI-72	VT-3	15			
			SI-129					
			SI-134					
			SI-135					
	88- East Wrap	supports	SI-72	VT-3	9			
			SI-73					
	89- East Wrap	supports	SI-194	VT-3	1			
	91- West Wrap	supports	SI-70	VT-3	3			
			SI-71					
	92- West Wrap	supports	SI-239	VT-3	4			
			SI-241	VT-3				
	93- West Wrap	supports	SI-89	VT-3	1			
	94- A Train Pipe Chase & 88'	supports	SI-89	VT-3	1			
	95- B Train Pipe Chase & 88'	supports	SI-72	VT-3	4			
			SI-194					
	96- Containment LPSI to 1A	supports	SI-202	VT-3	1			
	99- Containment LPSI to 2B	supports	SI-174	VT-3	2			
	100- Containment LPSI A Suction	supports	SI-241	VT-3	1			
	101- Containment LPSI B Suction	supports	SI-194	VT-3	1			
	102- SI Pump Suction A	supports	SI-307	VT-3	1			
	104- SI Pump Suction B	supports	SI-308	VT-3	1			
	106- HPSI Room Discharge A	supports	SI-99	VT-3	3			
			SI-100					
	107- HPSI Room Discharge B	supports	SI-107	VT-3	3			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
108-	HPSI 88' Pipechase	supports	SI-100 SI-118	VT-3	2			
109-	HPSI 88' Pipechase	supports	SI-107	VT-3	3			
110-	HPSI Discharge West Wrap	supports	SI-107 SI-218	VT-3	4			
111-	HPSI Discharge West Wrap	supports	SI-236	VT-3	1			
113-	HPSI Discharge	supports	SI-157	VT-3	1			
118 -	HPSI Long Term	supports	SI-106	VT-3	2			
119 -	HPSI Long Term	supports	SI-114 SI-319	VT-3	4			
120-	Containment Spray A	supports	SI-88	VT-3	1			
121-	Containment Spray B	supports	SI-130	VT-3	2			
F1.40B	SUPPORTS OTHER THAN PIPING SUPPORTS	-	-	-	22**	2	1	**22 Total, 12 REQ'D
						5	2	*multiple vessels, see
						5	3	similar Zones for grouping
68-	Regenerative Heat Exchanger	supports	79313	VT-3	2			
72-	LPSI Pump A*	supports	0876-41	VT-3	3			
75-	LPSI Pump B*	supports	0876-42	VT-3	3			
78-	CS Pump A*	supports	0876-43	VT-3	3			
81-	CS Pump B*	supports	0876-44	VT-3	3			
116-	HPSI Pump A*	supports	0776-16	VT-3	4			
117-	HPSI Pump B*	supports	0776-17	VT-3	4			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
F-1.40C	SUPPORTS OTHER THAN PIPING SUPPORTS	-	-	-	4**	1	1	**4 Total, 2 REQ'D
						1	2	*multiple vessels
	41- Steam Generator 1*	snubbers	212	VT-3	2			
	42- Steam Generator 2*	snubbers	211	VT-3	2			

**SECTION 6.0
ASME CLASS 3
EXAMINATION SUMMARY**

INDEX

EXAM CATEGORY

D-A	Welded Attachments for Vessels, Piping, Pumps and Valves
D-B	All Pressure Retaining Components
F-A	Class 3 Supports

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY D-A; WELDED ATTACHMENTS FOR VESSELS, PIPING, PUMPS, AND VALVES							
	Pressure Vessels							
D1.10	Welded Attachments*	-	-	-	22**	3	1	**10 req'd due to multiple comp. see similar description for grouping
						3	2	
						4	3	
	DF System	attachments	DFA-T02 DFB-T02	VT-1	2			
	DG System	attachments	DGA-E04 DGA-E05 DGB-E04 DGB-E05 DGA-X01A DGA-X01B DGB-X01A DGB-X01B	VT-1	8			
	EC System	attachments	ECA-E-1 ECA-T-1 ECB-E-1 ECB-T-1	VT-1	4			
	EW System	attachments	EWA-E01 EWA-T01 EWB-E01 EWB-T01	VT-1	4			
	PC System	attachments	PCA-E1 PCB-E1	VT-1	2			
	SI System	attachments	SIA-E01 SIB-E01	VT-1	2			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
D1.20	Piping Welded Attachments	-	-	-	319	11	1	
						11	2	
						11	3	
	AF System	attachments	pipng	VT-1	9			
	CT System	attachments	pipng	VT-1	4*			*Added CT-44-H-1-W per AI 16-13150-004.
	DG System	attachments	pipng	VT-1	14			
	EC System	attachments	pipng	VT-1	14			
	EW System	attachments	pipng	VT-1	37			
	NC System	attachments	pipng	VT-1	19			
	PC System	attachments	pipng	VT-1	13			
	SG System	attachments	pipng	VT-1	3			
	SI System	attachments	pipng	VT-1	2			
	SP System	attachments	pipng	VT-1	204			
	EXAM CATEGORY D-B; ALL PRESSURE RETAINING COMPONENTS							
D2.10	Pressure retaining components	Class 2	IWD-5221	VT-2	*	*	*	*Note Pressure Test Program

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY F-A; SUPPORTS							
F1.30B	CLASS 3 PIPING SUPPORTS	-	-	-	326	10	1	
	B-MULTIDIRECTIONAL RESTRAINTS					11	2	
						12	3	
	AF System	supports	pipng	VT-3	20			
	CT System	supports	pipng	VT-3	4*			*Added CT-44-H-1 per AI 16-13150-004.
	DG System	supports	pipng	VT-3	30			
	EC System	supports	pipng	VT-3	16			
	EW System	supports	pipng	VT-3	67			
	NC System	supports	pipng	VT-3	35			
	PC System	supports	pipng	VT-3	17			
	SG System	supports	pipng	VT-3	5			
	SI System	supports	pipng	VT-3	4			
	SP System	supports	pipng	VT-3	128			
F1.30C	CLASS 3 PIPING SUPPORTS	-	-	-	54	5	1	
	C-Supports that allow thermal movement					5	2	
						4	3	
	AF System	supports	pipng	VT-3	8			
	DG System	supports	pipng	VT-3	4			
	EC System	supports	pipng	VT-3	2			
	EW System	supports	pipng	VT-3	10			
	NC System	supports	pipng	VT-3	1			

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	PC System	supports	pipng	VT-3	13			
	SG System	supports	pipng	VT-3	6			
	SI System	supports	pipng	VT-3	1			
	SP System	supports	pipng	VT-3	9			
F1.40B	SUPPORTS OTHER THAN PIPING SUPPORTS*	-	-	-	22	3	1	**10 req'd due to
						3	2	*multiple comp. see
						4	3	similar description for
								grouping
	DF System	supports	DFA-T02 DFB-T02	VT-3	2			
	DG System	supports	DGA-E04 DGB-E04 DGA-E05 DGB-E05 DGA-X01A DGA-X01B DGB-X01A DGB-X01B	VT-3	8			
	EC System	attachments	ECA-E-1 ECB-E-1 ECA-T-1 ECB-T-1	VT-3	4			
	EW System	attachments	EWA-E01 EWB-E01 EWA-T01 EWB-T01	VT-3	4			
	PC System	attachments	PCA-E1 PCB-E1	VT-3	2			
	SI System	attachments	SIA-E01 SIB-E01	VT-3	2			

SECTION 7.0
AUGMENTED EXAMINATION SUMMARY

INDEX

EXAM CATEGORY

- N-722-1 PWR Components Containing Alloy 600/82/182
- N-729-4 PWR Reactor Vessel Upper Head
- N-770-2 PWR Pressure Retaining Dissimilar Metal Piping and Vessel Nozzle Butt Welds containing Alloy 82/182
- B-J Pressure Retaining Welds in Piping

AUGMENTED HIGH ENERGY

- C-F-2 Pressure Retaining Welds in Carbon or Low Alloy Steel Piping

AUGMENTED FLYWHEEL

- NA Reactor Coolant Pump Flywheel Examinations

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	EXAM CATEGORY CC722-1; PWR COMPONENTS CONTAINING ALLOY 600/82/182							
B15.80	REACTOR VESSEL RPV bottom mounted instrument penetrations							
	1- Reactor Vessel (1-31)	ICI Penetrations	79173	VE	1	1	*	* Required R16, R18, R20 61 locations
	STEAM GENERATOR							
B15.135	3- Cold leg instrument connections	Penetrations	212	VE	4	4	***	*** Prorated over interval per Footnote 6 of Code Case.
	4- Cold leg instrument connections	Penetrations	211	VE	4	4	***	
	PRESSURIZER							
B15.140	5- Heater Penetrations (5-36)	Penetrations	79373	VE	1	1	**	**Each RFO 36 locations
B15.180	5- Instrument Connections (5-37, 1 through 7)	Instruments	79373	VE	7	7	**	
	PIPING							
B15.200	6- Hot Leg Instrument Connections (6-101)	Instruments	RCS	VE	27	27	**	**Each RFO
B15.205	Cold leg instrument connections							
	6- RCP Pressure Taps (6-100)	Instrument	RCP	VE	8	8	1	
	6- Cold Leg Instrumentation (6-99)	Instrument	RCS	VE	12	6	2	
						6	3	

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
B15.215	Cold leg full penetration welds							
	23- Safety Injection 1A (9-10)	butt welds	SI-207-14"	VE	1	1	****	*** VE in conjunction with N-770-2 VOL.,
	24- Safety Injection 1B (11-10)	butt welds	SI-223-14"	VE	1	1	****	prorated over interval per Footnote 6 of Code Case
	25- Safety Injection 2A (13-10)	butt welds	SI-160-14"	VE	1	1	****	
	26- Safety Injection 2B (15-9)	butt welds	SI-179-14"	VE	1	1	****	
	27- Pzr Spray 1A (9-11)	butt welds	RC-062-3"	VE	1	1	****	
	28- Pzr Spray 1B (11-11)	butt welds	RC-017-3"	VE	1	1	****	
	32- Drain Line Loop 1A (8-18)	butt welds	RC-060-2"	VE	1	1	****	
	33- Drain Line Loop 1B (10-18)	butt welds	RC-058-2"	VE	1	1	****	
	34- Drain Line Loop 2A (12-18)	butt welds	RC-096-2"	VE	1	1	****	
	36- Letdown Line (14-18)	butt welds	RC-091-2"	VE	1	1	****	
	37- Charging Line (13-11)	butt welds	CH-005-3"	VE	1	1	****	

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	CODE CASE N-729-4; PWR REACTOR VESSEL UPPER HEAD							
B4.30	REACTOR VESSEL UPPER HEAD Head with nozzles and partial-penetration welds of PWSCC-resistant materials							
	2-Closure Head CEDM Penetrations (2-89)	Head Surface	N05065-CHA-01	VE	97	97	*	*R15 (Head Replaced) REQUIRED R18, R21
	2-Closure Head Vent Penetration (2-88)	Vent Nozzle	N05065-CHA-01	VE	1	1	*	*R15 (Head Replaced) REQUIRED R18, R21
B4.40	Nozzles and partial-penetration welds of PWSCC-resistant materials in head							
	2-Closure Head CEDM Nozzles & J-Weld (2-89)	CEDM Nozzle	N05065-CHA-01	S or Vol	97	97	*	*Required in 2R25 per Relief Request 55
	2-Closure Head Vent Nozzle & J-Weld (2-88)	Vent Nozzle	N05065-CHA-01	S or Vol	1	1	*	*Required in 2R25 per Relief Request 55

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	CODE CASE N-770-2; PWR PRESSURE RETAINING DISSIMILAR METAL PIPING AND VESSEL NOZZLE BUTT WELDS CONTAINING ALLOY 82/182							
	Cracked butt weld reinforced by full structural weld overlay of Alloy 52/152 material							
	INSPECTION ITEM F-1							
	NOMINAL PIPE SIZE \geq 4 INCH NOZZLE TO SAFEEND BUTT WELDS							Mitigated with FSWO During R14; 1st ISI R16
	29- Spray (5-33-OL)	butt welds	RC-18-4"	Vol	6	1	2	*Design Calc Exam
	20- Surge* (5-34-OL)	butt welds	RC-028-12"	Vol	1	1	3	Freq. every 3 years.
	31- Safeties (4) (5-29-OL)	butt welds	RC-001-6"	Vol				R18, R20, R22.
	(5-30-OL)		RC-003-6"	Vol				
	(5-31-OL)		RC-005-6"	Vol				
	(5-32-OL)		RC-007-6"	Vol				
	NPS 4 OR LARGER							Mitigated with FSWO
	* CIRCUMFERENTIAL WELDS							During R13; 1st ISI R15
	20- Pressurizer Surge Line** (6-10-OL)	butt welds	RC-028-12"	Vol	3	1	3	** Design Calc Frequency every 6 years; Last examined R19
	21- Shutdown Cooling Loop 1 (6-11-OL)	butt welds	RC-051-16"	Vol				
	22- Shutdown Cooling Loop 2 (7-9-OL)	butt welds	RC-068-16"	Vol				

ASME ITEM NO	ZONE-COMPONENT OR SYSTEM	IDENTIFICATION	DESCRIPTION, LINE OR SERIAL NO	NDE METHOD	TOTAL ITEMS	EXAM AMOUNT	INSPECTION PERIOD	REMARKS
	Unmitigated butt weld at cold leg operating temperature							VOL in conjunction with N-722 1 VE; UTs must be encoded per 50.55a(g)(6)(ii)(F)(13)
	INSPECTION ITEM B							
	23- Safety Injection 1A (9-10)	butt welds	SI-207-14"	VE & Vol	1	1		Examined R15, REQUIRED R19
	24- Safety Injection 1B (11-10)	butt welds	SI-223-14"	VE & Vol	1	1		Examined R15, REQUIRED R19
	25- Safety Injection 2A (13-10)	butt welds	SI-160-14"	VE & Vol	1	1		Examined R15, REQUIRED R19
	26- Safety Injection 2B (15-9)	butt welds	SI-179-14"	VE & Vol	1	1		Examined R15, REQUIRED R19
	27- Pressurizer Spray 1A (9-11)	butt welds	RC-062-3"	VE & Vol	1	1		REQUIRED R17, R21
	28- Pressurizer Spray 1B (11-11)	butt welds	RC-017-3"	VE & Vol	1	1		REQUIRED R17, R21
	32- Drain Line Loop 1A (8-18)	butt welds	RC-060-2"	VE & Vol	1	1		REQUIRED R17, R21
	33- Drain Line Loop 1B (10-18)	butt welds	RC-058-2"	VE & Vol	1	1		REQUIRED R17, R21
	34- Drain Line Loop 2A (12-18)	butt welds	RC-096-2"	VE & Vol	1	1		REQUIRED R17, R21
	36- Letdown Line (14-18)	butt welds	RC-091-2"	VE & Vol	1	1		REQUIRED R17, R21
	37- Charging Line (13-11)	butt welds	CH-005-2"	VE & Vol	1	1		REQUIRED R17, R21
	EXAM CATEGORY B-J; PRESSURE RETAINING WELDS IN PIPING							
B9.20	LESS THAN NPS 4							
B9.21	CIRCUMFERENTIAL WELDS OTHER THAN PWR HPSI SYSTEMS							
	30- Aux Pressurizer Spray**	butt welds	CH-009-2"	S	2	2	3	** IEB 89-08 & IN 97-19 2 welds and base metal down stream of V431