

Hatch Nuclear Plant Units 1 and 2 Program

<u>Holder</u>	<u>Manual No.</u>
E. C. Sorrell	7
M. Belford	17
T. N. Epps	18
J. P. Kane	19
L. T. Gucwa	20
E. M. Burkett	22
D. H. Swann	23
R. T. Oedamer	37
Supt. of Planning and Support	32
C. F. Toegel	39
O. M. Fraser	40
R. L. Dyle	41
M. H. Googe	42
J. C. Lewis, Jr.	43

0953K*/4
(1/4/88)

8803010279 880224
PDR ADOCK 05000321
0 DCD

TABLE OF CONTENTS

1.0 Introduction.....1-1

2.0 Class 1 with Relief Requests.....2-1

3.0 Class 2 with Relief Requests.....3-1

4.0 Class 3 with Relief Requests.....4-1

5.0 Class 1, 2, and 3 Supports with Relief Requests.....5-1

6.0 Valve Testing with Relief Requests.....6-1

7.0 Pump Testing with Relief Requests.....7-1

8.0 General Relief Requests.....8-1

1.0 INTRODUCTION

1.1 GENERAL

This document describes the revised Inservice Inspection (ISI) and Inservice Testing (IST) Programs for Edwin I. Hatch Nuclear Plant, Units 1 and 2.

This Program meets, as much as practical, the requirements of the 1980 Edition of Section XI with Addenda through Winter 1981.

1.2 EFFECTIVE DATE

The original, Program developed to meet the Winter 1981 Addenda, became effective on January 1, 1986.

1.3 SCOPE

This document is a description of the ISI and IST Programs for Units 1 and 2 of Plant Hatch. The programs for Class 1, 2, and 3 component examinations as well as for pump and valve surveillance testing are included.

1.4 COMPONENT UPGRADING

All plant components have been reviewed to determine the appropriate classification for inservice inspection and testing. Regulatory Guide 1.26 was used for guidance in determining component classifications.

It must be noted that the classification of components as ASME Class 1, 2, or 3 equivalent for this Program does not imply that the components were designed in accordance with ASME requirements. The component design codes remain as stated in the FSAR.

1.5 SUBSEQUENT PROGRAM REVISIONS

It is anticipated that this Program will be reviewed again near the end of 120 months of implementation. At that time, the Program will be modified as required to bring it into compliance with a later Nuclear Regulatory Commission (NRC) approved edition and addenda of ASME Section XI.

1.6 RESPONSIBILITY

Georgia Power Company, as owner, bears the overall responsibility for the performance of the inservice inspection and testing activities in accordance with IWA-1400.

1.7 RECORDS

Records and documentation of information and examination results, which provide the basis for evaluation and which facilitate comparison with results from previous and subsequent examinations, will be maintained and available for the active life of the plant in accordance with Section XI, IWA-6000.

1.8 METHODS OF EXAMINATION

The method of examination planned for each area is delineated in subsequent sections. Personnel performing nondestructive examinations will be trained in accordance with the American Society for Nondestructive Testing (ASNT) "Recommended Practice SNT-TC-1A, Supplements and Appendices," as applicable for technique and method used.

1.8.1 ULTRASONIC EXAMINATION (UT)

It is anticipated that most volumetric examinations will be performed ultrasonically. Examinations will be conducted in accordance with the requirements of IWA-2232 of ASME Section XI except as requested by relief.

1.8.2 RADIOGRAPHIC EXAMINATION (RT)

Radiographic techniques will be used to supplement UT when necessary.

1.8.3 LIQUID PENETRANT EXAMINATION (PT)

Liquid penetrant examinations in accordance with IWA-2222 of ASME Section XI will be performed whenever a surface examination is required on non-magnetic components.

1.8.4 MAGNETIC PARTICLE EXAMINATION (MT)

Magnetic particle tests in accordance with IWA-2221 of ASME Section XI will be used when surface examination of carbon steel components is required.

1.8.5 VISUAL EXAMINATION (VT)

Visual examinations in accordance with IWA-2210 of ASME Section XI are divided into four different categories:

a. VT-1

This examination shall be conducted to determine the condition of the part, component, or surface examined.

b. VT-2

This examination shall be conducted to locate evidence of leakage from pressure retaining components.

c. VT-3

This examination shall be conducted to determine the general mechanical and structural condition of components and their supports.

d. VT-4

This examination shall be conducted to determine conditions relating to the operability of components or devices.

1.9 STANDARDS FOR EXAMINATION EVALUATION

The acceptance standards for Class 1 components will be either IWB-3000 of ASME Section XI or the Section III construction Code for the plant, as applicable.

For Class 2 and 3 components, Articles IWC-3000 and IWD-3000, respectively, are in the course of preparation. Both Articles state that the rules of Article IWB-3000 may be used. Therefore, the acceptance standards for Class 2 and 3 components will be either Article IWB-3000 or the Section III construction Code for the plant.

The acceptance standards for Class 1, 2, and 3 component supports will be either IWF-3000 or the Section III construction Code for the plant, as applicable.

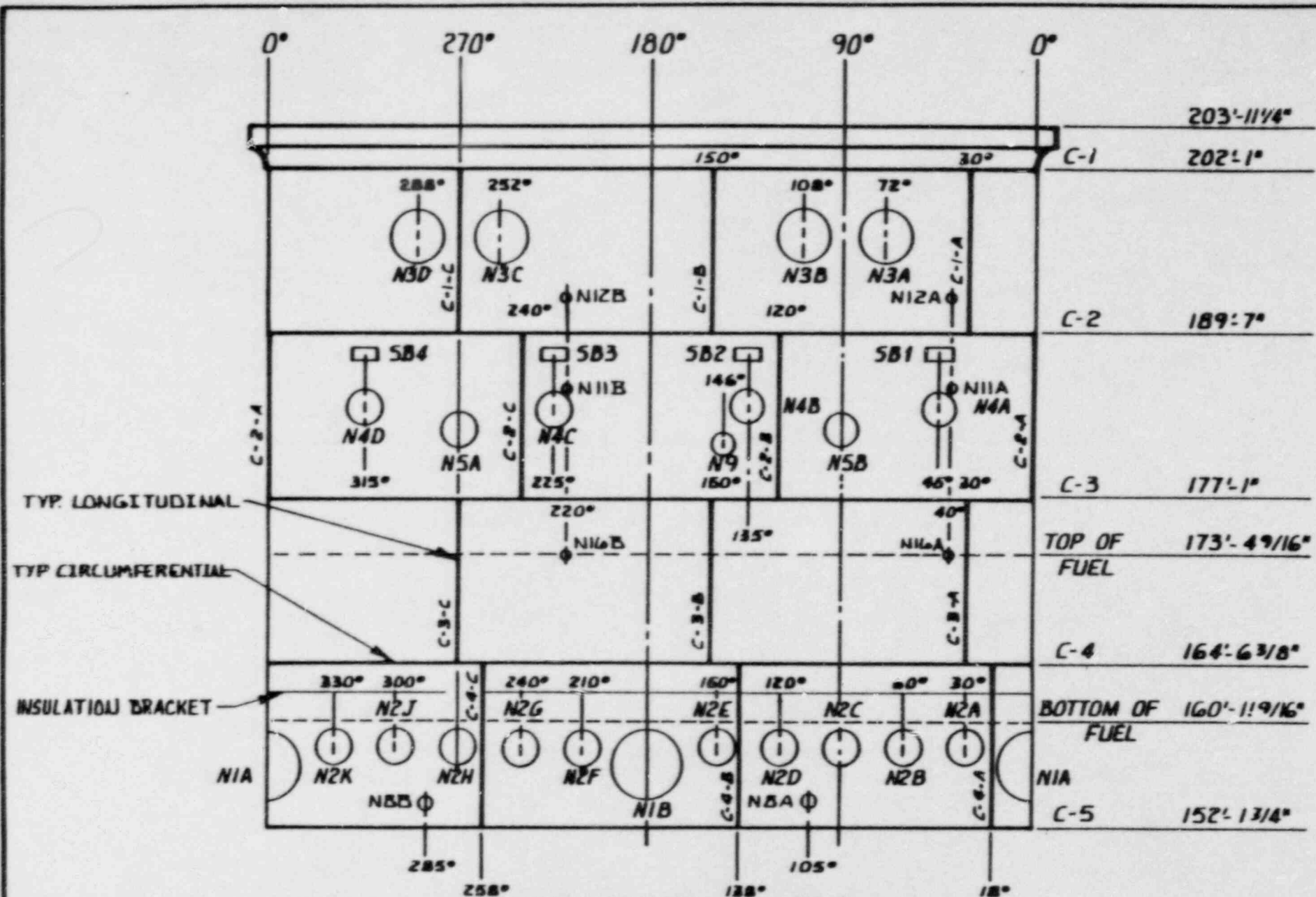
Corrective measures for Class 1, 2, and 3 pressure testing will be determined per IWA-5000 of ASME Section XI.

Analysis of results will be performed and corrective measures will be determined per IWP-3000 for pump testing and IWV-3000 for valve testing.

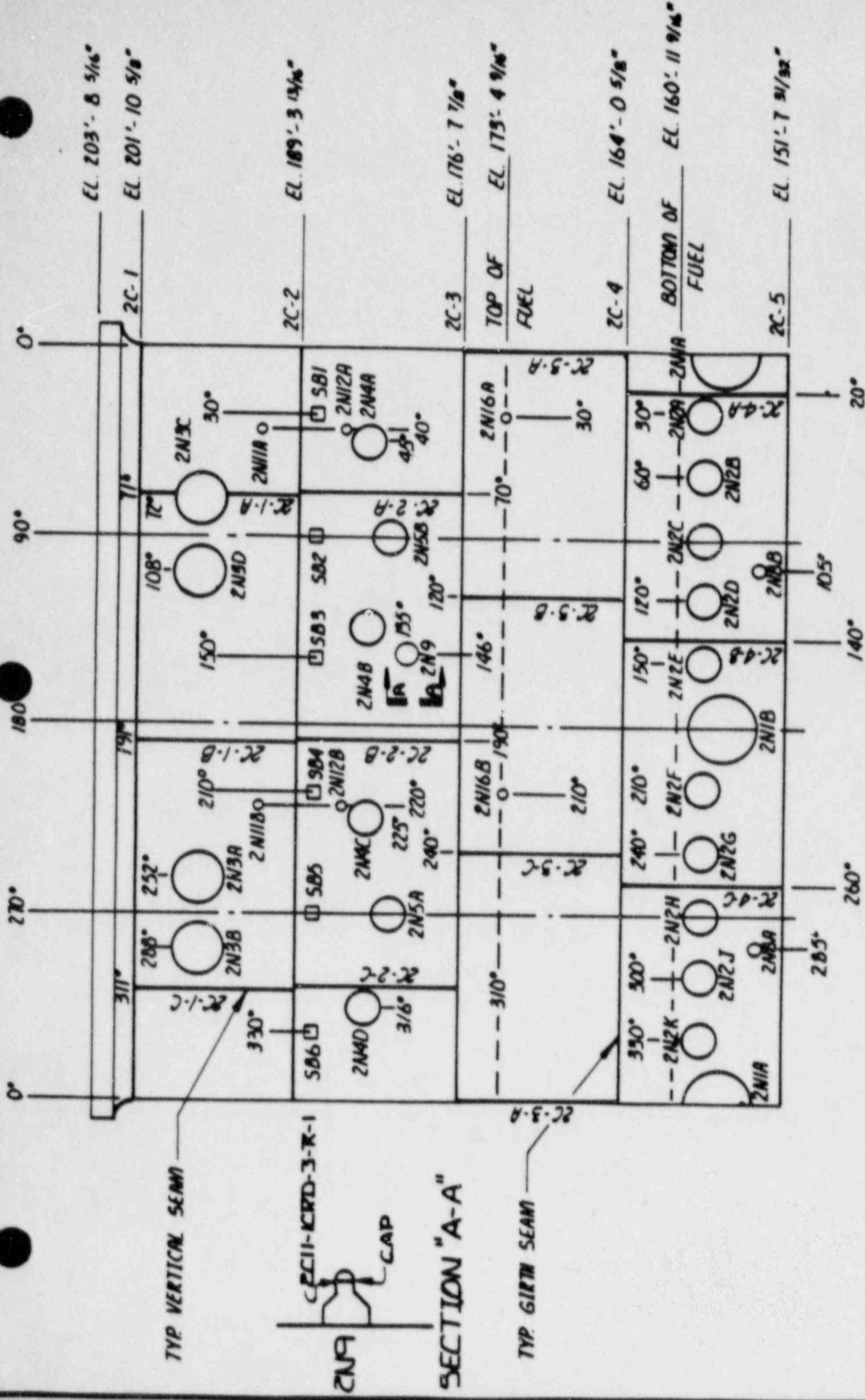
1.10 REPAIR PROCEDURES

Repairs to the pressure retaining boundary of ASME Class 1, 2, or 3 (equivalent) components will be performed in accordance with Article IWA-4000 utilizing Georgia Power company approved procedures which generally comply with the Code applicable to the construction of the component. In addition, replacement of components will be performed per Article IWA-7000 of Section XI, to the extent practical.

FIGURES

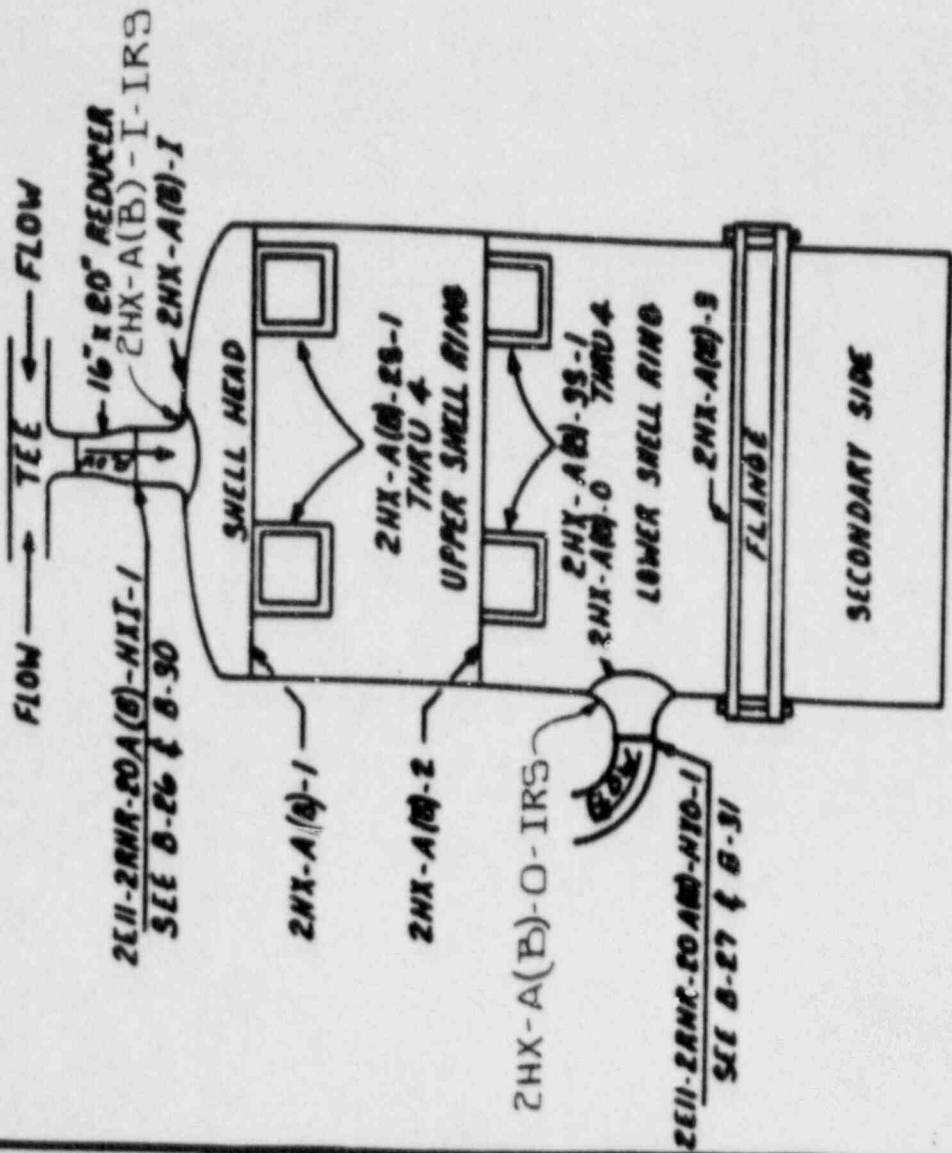


EDWIN I. HATCH UNIT 1
 RPV LONGITUDINAL, CIRCUMFERENTIAL
 AND NOZZLE TO VESSEL WELDS
 FIGURE 1



EDWIN I HATCH UNIT -2 RPV SHELL STRETCH OUT - NOZZLE TO VESSEL WELDS

FIGURE 2



RESIDUAL HEAT REMOVAL
HEAT EXCHANGERS

~~MATCH PL. CLASS 2~~

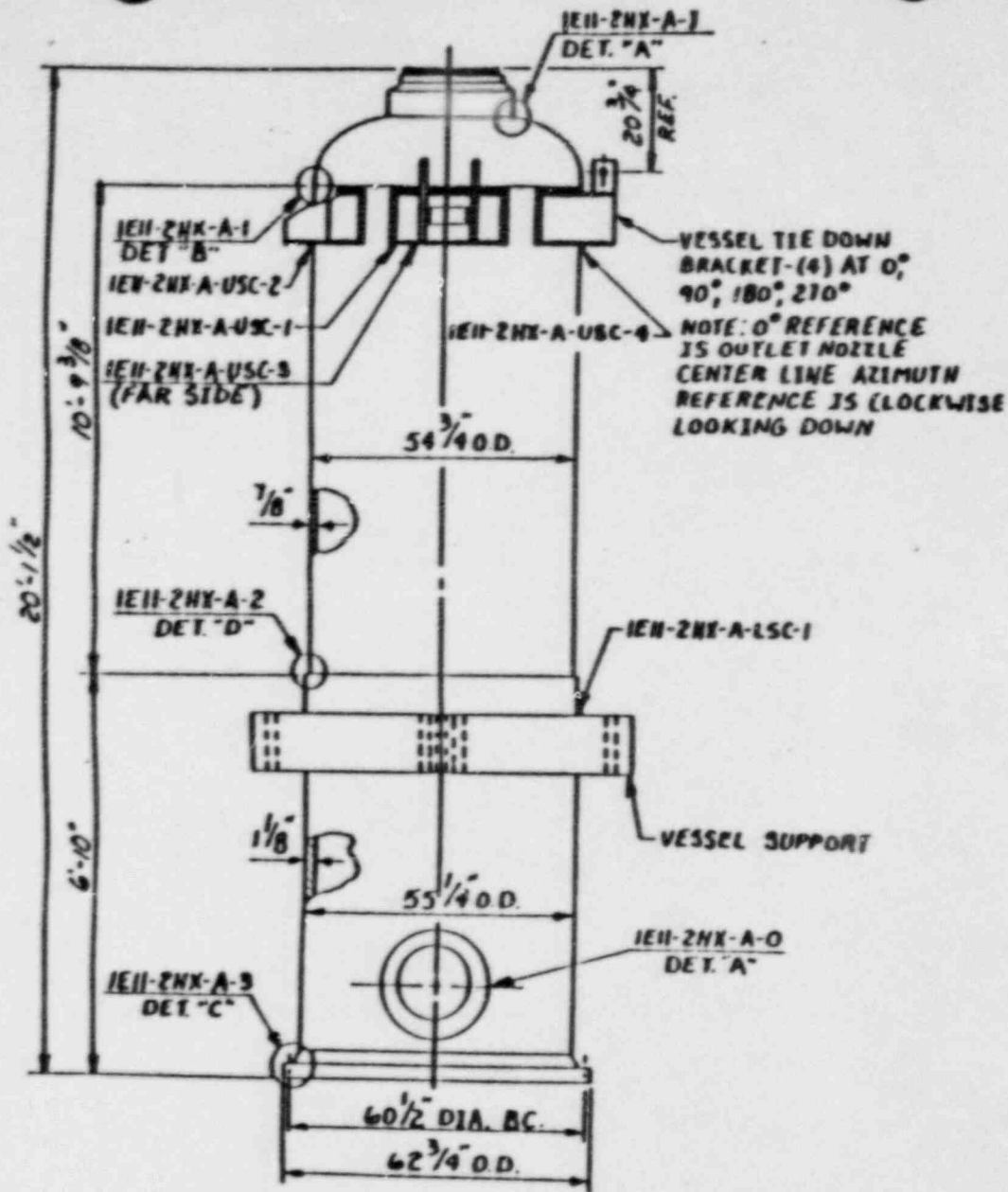
CAL. BLOCKS: M-15-1.150-72-N

PL-C3-0.800-73-N

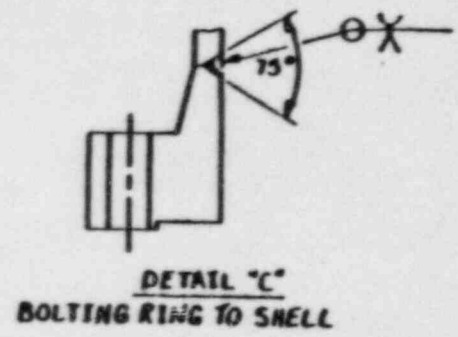
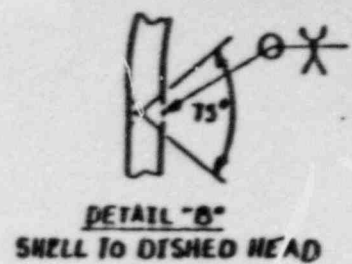
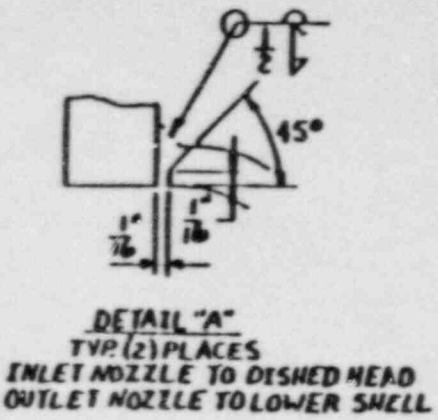
LOCATION: NORTHEAST AND SOUTH
EAST DIAGONALS

THE ZERO REFERENCE LOCATION FOR
THE CIRCUMFERENTIAL SHELL BELLS IS
THE CENTERLINE OF THE OUTLET NOZZLE
ZHX-A(B)-0

FIGURE 3



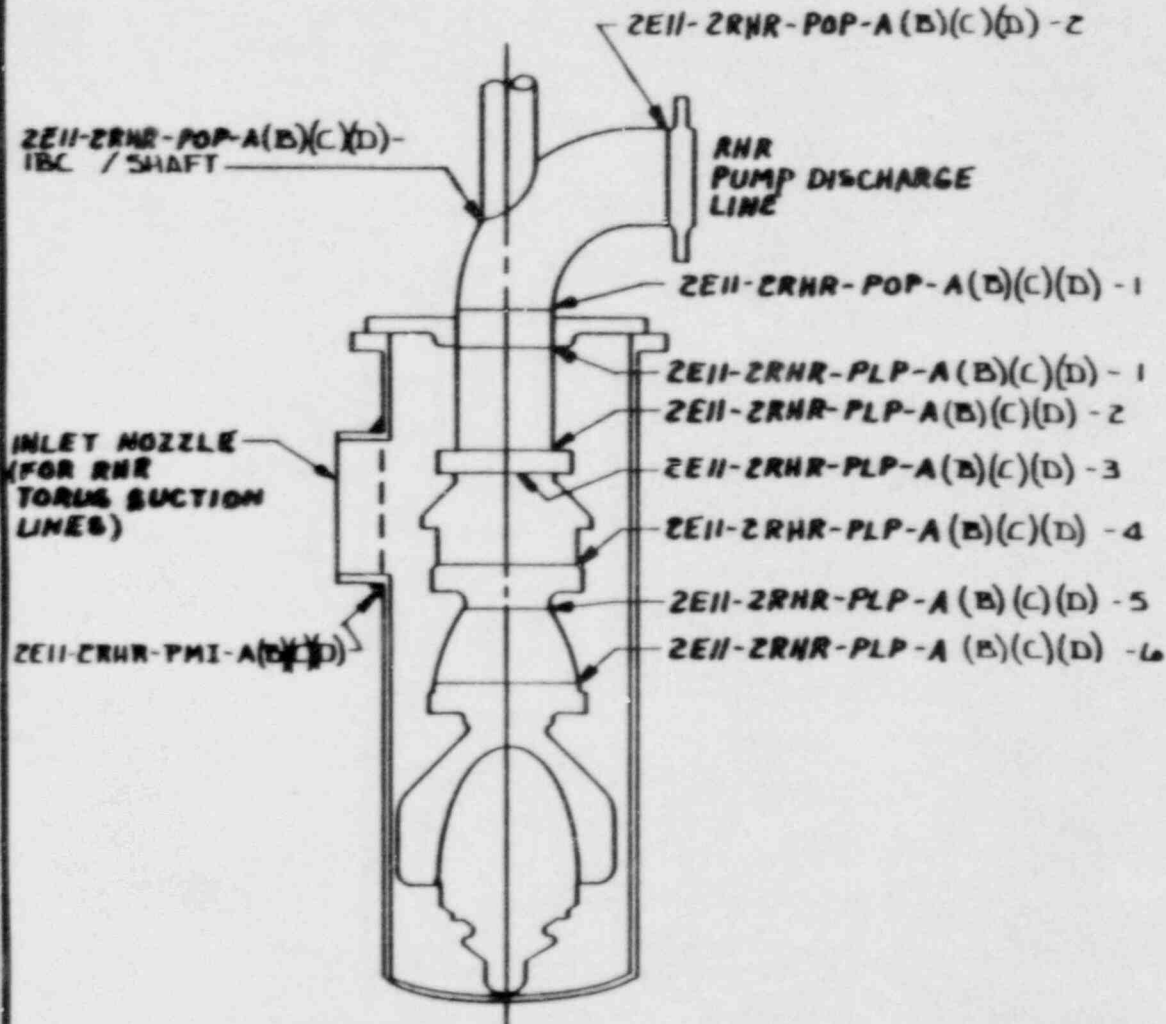
VESSEL TIE DOWN BRACKET-(4) AT 0°, 90°, 180°, 270°
 NOTE: 0° REFERENCE IS OUTLET NOZZLE CENTER LINE AZIMUTH REFERENCE IS (CLOCKWISE) LOOKING DOWN



EII-HX
 RHR HEAT EXCHANGER A & B
 HATCH 1, CLASS 2
 CAL BLOCKS: PL-CS-0850-73-H
 PL-CS-1.125-114-H
 LOCATION:
 NOTE: ALL DEVICE NUMBERS PRECEDED BY IEII

FIGURE 4

THIS FIGURE DEPICTS THE RHR PUMPS A,B,C, & D AND THE CORE SPRAY PUMPS



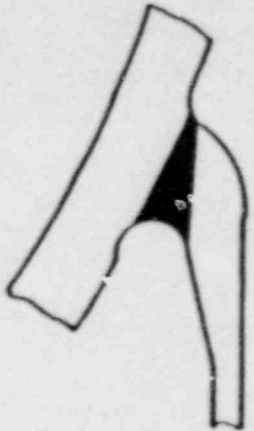
RESIDUAL HEAT REMOVAL PUMPS
AND CORE SPRAY PUMPS
HATCH 2, CLASS 2

CAL. BLOCKS:

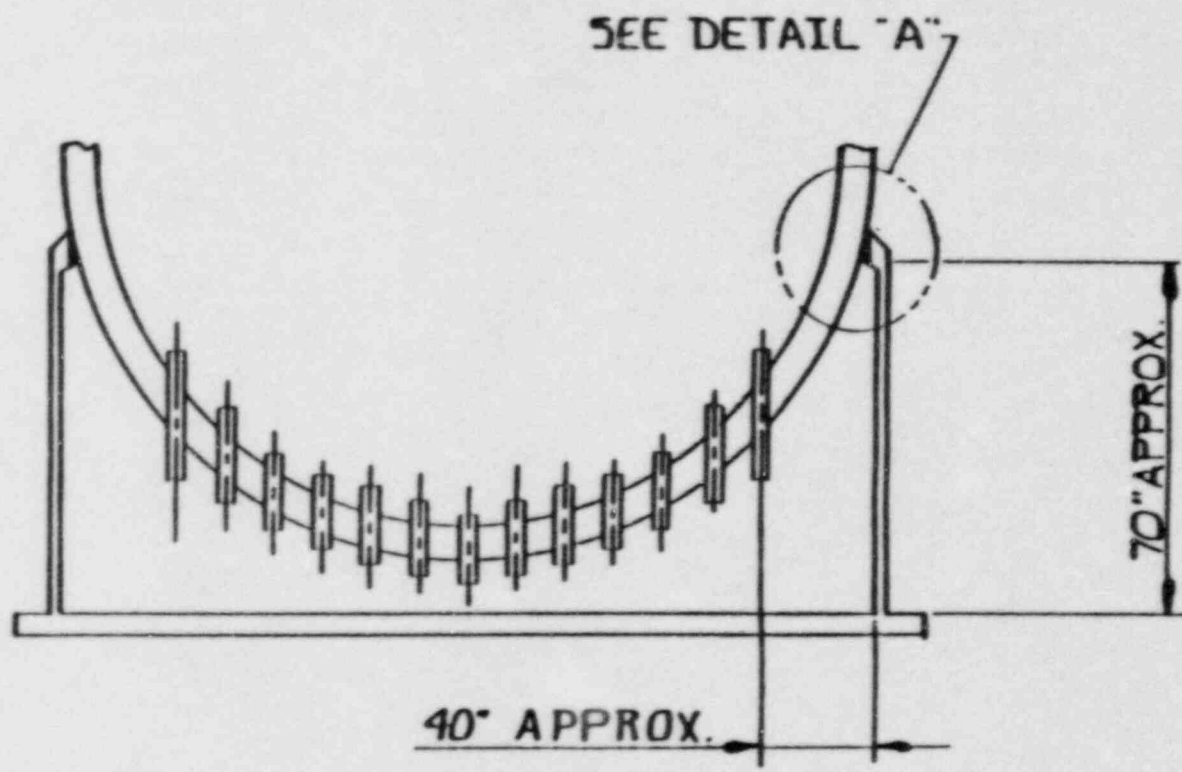
16-CS-40-0.500-66-H

LOCATION: NE & SE DIAGONALS

FIGURE 5



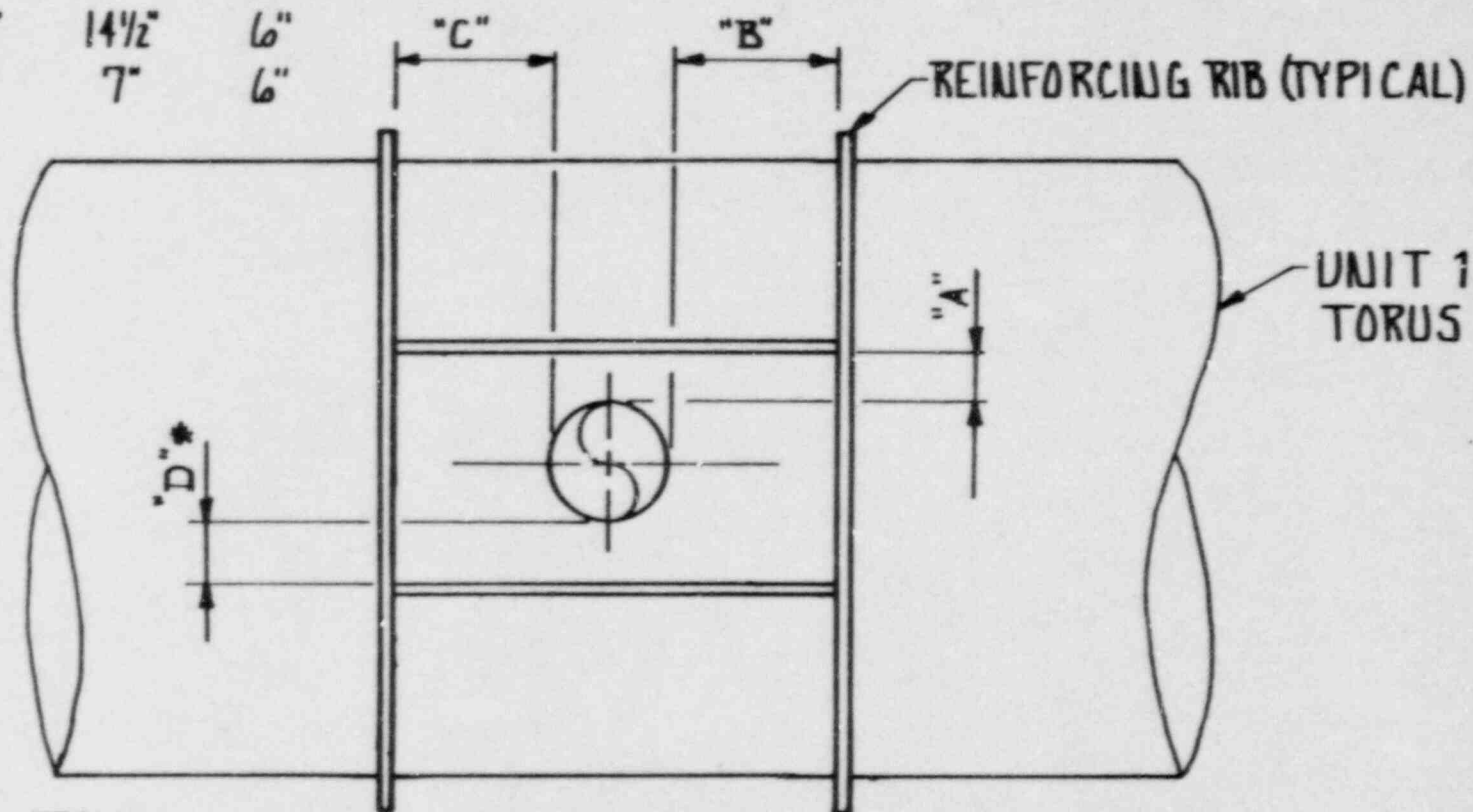
DETAIL "A"



HATCH-UNIT 2

FIGURE - 6

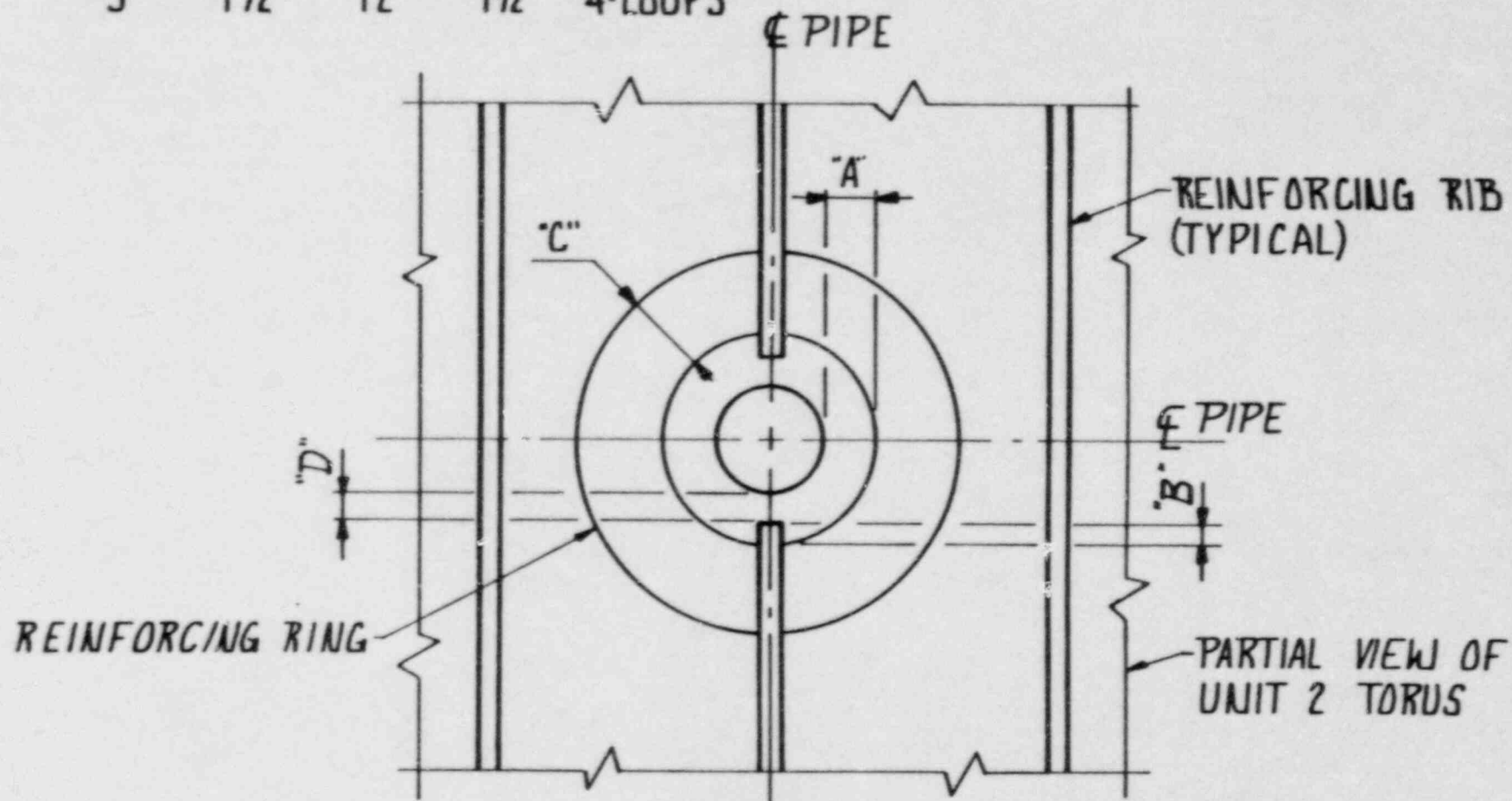
SYST	"A"	"B"	"C"	"D"
IE 51	8½"	16"	18"	19"
IE 41	14"	8½"	12"	14½"
IE 21 "A"	N/A	6"	8"	N/A
IE 21 "B"	13"	24½"	7"	16"
IE 11 "A"	6"	6½"	24"	6"
IE 11 "B"	7"	24"	6"	6"
IE 11 "C"	6"	8½"	14½"	6"
IE 11 "D"	7"	16"	7"	6"



*"D" DIMENSION IS TAKEN FROM
 BOTTOM EDGE OF WELD TO
 THE HORIZONTAL REINFORCEMENT
 RIB.

HATCH-UNIT 1
 FIGURE 7

SYSTEM	"A"	"B"	"C"	"D"	
ZE51	3 1/2"	1 1/2"	10"	2"	1-LOOP (INSULATED)
ZE41	3 1/2"	1 1/2"	10-11"	2"	1-LOOP
ZE21	3 1/2"	1 1/2"	12"	2"	2-LOOPS
ZE11	3"	1 1/2"	12"	1 1/2"	4-LOOPS

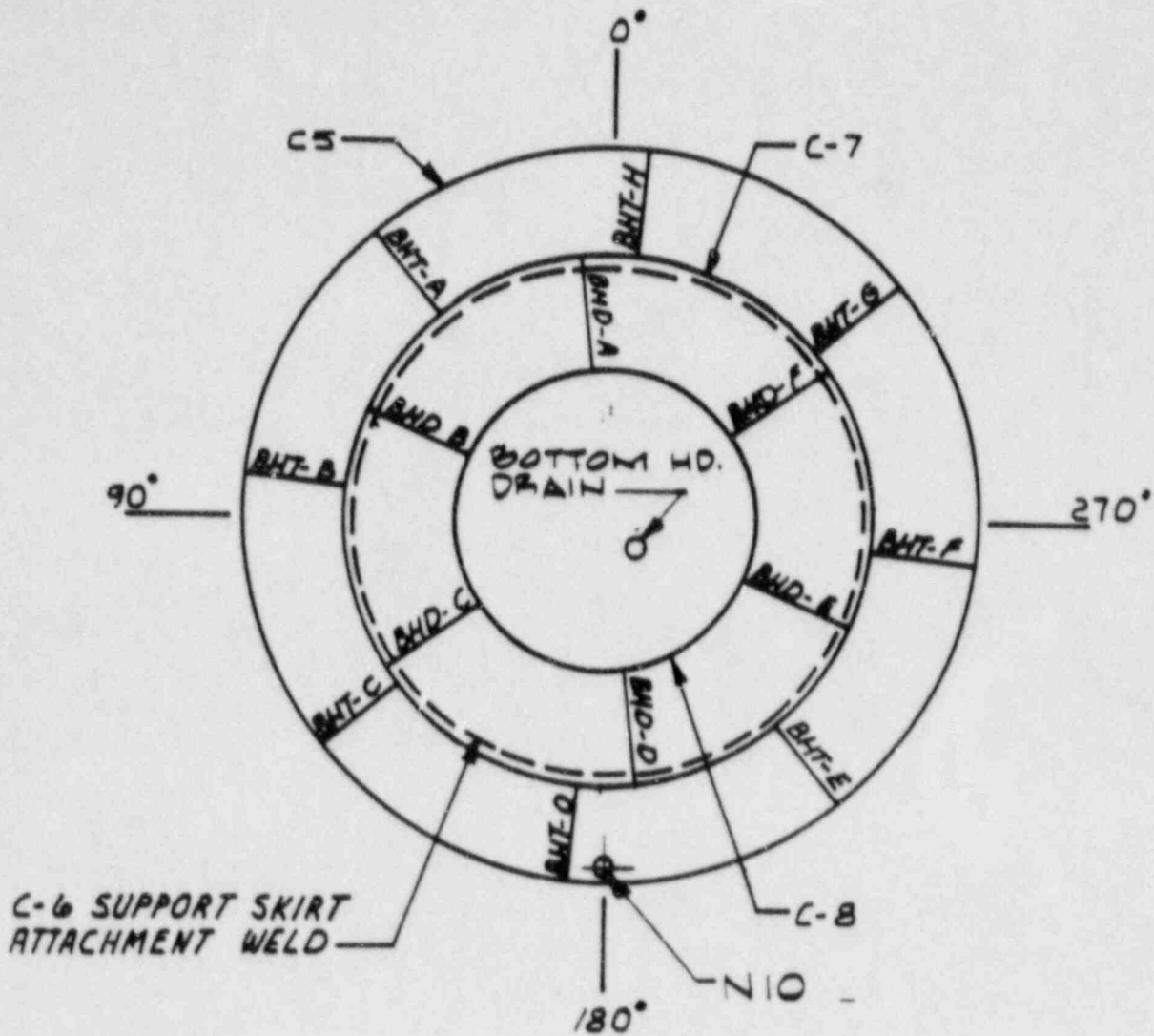


HATCH - UNIT 2

FIGURE 8



PLANT NORTH

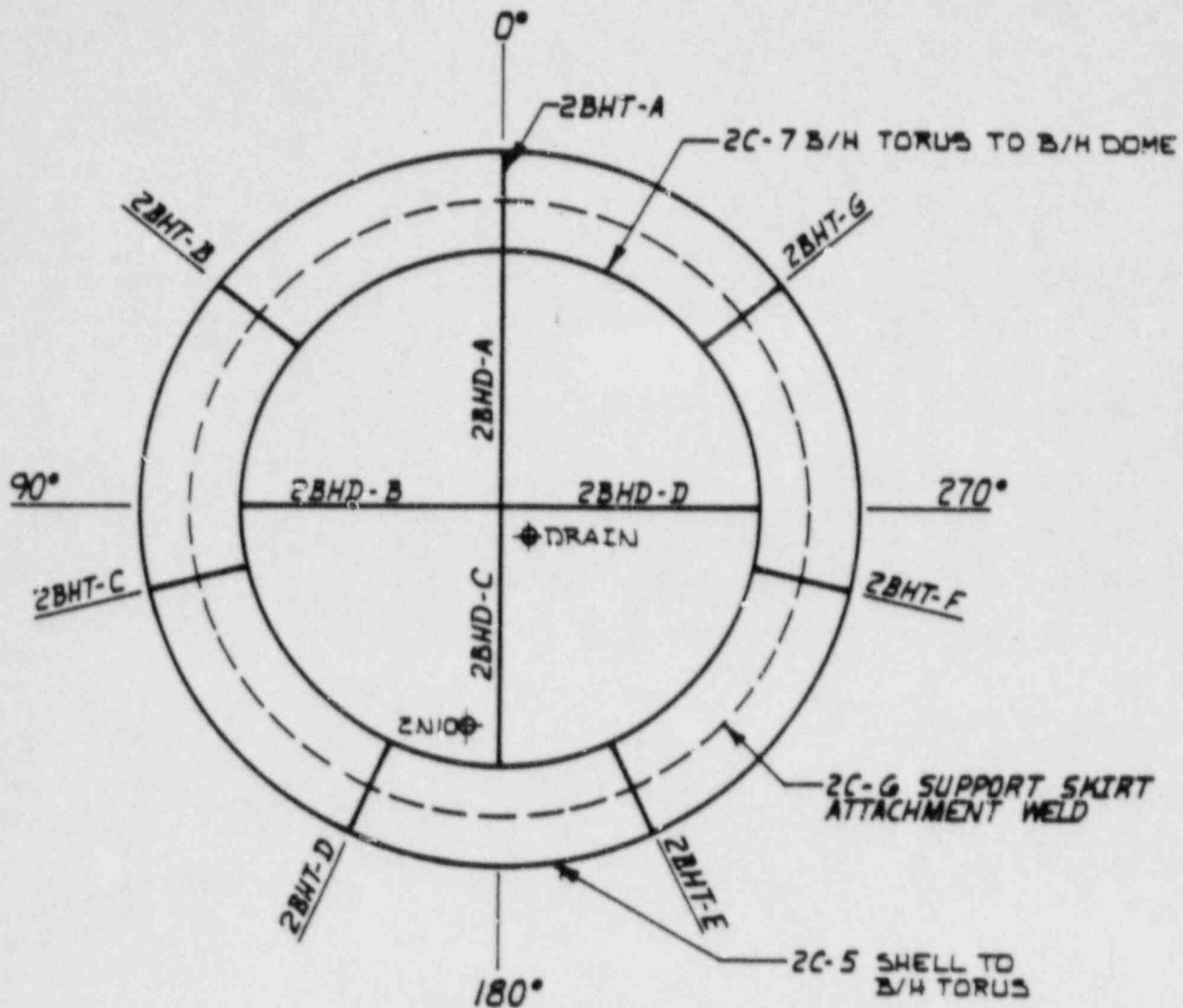


EDWIN I. HATCH UNIT 1
BOTTOM HEAD MERIDIONAL + CIRCUMFERENTIAL
WELDS

FIGURE 9



PLANT NORTH



EDWIN I. HATCH UNIT 2 RPV
BOTTOM HEAD MERIDIONAL & CIRCUMFERENTIAL
WELDS

FIGURE 10

2.0 CLASS 1 WITH RELIEF REQUESTS

General

Table 1 provides a tabulation of the Class 1 pressure-retaining components subject to the inspection requirements of Subsection IWB of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition with Addenda through Winter 1981. These components will be inspected in accordance with the requirements of Subsection IWB to the extent practical. This tabulation identifies the components to be inspected, the Section XI examination item and category, area to be examined, and the method of examination. Where relief from the inspection requirements of Subsection IWB is requested, information is provided which identifies the applicable Code requirements, justification for the relief requested, and the examination method to be used as an alternative. Table IWB-2500-1 items not applicable to the Hatch Plant have also been listed and identified in the interest of completeness.

Hydrostatic Testing

Hydrostatic testing will be conducted in a manner that will satisfy the requirements of IWA-5000 and IWB-5000. Where adjoining pipe sections have different test pressures, they will be separated whenever practicable and each section tested at its specified pressure. Where it is not practicable to separate adjoining sections of piping (e.g., the boundary is a check valve), the sections will be tested together at the lower of the specified test pressures. No point in the piping shall be permitted to experience a pressure greater than the specified test pressure for that piping.

Weld Selection Criteria

The extent of examination for Code Class 1 pipe welds (Category B-J) was determined by the requirements of Table IWB-2500 and Table IWB-2600 Category B-J of Section XI of the ASME Code in the 1974 Edition with Addenda through Summer 1975 as allowed by 10 CFR 50.55a. In addition, terminal ends and high stress welds were chosen when practical to upgrade the overall selection criteria.

2.1 REQUESTS FOR RELIEF FROM ASME SECTION XI REQUIREMENTS

2.1.1 VOLUMETRIC EXAMINATION OF REACTOR PRESSURE VESSEL AND CLOSURE HEAD WELDS

2.1.1.1 Requirement From Which Relief is Requested

Item No. B1.11, B1.12, B1.21, and B1.22 of Table IWB-2500-1 of ASME Section XI require the volumetric examination of reactor pressure vessel (RPV) and closure head circumferential, longitudinal, and meridional welds. At Hatch, these examinations will be performed using ultrasonic techniques. The applicable examination volumes are shown in Figures IWB-2500-1, -2, and -3.

The Code also requires that welds selected for examination are to be examined for essentially 100 percent of their length. Relief from this requirement is requested.

2.1.1.2 Justification

At Hatch, physical limitations prevent the examination of the entire length of these welds. The 1974 Edition with Addenda through Summer 1975 and earlier editions of Section XI required that the examination cover at least 10 percent of the length of each longitudinal weld and 5 percent of the length of each circumferential weld. For both Hatch units, the minimum lengths described above were met during previous examinations. The following evaluation (listed by code item No.) gives the percentage of weld accessible for examination and the additional welds to be examined so that the total weld length examined equals 100 percent of the required examination length.

Item B1.11 - Hatch Unit 1 - There are two circumferential welds (C-3 and C-4) in the beltline region of the RPV, as shown in Figure 1. Weld C-4 has three access doors through the concrete shield, and removable RPV insulation in these areas was provided during the design. These three access ports allow the manual examination of approximately 15 percent of the weld. Weld C-3 has two usable access doors allowing approximately 10-percent coverage; therefore, a total of only 25 percent of the beltline area welds can be examined during the second 10-year interval.

During the second 10-year interval, portions of welds C-2 and C-5 will also be examined in order that the total equivalent length being examined equals the length of one beltline circumferential weld.

Item B1.11 - Hatch Unit 2 - There are two circumferential welds (2C-3 and 2C-4) in the beltline region of the RPV, as shown in Figure 2. These welds have permanent tracks which were installed during construction prior to the preservice examinations. Projected examination coverage indicates that approximately 348 inches (47 percent) of weld 2C-3 can be examined using a mechanized system and 234 inches of weld 2C-4 (32%) can be examined. Therefore, a total of approximately 79 percent of the circumferential beltline area welds can be examined during the second 10-year interval.

During the second 10-year interval, portions of welds 2C-2 and 2C-5 will also be examined in order that the total equivalent length being examined equals the length of one beltline circumferential weld. In addition, the required examinations for the third 40-month period of the first 10-year interval will be completed.

Item B1.12 - Hatch Unit 1 - Using the same access doors as described above, approximately 20 percent to 30 percent of C-3-A, 20 percent to 30 percent of C-3-B, and 10 percent to 15 percent of weld C-3-C can be manually examined. Therefore, a total of 50 percent to 75 percent of the beltline longitudinal welds can be examined during the second 10-year

interval. Also, during the second 10-year interval, sufficient weld lengths will be selected from welds C-2-A, C-2-B, C-2-C and/or C-4-A, C-4-B, and C-4-C to ensure that the equivalent length of a beltline longitudinal weld is examined.

Item B1.12 - Hatch Unit 2 - From the preservice data it is apparent that longitudinal welds 2C-3-A, 2C-3-B, and 2C-3-C can be 100-percent examined using a mechanized system with pole tracks installed during construction. One of these three welds will be 100-percent examined during the second 10-year interval. In addition, the required examinations for the third 40-month period of the first 10-year interval will be completed.

Item B1.21 - Hatch Unit 1 - Circumferential bottom head weld C-7 (Figure 9) will be 100-percent examined to the extent practical during the second 10-year interval. If it is found during examinations that 100-percent coverage cannot be obtained, specific relief will be requested at that time. One circumferential closure head weld will also be 100-percent examined during the interval.

Item B1.21 - Hatch Unit 2 - Circumferential bottom head weld 2C-7 (Figure 10) had 73 percent of its weld length examined during preservice. This weld will be 100-percent examined to the extent practical during the second 10-year interval. If it is found during examinations that 100-percent coverage cannot be obtained, specific relief will be requested at that time. One circumferential closure head weld will also be 100-percent examined during the interval. In addition, the required examinations for the third 40-month period of the first 10-year interval will be completed.

Item B1.22 - Hatch Unit 1 - One of the bottom head meridional welds extending from circumferential weld C-5 to C-7 (Figure 9) will be 100-percent examined to the extent practical during the interval. If it is found during examinations that 100-percent coverage cannot be obtained, specific relief will be requested at that time. One meridional closure head weld will also be 100-percent examined during the interval.

Item B1.22 - Hatch Unit 2 - One of the bottom head meridional welds extending from circumferential weld 2C-5 to 2C-7 (Figure 10) will be 100-percent examined to the extent practical during the interval. If it is found during examinations that 100-percent coverage cannot be obtained, specific relief will be requested at that time. One meridional closure head weld will also be 100-percent examined during the interval. In addition, the required examinations for the third 40-month period of the first 10-year interval will be completed.

2.1.1.3 Testing in Lieu of Section XI Requirements

For future examinations of RPV circumferential, longitudinal, and meridional welds, the examinations will be performed to the extent possible as described in the previous paragraphs.

2.1.2 Georgia Power has withdrawn Relief Request 2.1.2.

2.1.3 VOLUMETRIC EXAMINATION OF REACTOR PRESSURE VESSEL AND CLOSURE HEAD NOZZLE-TO-VESSEL WELDS AND NOZZLE INSIDE RADIUS SECTIONS

2.1.3.1 Requirement From Which Relief is Requested

Item No. B3.90 and B3.100 of Table IWB-2500-1 of ASME Section XI require the volumetric examination of RPV and closure head nozzle-to-vessel welds and nozzle inside radius sections. The applicable examination volumes are shown in Figures IWB-2500-7(a) through (d). At Hatch, these examinations will be performed using ultrasonic techniques.

2.1.3.2 Justification

Examination limitations exist for the nozzle examinations at Hatch Units 1 and 2 due to a combination of permanent physical obstructions. At Hatch Unit 1, an insulation support ring (Figure 1) is welded just above the N2A through K recirculation system inlet nozzles and the N1A and B recirculation system outlet nozzles. Welded thermocouples are near nozzles N4B and N4D which partially limit coverage. The limitations exist regardless of transducer size. Hatch Unit 2 has limitations for the examination of the 2N4A and C feedwater nozzles due to interference from adjacent nozzles (Figure 2) and the transition area of the nozzles where they are welded to the shell. As before, transducer size has very little impact on the coverage of these feedwater nozzle welds. Showing the nozzle-to-vessel weld as N to V and the nozzle inside radius section as IRS, the table below shows the affected nozzle, minimum coverage, and reason for limitation.

Hatch Unit 1

<u>Nozzle</u>	<u>Limited Examinations</u>	<u>Minimum Coverage</u>	<u>Reason</u>
N2A	N to V; IRS	85%	Ins. Support Ring
N2B	N to V; IRS	85%	Ins. Support Ring
N2C	N to V; IRS	85%	Ins. Support Ring
N2D	N to V; IRS	85%	Ins. Support Ring
N2E	N to V; IRS	85%	Ins. Support Ring
N2F	N to V; IRS	85%	Ins. Support Ring
N2G	N to V; IRS	85%	Ins. Support Ring
N2H	N to V; IRS	85%	Ins. Support Ring
N2J	N to V; IRS	85%	Ins. Support Ring
N2K	N to V; IRS	85%	Ins. Support Ring
N1A	N to V; IRS	85%	Ins. Support Ring
N1B	N to V; IRS	85%	Ins. Support Ring
N4B	N to V; IRS	95%	Thermocouples
N4D	N to V; IRS	95%	Thermocouples

Hatch Unit 2

<u>Nozzle</u>	<u>Limited Examinations</u>	<u>Minimum Coverage</u>	<u>Reason</u>
2N4A	N to V; IRS	85%	Adjacent Nozzle
2N4C	N to V; IRS	85%	Adjacent Nozzle

2.1.3.3 Testing in Lieu of Section XI Requirements

Not applicable to this relief request.

2.1.4 VOLUMETRIC EXAMINATION OF AUSTENITIC AND DISSIMILAR METAL PIPING WELDS

2.1.4.1 Requirement From Which Relief is Requested

Item No. B5.130, B5.50, B9.11, B9.12, and B9.31 of Table IWB-2500-1 of ASME Section XI require a volumetric and surface examination of austenitic and dissimilar metal piping welds. In addition, Item No. B14.10 of Table IWB-2500-1 requires either a volumetric or a surface examination of the pressure retaining welds in control rod drive (CRD) housings. These volumetric examinations are to be performed using ultrasonic techniques in accordance with Paragraph IWA-2232 of Section XI. This paragraph specifies that austenitic and dissimilar metal piping welds are to be examined in accordance with Article 5 of ASME Section V.

2.1.4.2 Justification

Article 5 of ASME Section V does not provide the detailed guidance necessary to examine austenitic and dissimilar metal piping welds with the exception of austenitic piping welds which have been repaired by weld overlay. These clad overlaid piping welds will be examined in accordance with Article 5 of Section V and Appendix III of Section XI.

2.1.4.3 Testing in Lieu of Section XI Requirements

Ferritic piping welds will be examined per Appendix III of Section XI. To provide consistency, austenitic and dissimilar metal piping welds will also be examined in accordance with Appendix III.

2.1.5 SURFACE EXAMINATION OF REACTOR PRESSURE VESSEL SUPPORT SKIRT WELD

2.1.5.1 Requirement From Which Relief is Requested

Item No. B8.10 of Table IWB-2500-1 of ASME Section XI requires volumetric or surface (as applicable) examination of integrally welded attachments (support skirt), in accordance with the examination requirements shown on Fig. No. IWB-2500-13. At both Hatch units these examinations will be performed using either liquid penetrant or magnetic particle techniques.

2.1.5.2 Justification

At both Hatch units, examination area C-D of Fig. No. IWB-2500-13 is not accessible for meaningful examination because of location and geometric configuration of welded areas. Physical access by the examiner is also restricted because of high radiation and obstruction due to CRD housings and its support system. The combination of these factors prevents these welds from being examined from inside the support skirt.

Hatch Unit 1 has no access through the support skirt; therefore, the inside surface of the reactor vessel support skirt is totally inaccessible. As

shown in Figure 6 for Hatch Unit 2, the support skirt near the skirt-to-vessel weld is very limited. Health Physics indicates that the dose rate in this area during a recent Hatch Unit 2 outage was approximately 180 mr/hr; however, it is very difficult to quantify the total exposure for an examination. Magnetic particle techniques cannot be used due to the space restrictions. The use of dye penetrant would require a very thorough cleaning of the weld and adjacent base material to remove rust and scale. The preparation of the weld would potentially have to be performed using techniques such as wire brushes since power tools may not fit into the limited area.

2.1.5.3 Testing in Lieu of Section XI Requirements

As an alternate, both units will have a surface examination performed on the OD of 100 percent of the weld during the second 10-year interval. Also, a limited ultrasonic examination will be performed to the extent practical to provide as much coverage as possible of the weld.

2.1.6 REACTOR PRESSURE VESSEL NOZZLE TO SAFE-END WELDS (NOMINAL PIPE SIZE < 4 INCHES)

2.1.6.1 Requirement From Which Relief is Requested

Item No. B5.20 of Table IWB-2500-1 of ASME Section XI requires a surface examination of the RPV nozzle-to-safe-end welds with nominal pipe size < 4 inches. Relief from this requirement is requested.

2.1.6.2 Justification

The nozzle-to-safe-end welds for the nozzles listed below are physically inaccessible for surface examination. The affected nozzles are:

N10	2N10
N11A	2N11A
N11B	2N11B
N12A	2N12A
N12B	2N12B
N16A	2N16A
N16B	2N16B

These 2-inch instrument nozzles have very limited access due to the design of the concrete shield. Each nozzle has small doors that can be opened allowing 12 to 18 inches of access. However, due to the distance the RPV wall is recessed from the outside of the shield wall (e.g., insulation thickness, air gap, and shield thickness) the weld cannot be physically reached. The 2-inch RPV bottom head-drain-nozzle-to-safe-end weld is exempted by IWB-1220(c) of ASME Section XI from examination.

2.1.6.3 Testing in Lieu of Section XI Requirements

The nozzle-to-safe-end welds listed above will receive a remote visual examination with the exception of the 2-inch drain nozzle welds. In addition, these nozzles will be pressure tested per IWB-5000 of ASME Section XI since they are located within the hydrostatic test boundary of the nuclear steam supply system.

2.1.7 VOLUMETRIC AND SURFACE EXAMINATIONS OF PRESSURE RETAINING WELDS IN PIPING WITH NOMINAL PIPE SIZE 4 INCHES

2.1.7.1 Requirement From Which Relief is Requested

Item No. B9.11 of Table IWB-2500-1 of ASME Section XI requires the examination of pressure retaining welds in piping that are located within flued head containment penetration assemblies. These welds and their penetration assembly number for Hatch 1 are listed below. Hatch 2 has no pressure retaining welds in the penetration assemblies.

<u>Weld Identification No.</u>	<u>Pen. No.</u>	<u>Weld Identification No.</u>	<u>Pen. No.</u>
1B21-1FW-18A-7A	X-9A	1B21-1MS-24A-17A	X-7A
1B21-1FW-18B-6A	X-9B	1B21-1MS-24B-16A	X-7B
1E51-1RCIC-4-D-20A	X-10	1B21-1MS-24C-16A	X-7C
1E41-1HPCI-10-D-15A	X-11	1B21-1MS-24D-17A	X-7D
1E11-1RHR-20B-D-13A	X-12		
1E11-1RHR-24A-R-3A	X-13A		
1E11-1RHR-24B-R-3A	X-13B		
1G31-1RWCU-6-D-15B	X-14		
1G31-1RWCU-6-D-15C	X-14		
1E21-1CS-10A-3A	X-16A		
1E21-1CS-10B-4A	X-16B		
1E11-1RHR-4-HS-6B	X-17		

2.1.7.2 Justification

These welds are inaccessible for examination due to the design of the flued head. All twelve circumferential butt welds, except the two located in the reactor water cleanup (RWCU) penetration, are carbon steel.

The two stainless steel welds that are located in the RWCU penetration were made to replace a Type 304 SS pipe that had undergone IGSCC. The welds involved are a flued head with a Type 308L corrosion resistant clad on the inside surface to a Type 304L solution annealed pipe (<0.035-percent carbon), and a Type 304L pipe-to-pipe weld. These welds were made in accordance with the guidelines of NUREG-0313 to minimize susceptibility to IGSCC.

2.1.7.3 Testing in Lieu of Section XI Requirements

A UT baseline was performed on the two new welds in the RWCU system while they were accessible during repair to ensure a high quality weld.

In accordance with IWB-5221 of ASME Section XI, a system leakage test is to be performed on all 16 welds prior to startup following each reactor refueling outage.

All pipe-to-penetration (flued head) welds outside containment will be examined volumetrically. In addition, a surface examination will be performed on the accessible weld(s) of the flued head penetration assembly.

2.1.8 ASME CLASS 1 (EQUIVALENT) VALVES EXCEEDING 4-INCHES NOMINAL PIPE SIZE AND ASME CLASS 1 (EQUIVALENT) PUMP CASINGS

2.1.8.1 Requirement From Which Relief is Requested

Table IWB-2500-1, Item No. B12.50 of ASME Section XI requires a visual examination of the internal pressure boundary surfaces of one valve in each group of valves that are of the same constructional design, such as globe, gate, or check valve, and manufacturing method and that are performing similar functions in the system.

Table IWB-2500-1, Item No. B12.20 of ASME Section XI requires a visual examination of the internal pressure boundary surface of one of the two reactor recirculation system pumps.

2.1.8.2 Justification

Disassembly of these valves and pumps for the visual examination during the inspection interval, in the absence of other required maintenance, represents an unnecessary exposure to radiation and contamination. Valves on the reactor recirculation (RC) system and the residual heat removal (RHR) system suction lines would involve off-loading the fuel elements and draining the RPV prior to disassembly as a precautionary measure. Work on the RC system pump discharge valves and the RHR system injection valves would require the installation of plugs in the jet pump risers. Preparatory work of this scope is considered impractical for the sole purpose of conducting a visual examination. Contamination levels in the valves and pumps associated with the RC system loops are particularly high due to the physical location at the bottom of the system. During routine maintenance, the valve body and the pump casing internal surfaces are visually examined. Many of the valves, particularly the containment isolation valves are disassembled for maintenance of leak-tightness. Disassembly of other Class 1 valves and the pumps solely for internal examination is counter to the ALARA guidelines to keep the occupational dose rates as low as reasonably achievable. In view of the cost in man-rem and in view of the minimal benefits obtained, we conclude that this Code requirement does not provide sufficient benefits to justify the exposure.

2.1.8.3 Testing in Lieu of Section XI Requirements

Class 1 pumps and Class 1 valves exceeding 4 inches nominal pipe size are subject to visual examination of the internal surfaces when disassembled for maintenance. The coverage provided by examinations during routine maintenance coupled with periodic leak tests and hydrostatic tests will provide adequate assurance of the structural integrity of the Class 1 pumps and valves, while keeping exposure to radiation and contamination as low as reasonably achievable.

2.1.9 PRESSURE RETAINING WELDS IN CONTROL ROD DRIVE HOUSINGS

2.1.9.1 Requirement From Which Relief is Requested

Table IWB-2500-1, Item No. B14.10 of ASME Section XI requires a volumetric or surface examination of the pressure retaining welds in 10 percent of the

peripheral control rod drive housings. Each housing has a pipe-to-pipe weld located near the RPV and a pipe-to-flange weld.

2.1.9.2 Justification

The examination of these welds are limited because of the location and design of the housings. Physical accessibility by an examiner is extremely limited by the close proximity of the housings to each other and by the support arrangement. Also, the insert and withdraw lines to the control rod drive system are connected at the top of the housing flange and limit access to much of the lower weld. The combination of these factors limit the examination of these welds.

Figure 4.2-8 of the Hatch Unit 2 FSAR shows that there are 28 peripheral CRD housings. Each housing has an attachment weld to the reactor vessel and a weld joining the housing to the flange. Section 4.2 of the FSAR shows that the failure of a CRD housing weld will produce a maximum leakage rate of 840 gal/min. The available makeup systems are RCIC-400 gal/min, CRD-160 gal/min., and the transfer system to feedwater-1000 gal/min. Therefore, the reactor can be shut down and cooled in an orderly manner using makeup systems supplied by onsite power, as required by IWB-1220. Since loss of coolant would occur during normal operation, it is our interpretation that the service transformer is the source of onsite power. (Note: Hatch Unit 1 should have essentially the same leakage rates and makeup capabilities).

2.1.9.3 Testing in Lieu of Section XI Requirements

These welds will be pressure tested per IWB-5000 of ASME Section XI since they are located within the hydrostatic test boundary of the nuclear steam supply system.

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN S. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B1.11	B-A	Reactor Pressure Vessel	Circumferential Shell Welds	Volumetric	Yes; 2.1.1
B1.12	B-A	Reactor Pressure Vessel	Longitudinal Shell Welds	Volumetric	Yes; 2.1.1
B1.21	B-A	Reactor Pressure Vessel and Closure Head	Circumferential Head Welds	Volumetric	Yes; 2.1.1
B1.22	B-A	Reactor Pressure Vessel and Closure Head	Meridional Head Welds	Volumetric	Yes; 2.1.1
B1.30	B-A	Reactor Pressure Vessel	Shell-to-Flange Weld	Volumetric	No
B1.40	B-A	Reactor Pressure Vessel Closure Head	Head-to-Flange Weld	Surface and Volumetric	No
B1.51	B-A	Reactor Pressure Vessel	Beltline Region Repair Welds	Volumetric	Not applicable to either Hatch unit
B2.10	B-B	Pressurizer	Shell-to-Head Welds	Volumetric	Not applicable to either Hatch unit
B2.20	B-B	Pressurizer	Head Welds	Volumetric	Not applicable to either Hatch unit
B2.30	B-B	Steam Generator (Primary Side)	Head Welds	Volumetric	Not applicable to either Hatch unit
B2.40	B-B	Steam Generator (Primary Side)	Tubesheet-to-Head Welds	Volumetric	Not applicable to either Hatch unit
B2.50	B-B	Heat Exchangers (Primary Side)	Head Welds	Volumetric	Not applicable to either Hatch unit
B2.60	B-B	Heat Exchangers (Primary Side)	Tubesheet-to-Shell (or Head) Welds	Volumetric	Not applicable to either Hatch unit

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
83.10	B-D	Reactor Pressure Vessel	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit; GPC has elected to perform examinations in accordance with Program B.
83.20	B-D	Reactor Pressure Vessel	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit; GPC has elected to perform examinations in accordance with Program B.
83.30	B-D	Pressurizer	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit
83.40	B-D	Pressurizer	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
83.50	B-D	Steam Generators (Primary Side)	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit
83.60	B-D	Steam Generators (Primary Side)	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
83.70	B-D	Heat Exchangers (Primary Side)	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit

TABLE 1
 ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B3.80	B-D	Heat Exchangers (Primary Side)	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
B3.90	B-D	Reactor Pressure Vessel	Nozzle-to-Vessel Welds	Volumetric	Yes; 2.1.3
B3.100	B-D	Reactor Pressure Vessel	Nozzle Inside Radius Section	Volumetric	Yes; 2.1.3
B3.110	B-D	Pressurizer	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit
B3.120	B-D	Pressurizer	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
B3.130	B-D	Steam Generators (Primary Side)	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit
B3.140	B-D	Steam Generators (Primary Side)	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
B3.150	B-D	Heat Exchangers (Primary Side)	Nozzle-to-Vessel Welds	Volumetric	Not applicable to either Hatch unit
B3.160	B-D	Heat Exchangers (Primary Side)	Nozzle Inside Radius Section	Volumetric	Not applicable to either Hatch unit
B4.11	B-E	Vessel Nozzles	External Surfaces of Partial Penetration Welds	Visual, VT-2	No
B4.12	B-E	Control Rod Drive Nozzles	External Surfaces of Partial Penetration Welds	Visual, VT-2	No
B4.13	B-E	Instrumentation Nozzles	External Surfaces of Partial Penetration Welds	Visual, VT-2	No
B4.20	B-E	Pressurizer	External Surfaces of Heater Penetration Welds	Visual, VT-2	Not applicable to either Hatch unit

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. PATCH NUCLEAR PLANT, UNITS 1 AND 2

Sh. 4 of 12

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B5.10	B-F	Reactor Pressure Vessel	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Yes; 2.1.4
B5.20	B-F	Reactor Pressure Vessel	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size < 4 in.)	Surface	Yes; 2.1.6
B5.30	B-F	Reactor Pressure Vessel	Nozzle-to-Safe End Socket Welds	Surface	Not applicable to either Hatch unit
B5.40	B-F	Pressurizer	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Not applicable to either Hatch unit
B5.50	B-F	Pressurizer	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size < 4 in.)	Surface	Not applicable to either Hatch unit
B5.60	B-F	Pressurizer	Nozzle-to-Safe End Socket Welds	Surface	Not applicable to either Hatch unit
B5.70	B-F	Steam Generators (Primary Side)	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Not applicable to either Hatch unit
B5.80	B-F	Steam Generators (Primary Side)	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size < 4 in.)	Surface	Not applicable to either Hatch unit
B5.90	B-F	Steam Generators (Primary Side)	Nozzle-to-Safe End Socket Welds	Surface	Not applicable to either Hatch unit
B5.100	B-F	Heat Exchangers (Primary Side)	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Not applicable to either Hatch unit
B5.110	B-F	Heat Exchangers (Primary Side)	Nozzle-to-Safe End Butt Welds (Nominal Pipe Size < 4 in.)	Surface	Not applicable to either Hatch unit
B5.120	B-F	Heat Exchangers (Primary Side)	Nozzle-to-Safe End Socket Welds	Surface	Not applicable to either hatch unit
B5.130	B-F	Piping	Dissimilar Butt Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Yes; 2.1.4

04071

TABLE 1
 I-1 PROGRAM FOR ASME CLASS 1 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B5.140	B-F	Piping	Dissimilar Butt Welds (Nominal Pipe size <4 in.)	Surface	Not applicable to either Hatch unit
B5.150	B-F	Piping	Dissimilar Metal Socket Welds	Surface	Not applicable to either Hatch unit
B6.10	B-G-1	Reactor Pressure Vessel	Closure Head Nuts	Surface	No
B6.20	B-G-1	Reactor Pressure Vessel	Closure Studs, in Place	Volumetric	No; See Note 1
B6.30	B-G-1	Reactor Pressure Vessel	Closure Studs, When Removed	Surface and Volumetric	No; See Note 1
B6.40	B-G-1	Reactor Pressure Vessel	Threads in Flange	Volumetric	No
B6.50	B-G-1	Reactor Pressure Vessel	Closure Washers, Bushings	Visual, VT-1	No
B6.60	B-G-1	Pressurizer	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
B6.70	B-G-1	Pressurizer	Flange Surface, When Connection Disassembled	Visual, VT-1	Not applicable to either Hatch unit
B6.80	B-G-1	Pressurizer	Nuts, Bushings, and Washers	Visual, VT-1	Not applicable to either Hatch unit
B6.90	B-G-1	Steam Generator	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
B6.100	B-G-1	Steam Generator	Flange Surface, When Connection Disassembled	Visual, VT-1	Not applicable to either Hatch unit
B6.110	B-G-1	Steam Generator	Nuts, Bushings, and Washers	Visual, VT-1	Not applicable to either Hatch unit
B6.120	B-G-1	Heat Exchangers	Bolts and Studs	Volumetric	Not applicable to either Hatch unit

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B6.130	B-G-1	Heat Exchangers	Flange Surface, When Connection Disassembled	Visual, VT-1	Not applicable to either Hatch unit
B6.140	B-G-1	Heat Exchangers	Nuts, Bushing, and Washers	Visual, VT-1	Not applicable to either Hatch unit
B6.150	B-G-1	Piping	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
B6.160	B-G-1	Piping	Flange Surface, When Connection Disassembled	Visual, VT-1	Not applicable to either Hatch unit
B6.170	B-G-1	Piping	Nuts, Bushings, and Washers	Visual, VT-1	Not applicable to either Hatch unit
B6.180	B-G-1	Pumps	Bolts and Studs	Volumetric	No
B6.190	B-G-1	Pumps	Flange Surface, When Connection Disassembled	Visual, VT-1	No
B6.200	B-G-1	Pumps	Nuts, Bushings, and Washers	Visual, VT-1	No
B6.210	B-G-1	Valves	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
B6.220	B-G-1	Valves	Flange Surface, When Connection Disassembled	Visual, VT-1	Not applicable to either Hatch unit
B6.230	B-G-1	Valves	Nuts, Bushings, and Washers	Visual, VT-1	Not applicable to either Hatch unit
B7.10	B-G-2	Reactor Pressure Vessel	Bolts, Studs, and Nuts	Visual, VT-1	No
B7.20	B-G-2	Pressurizer	Bolts, Studs, and Nuts	Visual, VT-1	Not applicable to either Hatch unit

TABLE 1
 ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
87.30	B-G-2	Steam Generators	Bolts, Studs, and Nuts	Visual, VT-1	Not applicable to either Hatch unit
87.40	B-G-2	Heat Exchangers	Bolts, Studs, and Nuts	Visual, VT-1	Not applicable to either Hatch unit
87.50	B-G-2	Piping	Bolts, Studs, and Nuts	Visual, VT-1	No
87.60	B-G-2	Pumps	Bolts, Studs, and Nuts	Visual, VT-1	No
87.70	B-G-2	Valves	Bolts, Studs, and Nuts	Visual, VT-1	No
87.80	B-G-2	CRD Housings	Bolts, Studs, and Nuts (When Disassembled)	Visual, VT-1	No
88.10	B-H	Reactor Pressure Vessel	Integrally Welded Attachments	Volumetric or Surface as Applicable	Yes; 2.1.5
88.20	B-H	Pressurizer	Integrally Welded Attachments	Volumetric or Surface, as Applicable	Not applicable to either Hatch unit
88.30	B-H	Steam Generators	Integrally Welded Attachments	Volumetric or Surface, as Applicable	Not applicable to either Hatch unit
88.40	B-H	Heat Exchangers	Integrally Welded Attachments	Volumetric or Surface, as Applicable	Not applicable to either Hatch unit
89.11	B-J	Piping	Circumferential Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Yes; 2.1.4 and 2.1.7

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B9.12	B-J	Piping	Longitudinal Welds (Nominal Pipe Size ≥ 4 in.)	Surface and Volumetric	Yes; 2.1.4
B9.21	B-J	Piping	Circumferential Welds (Nominal Pipe Size < 4 in.)	Surface	No
B9.22	B-J	Piping	Longitudinal Welds (Nominal Pipe Size < 4 in.)	Surface	No
B9.31	B-J	Piping	Branch Pipe Connection Welds (Nominal Pipe size ≥ 4 in.)	Surface and Volumetric	Yes; 2.1.4
B9.32	B-J	Piping	Branch Pipe Connection Welds (Nominal Pipe Size < 4 in.)	Surface	No
B9.40	B-J	Piping	Socket Welds	Surface	No; See Note 2
B10.10	B-K-1	Piping	Integrally Welded Attachments	Volumetric or Surface, as Applicable	No
B10.20	B-K-1	Pumps	Integrally Welded Attachments	Volumetric or Surface, as Applicable	No
B10.30	B-K-1	Valves	Integrally Welded Attachments	Volumetric or Surface, as Applicable	Not applicable to either Hatch unit
B12.10	B-L-1	Pumps	Pump Casing Welds	Volumetric	Not applicable to either Hatch unit
B12.20	B-L-2	Pumps	Pump Casing	Visual, VT-3	Yes; 2.1.8
B12.30	B-M-1	Valves	Valve Body Welds (Nominal Pipe Size < 4 in.)	Surface	Not applicable to either Hatch unit

TABLE 1
 ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B12.40	B-M-1	Valves	Valve Body Welds (Nominal Pipe Size ≥4 in.)	Volumetric	Not applicable to either Hatch unit
B12.50	B-M-2	Valves	Valve Body (Nominal Pipe Size >4 in.)	Visual, VT-3	Yes; 2.1.8
B13.10	B-N-1	Reactor Pressure Vessel	Vessel Interior	Visual, VT-3	No
B13.20	B-N-2	Reactor Pressure Vessel (BWR)	Interior Attachments Within Beltline Region	Visual, VT-1	No
B13.21	B-N-2	Reactor Pressure Vessel (BWR)	Interior Attachments Beyond Beltline Region	Visual, VT-3	No
B13.22	B-N-2	Reactor Pressure Vessel (BWR)	Core Support Structure	Visual, VT-3	No
B13.30	B-N-2	Reactor Pressure Vessel (PWR)	Interior Attachments Within Beltline Region	Visual, VT-1	Not applicable to either Hatch unit
B13.31	B-N-2	Reactor Pressure Vessel (PWR)	Interior Attachments Beyond Beltline Region	Visual, VT-3	Not applicable to either Hatch unit
B13.32	B-N-3	Reactor Pressure Vessel (PWR)	Core Support Structure (Removed)	Visual, VT-3	Not applicable to either Hatch unit
B14.10	B-0	Reactor Pressure Vessel	Welds in Control Rod Drive Housing	Volumetric or Surface	Yes; 2.1.4 and 2.1.9

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B15.10	B-P	Reactor Pressure Vessel	Pressure Retaining Boundary	System Leakage Test; Visual, VI-2	No
B15.11	B-P	Reactor Pressure Vessel	Pressure Retaining Boundary	System Hydro-Test; Visual, VI-2	No
B15.20	B-P	Pressurizer	Pressure Retaining Boundary	System Leakage Test; Visual, VI-2	Not applicable to either Hatch unit
B15.21	B-P	Pressurizer	Pressure Retaining Boundary	System Hydro-Test; Visual, VI-2	Not applicable to either Hatch unit

TABLE 1
ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B15.30	B-P	Steam Generators	Pressure Retaining Boundary	System Leakage Test; Visual, VT-2	Not applicable to either Hatch unit
B15.31	B-P	Steam Generators	Pressure Retaining Boundary	System Hydrotest; Visual, VI-2	Not applicable to either Hatch unit
B15.40	B-P	Heat Exchangers	Pressure Retaining Boundary	System Leakage Test; Visual, VT-2	Not applicable to either Hatch unit
B15.41	B-P	Heat Exchangers	Pressure Retaining Boundary	System Hydrotest; Visual, VI-2	Not applicable to either Hatch unit
B15.50	B-P	Piping	Pressure Retaining Boundary	System Leakage Test; Visual, VT-2	No
B15.51	B-P	Piping	Pressure Retaining Boundary	System Hydrotest; Visual, VI-2	No
B15.60	B-P	Pumps	Pressure Retaining Boundary	System Leakage Test; Visual, VI-2	No
B15.61	B-P	Pumps	Pressure Retaining Boundary	System Hydrotest; Visual, VI-2	No
B15.70	B-P	Valves	Pressure Retaining Boundary	System Leakage Test; Visual, VI-2	No

TABLE 1
 ISI PROGRAM FOR ASME CLASS 1 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
B15.71	B-P	Valves	Pressure Retaining Boundary	System Hydro-test; Visual, VT-2	No
B16.10	B-Q	Steam Generator Tubing	Straight Tube Design	Volumetric	Not applicable to either Hatch unit
B16.20	B-Q	Steam Generator Tubing	U-Tube Design	Volumetric	Not applicable to either Hatch unit
--	--	Reactor Pressure Vessel Closure Head	Head Thickness Measurements	Ultrasonic	No; See Note 3

NOTES FOR TABLE 1

- (1) During each refueling outage, the reactor pressure vessel (RPV) closure studs are normally left in place; therefore, only a volumetric examination will be performed (ASME Section XI Table IWB-2500-1, Item No. B6.20). If the studs are removed, both a surface and volumetric examination will be performed (ASME Section XI Table IWB-2500-1, Item No. B6.30).
- (2) The Class 1 socket welds (Item No. B9.40 of Table IWB-2500-1 of ASME Section XI) for both units are exempted from surface examination by paragraph IWB-1220(a). However, selected austenitic piping welds may receive supplemental surface (PT) examinations.
- (3) Prior to January 1, 1984, ultrasonic thickness measurements were performed each refueling outage on the RPV closure head at both units (Hatch 1-six outages and Hatch 2-three outages) to determine if thinning has occurred. These measurements found no apparent thinning and therefore, these examinations will be performed once every 40 months at each unit.

3.0 CLASS 2 WITH RELIEF REQUESTS

General

Table 2 provides a tabulation of the Class 2 pressure-retaining components subject to the inspection requirements of Subsection IWC of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition with Addenda through Winter 1981. These components will be inspected in accordance with the requirements of Subsection IWC to the extent practical. This tabulation identifies the components to be inspected, the Section XI examination item and category, area to be examined, and the method of examination. Where relief from the inspection requirements of Subsection IWC is requested, information is provided which identifies the applicable Code requirements, justification for the relief request, and the examination method to be used as an alternative. Table IWC-2500-1 items not applicable to Plant Hatch have also been listed and identified in the interest of completeness.

Hydrostatic Testing

Hydrostatic testing will be conducted in a manner that will satisfy the requirements of IWA-5000 and IWC-5000. Where adjoining pipe sections have different test pressures, they will be separated whenever practicable and each section tested at its specified pressure. Where it is not practicable to separate adjoining sections of piping (e.g., the boundary is a check valve), the sections will be tested together at the lower of the specified test pressures. No point in the piping will be permitted to experience a pressure greater than the specified test pressure.

Weld Selection Criteria

As required by 10 CFR 50.55a (Code of Federal Regulations), the extent of examinations for all Class 2 ECCS piping welds was determined by the requirements of Paragraph IWC-1220, Table IWC-2520 (Category C-F and C-G welds), and Paragraph IWC-2411 of Section XI, 1974 Edition with Addenda through Summer 1975. To make this plan even more comprehensive, those welds with high S_m values were selected for examination to the extent practical.

However, some exemptions such as pressure/temperature were not used for particular systems. The following summarizes the general weld selection criteria for Class 2 systems:

RHR, Core Spray, and HPCI

1. Examine all required welds within the 10-year interval using the 1974 Code with Addenda through Summer 1975 for selection and the 1980 Code with Addenda through winter 1981 for technique.
2. Apply high stress and terminal ends when practical.

3. Do not use pressure/temperature exemption.
4. In addition to Code requirements examine (UT or surface as applicable) welds on branch connection lines greater than one inch in diameter that could impact safety-related function of system out to the first closed manual valve, reverse check valve, or power operated valve. Otherwise, component connections, piping and associated valves, and vessels (and their supports), that are 4 inches nominal pipe size and smaller are exempt.
5. Examine 100% of attachment welds within 10 years where the base material of the attachment is greater than or equal to 3/4 inches thick.

Other Class 2 Systems

As permitted in 10 CFR 50.55a, the remaining Class 2 piping welds were selected using the 1974 Edition of the Code with Addenda through summer 1975. The following components were exempted per IWC-1220:

1. Components in systems where both the design pressure and temperature are equal to or less than 275 psig and 200°F., respectively.
2. Components in systems or portions of systems, other than emergency core cooling systems, which do not function during normal reactor operation.
3. Component connections, piping and associated valves, and vessels (and their supports), that are four inches nominal pipe size and smaller.

3.1 REQUESTS FOR RELIEF FROM ASME SECTION XI REQUIREMENTS

3.1.1 VOLUMETRIC EXAMINATION OF PRESSURE RETAINING WELDS IN CLASS 2 VESSELS

3.1.1.1 Requirement From Which Relief is Requested

Item No. C1.10, C1.20, and C1.30 of Table IWC-2500-1 of ASME Section XI require the volumetric examination of Class 2 vessel shell circumferential, head circumferential, and tubesheet-to-shell circumferential welds, respectively. The volumetric examination of the residual heat removal (RHR) system heat exchanger circumferential welds will be performed using ultrasonic techniques. The required examination volumes are shown in ASME Section XI Figures IWC-2500-1 and -2. Relief from this requirement is requested.

3.1.1.2 Justification

The shell and head circumferential weld examinations are limited by vessel supports adjacent to these welds. In addition, the ultrasonic examination of the head circumferential weld from the head side cannot be performed due to configuration. The examination volume as required by Figure IWC-2500-2 for the tubesheet-to-shell weld cannot fully be met due to configuration also. The evaluation below lists the percentage of examination coverage and the physical limitations for each unit.

Hatch Unit 1

There are three Category C-A circumferential welds in each of the two RHR heat exchangers. These welds and their UT limitations are given below. (See Figure 4).

- 1E11 - 2Hx-A(B)-1 Shell Head to Upper Shell Ring - These welds cannot be examined from the shell head side due to the curvature of the head. Only about 65 inches of a total circumference of 179 inches (approximately 36 percent) can be examined from the upper shell ring side due to support interference.
- 1E11 - 2Hx-A(B)-2 Upper Shell Ring to Lower Shell Ring - Complete coverage is obtained from the upper shell-ring side and 0-percent coverage from the lower shell-ring side due to support interference.
- 1E11 - 2Hx-A(B)-3 Lower Shell-Ring to Flange - Complete coverage is obtained from the lower-shell-ring side. Examination from the flange side cannot be performed due to the geometry.

Hatch Unit 2

There are three Category C-A circumferential welds in each of the two RHR heat exchangers. These welds and their UT limitations are given below. (See Figure 3).

- 2E11 - 2Hx-A(B)-1 Shell Head to Upper Shell Ring - These welds cannot be examined from the shell-head side due to the curvature of the head. Only about 65 inches of a total circumference of 179 inches (approximately 36 percent) can be examined from the upper shell-ring side due to support interference.
- 2E11 - 2Hx-A(B)-2 Upper Shell-Ring to Lower Shell Ring - Complete coverage is obtained from the upper shell-ring side and approximately 36 percent coverage from the lower shell-ring side due to support interference.
- 2E11 - 2Hx-A(B)-3 Lower Shell-Ring to Flange - Complete coverage is obtained from the lower shell-ring side. Examination from the flange side cannot be performed due to the geometry.

3.1.1.3 Testing in Lieu of Section XI Requirements

The ultrasonic examination of the shell and head circumferential welds will be supplemented by a surface examination. The tubesheet-to-shell weld cannot be properly prepared for surface examination nor can the examination be performed due to the tubesheet studs and nuts adjacent to the weld. In addition to the examinations described above, system pressure tests per Article IWC-5000 of ASME Section XI will be performed on these welds.

3.1.2 SURFACE EXAMINATION OF WELDED ATTACHMENTS ON RHR, CORE SPRAY, HPCI, AND RCIC SUCTION LINES FROM TORUS

3.1.2.1 Requirement From Which Relief is Requested

Item No. C3.20 of Table IWC-2500-1 of ASME Section XI requires 100-percent surface examination of integrally welded attachments on piping. Figure IWC-2500-5 determines the surface area of this examination.

Suction lines for RHR, core spray, HPCI, and RCIC systems penetrating the torus are seal welded to the outside surface of the torus wall. Relief is requested from the surface examination of these welded attachments.

3.1.2.2 Justification

At both Hatch units, these integrally welded attachments on lines penetrating the torus are obstructed by reinforcement plates added after plant construction. The evaluation below lists the percentage of examination coverage and describes the physical limitations for each unit.

Hatch Unit 1

As shown in Figure 7, the suction piping is surrounded by reinforcing ribs which may limit access on one or more sides of the pipe, in particular, when using magnetic particle techniques. This method is preferred since the torus has a heavy coating of paint, and removing the paint and cleaning the surface to perform penetrant examinations would be extremely difficult with the space limitations. As shown in Figure 7 approximately 80 percent - 100 percent of the RCIC (1E51) and HPCI (1E41) welds can be examined, approximately 50 percent - 75 percent of the core spray (1E21) welds, and approximately 25 percent or less of the RHR (1E11) welds.

Hatch Unit 2

As shown in Figure 8, the welds are totally inaccessible to perform surface examinations; therefore, a visual examination will need to be performed in lieu of the Code requirements.

3.1.2.3 Testing in lieu of Section XI Requirements

Hatch Unit 1

The examinations will be performed to the extent possible as described in the previous paragraph, concerning Hatch Unit 1.

Hatch Unit 2

Visual examination (VT-1) in accordance with IWA-2211 will be performed to insure the integrity of these attachments.

3.1.3 SURFACE EXAMINATION OF PRESSURE RETAINING WELDS IN CLASS 2 PUMPS

3.1.3.1 Requirement From Which Relief is Requested

Item No. C6.10 of Table IWC-2500-1 of ASME Section XI requires a surface examination of the pump casing welds from one Class 2 pump in each group of pumps that are of similar design, size, function, and service in a system. Relief from this requirement is requested.

3.1.3.2 Justification

This relief request applies to the core spray pumps and RHR pumps on Hatch Unit 2 only. The Hatch Unit 1 pumps have a different design and do not contain pressure retaining welds (Item No. C6.10). As shown in Figure 5, the pressure retaining welds 2E11-1RHR-PLP-A-1 through -6 are completely encased in the suction casing and can be accessed only when the pump is completely disassembled. These welds are not the welds considered to be pressure retaining pump casing welds; therefore, it is impractical to disassemble the pump(s) solely to examine these welds. (Note: At least one of the six pumps has been disassembled for maintenance and the welds examined).

3.1.3.3 Testing in Lieu of Section XI Requirements

Class 2 pump casing welds are subject to surface examination when disassembled for maintenance. The coverage provided by examinations during routine maintenance coupled with hydrostatic tests will provide adequate assurance of the structural integrity of these pumps, while keeping exposure to radiation and contamination as low as reasonably achievable.

TABLE 2
ISI PROGRAM FOR ASME CLASS 2 COMPONENTS
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
C1.10	C-A	Pressure Vessels	Shell Circumferential Welds	Volumetric	Yes; 3.1.1
C1.20	C-A	Pressure Vessels	Head Circumferential Welds	Volumetric	Yes; 3.1.1
C1.30	C-A	Pressure Vessels	Tubesheet-to-Shell Weld	Volumetric	Yes; 3.1.1
C2.11	C-B	Pressure Vessels	Nozzles-to-Shell (or Head) Weld Where Vessel Nominal Thickness $\leq 1/2$ inch	Surface	Not applicable to either Hatch unit
C2.21	C-B	Pressure Vessels	Nozzle-to-Shell (or Head) Weld for Vessels Without Reinforcing Plates Where Vessel Nominal Thickness $> 1/2$ inch	Surface and Volumetric	No
C2.22	C-B	Pressure Vessels	Nozzle Inside Radius Section for Vessels without Reinforcing Plates Where Vessel Nominal Thickness $> 1/2$ inch	Volumetric	No
C2.31	C-B	Pressure Vessels	Reinforcing Plate Welds to Nozzle and Vessel Where Vessel Nominal Thickness $> 1/2$ inch	Surface	Not applicable to either Hatch unit
C2.32	C-B	Pressure Vessels	Nozzle-to-Shell (or Head) welds for Vessels With Reinforcing Plates Where Vessel Nominal Thickness $> 1/2$ inch	Volumetric	Not applicable to either Hatch unit

TABLE 2
 ISI PROGRAM FOR ASME CLASS 2 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
C3.10	C-C	Pressure Vessels	Integrally Welded Attachments	Surface	No
C3.20	C-C	Piping	Integrally Welded Attachments	Surface	Yes; 3.1.2
C3.30	C-C	Pumps	Integrally Welded Attachments	Surface	Not applicable to either Hatch unit
C3.40	C-C	Valves	Integrally Welded Attachments	Surface	Not applicable to either hatch unit
C4.10	C-D	Pressure Vessels	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
C4.20	C-D	Piping	Bolts and Studs	Volumetric	Not applicable to either Hatch unit

TABLE 2
 ISI PROGRAM FOR ASME CLASS 2 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
C4.30	C-D	Pumps	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
C4.40	C-D	Valves	Bolts and Studs	Volumetric	Not applicable to either Hatch unit
C5.11	C-F	Piping	Circumferential Welds (Nominal Wall Thickness $\leq 1/2$ in.)	Surface	No
C5.12	C-F	Piping	Longitudinal Welds (Nominal Wall Thickness $\leq 1/2$ in.)	Surface	No
C5.21	C-F	Piping	Circumferential Welds (Nominal Wall Thickness $> 1/2$ in.)	Surface and Volumetric	No
C5.22	C-F	Piping	Longitudinal Welds (Nominal Wall Thickness $> 1/2$ in.)	Surface and Volumetric	No
C5.31	C-F	Piping	Circumferential Welds Pipe Branch Connections (Nominal Pipe Size > 4 in.)	Surface	No
C5.32	C-F	Piping	Longitudinal Welds Pipe Branch Connections (Nominal Pipe Size > 4 in.)	Surface	Not applicable to either Hatch unit
C6.10	C-G	Pumps	Pump Casing Welds	Surface	Yes; 3.1.3
C6.20	C-G	Valves	Valve Body Welds	Surface	Not applicable to either Hatch unit
C7.10	C-H	Pressure Vessels	Pressure Retaining Components	System Pressure Test; Visual, VT-2	No
C7.20	C-H	Pressure Vessels	Pressure Retaining Components	System Hydrostatic Test; Visual, VT-2	No

TABLE 2
 ISI PROGRAM FOR ASME CLASS 2 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
C7.30	C-H	Piping	Pressure Retaining Components	System Pressure Test; Visual, VT-2	No
C7.40	C-H	Piping	Pressure Retaining Components	System Hydrostatic Test; Visual, VT-2	No
C7.50	C-H	Pumps	Pressure Retaining Components	System Pressure Test; Visual, VT-2	No
C7.60	C-H	Pumps	Pressure Retaining Components	System Hydrostatic test; Visual, VT-2	No
C7.70	C-H	Valves	Pressure Retaining Components	System Pressure Test; Visual, VI-2	No
C7.80	C-H	Valves	Pressure Retaining Components	System Hydrostatic Test; Visual, VT-2	No

4.0 CLASS 3 COMPONENTS WITH RELIEF REQUESTS

Table 3 provides a tabulation of the Class 3 pressure-retaining components subject to the inspection requirements of Subsection IWD of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition with Addenda through Winter 1981. These components will be inspected in accordance with Subsection IWD to the extent practical with the exception of the relief requests outlined in Paragraph 4.1 below. Table IWD-2500-1 items not applicable to Plant Hatch have also been listed and identified in the interest of completeness.

Where adjoining pipe sections have different test pressures, they will be separated whenever practicable and each section tested at its specified pressure. Where it is not practicable to separate adjoining sections of piping (e.g., the boundary is a check valve), the sections will be tested together at the lower of the specified pressures. No point in the piping will be pressurized above the specified test pressure.

4.1 REQUESTS FOR RELIEF FROM ASME SECTION XI REQUIREMENTS

4.1.1 SYSTEM PRESSURE TESTS ON CLASS 3 SMALL DIAMETER PIPING

Relief Request 4.1.1 has been withdrawn.

4.1.2 SYSTEM PRESSURE TESTS ON CLASS 3 BURIED PIPING

4.1.2.1 Requirement From Which Relief is Requested

Table IWD-2500-1 of ASME Section XI requires a system pressure test for Class 3 components including buried piping.

4.1.2.2 Justification

The following portions of systems were designed without including provisions for testing buried piping as required by Paragraph IWA-5244.

Hatch Unit No. 1

Plant service water system from the valve pit at the intake structure to the diesel generator building and from the valve pit to the reactor building wall.

RHR service water system from the valve pit at the intake structure to the reactor building wall.

Reactor core isolation cooling system from valve 1E51-F009 to valve 1E51-F010.

High pressure coolant injection system from valve 1E41-F004 to valve 1E41-F010.

Hatch Unit No. 2

Plant service water system from the valve pit at the intake structure to the diesel generator building and from the valve pit to the reactor building wall.

RHR service water system from the valve pit at the intake structure to the reactor building wall.

In addition, the visual examination for leakage at the ground level is not feasible since a majority of the piping is buried under asphalt.

4.1.2.3 Testing in Lieu of Section XI Requirements

Normal system functional testing demonstrates leaktight integrity of all safety-related buried piping.

4.1.3 PRESSURE TEST ON CLASS 2 AND 3 WATER SYSTEMS

4.1.3.1 Requirement From Which Relief is Requested

IWC-5222 and IWD-5223 of ASME Section XI requires that Class 2 and 3 systems be tested at a pressure of 1.10 or 1.25 times the design pressure. Relief is requested from testing those portions where it is necessary to use a butterfly valve six inches in diameter or greater as a hydrostatic test boundary valve.

4.1.3.2 Justification

Butterfly valves are basically flow control valves and are not intended to be block valves. The normal leakage through these large valves makes it impractical to attain and maintain the hydrostatic test pressure.

4.1.3.3 Testing in Lieu of Section XI Requirements

Since there are no viable means to test those portions of the system described above at a higher pressure, a hydrostatic test at normal operating pressure (i.e., system functional test or system inservice test) will be performed on those portions of these systems which have a butterfly valve six inches in diameter or greater.

4.1.4 SYSTEM PRESSURE TESTS ON CLASS 3 TUBING <1 INCH IN DIAMETER

4.1.4.1 Requirement From Which Relief is Requested

Table IWD-2500-1 of ASME Section XI requires that a system functional (or inservice) test and a system hydrostatic test be accomplished for the pressure retaining boundary. Relief is requested from visually examining small instrument tubing <1 inch in diameter in the plant service water (PSW) system and the RHR service water (RHRSW) System which does not provide a cooling function for a safety-related component.

4.1.4.2 Justification

These lines do not provide cooling water to safety-related equipment; therefore, loss of the line would not cause loss of a safety-related component. In addition, leakage through the tubing would not degrade the overall capability of these service water systems, since such flow would be negligible when compared to the rated flow of the pumps (PSW 8500 gpm each pump and RHRSW 4000 gpm each pump).

4.1.4.3 Testing in Lieu of Section XI Requirements

All piping ≥ 1 inch providing a safety-related function will be pressure tested. In addition, any tubing providing cooling water to a safety-related component will also be pressure tested.

TABLE 3
 ISI PROGRAM FOR ASME CLASS 3 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
D1.10	D-A	Systems in Support of Reactor Shutdown Function	Pressure Retaining Components	Visual, VT-2	Yes; 4.1.1, 4.1.3, and 4.1.2
D1.20	D-A	Systems in Support of Reactor Shutdown Function	Integral Attachment-Component Supports and Restraints	Visual, VT-3	No
D1.30	D-A	Systems in Support of Reactor Shutdown Function	Integral Attachment-Mechanical and Hydraulic Snubbers	Visual, VT-3	No
D1.40	D-A	Systems in Support of Reactor Shutdown Function	Integral Attachment-Spring Type Supports	Visual, VT-3	No
D1.50	D-A	Systems in Support of Reactor Shutdown Function	Integral Attachment-Constant Load Type Supports	Visual, VT-3	No
D1.60	D-A	Systems in Support of Reactor Shutdown Function	Integral Attachment-Shock Absorbers	Visual, VT-3	No

TABLE 3
 ISI PROGRAM FOR A CLASS COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
D2.10		Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Pressure Retaining Components	Visual, VT-2	Yes; 4.1.2
D2.20		Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Integral Attachment-Components Supports and Restraints	Visual, VT-3	No.
D2.30		Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Integral Attachment-Mechanical and Hydraulic Snubbers	Visual, VT-3	No
D2.40	D-B	Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Integral Attachment-Spring Type Supports	Visual VT-3	No
D2.50	D-B	Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Integral Attachment-Constant Load Type Supports	Visual, VT-3	No
D2.60	D-B	Systems in Support of ECC, CHR, Atmosphere Cleanup, and Reactor RHR	Integral Attachment-Shock Absorbers	Visual, VT-3	No

TABLE 3
 ISI PROGRAM FOR ASME CLASS 3 COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
D3.10	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Pressure Retaining Components	Visual, VT-2	No
D3.20	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Integral Attachment-Component Supports and Restraints	Visual, VT-3	No
D3.30	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Integral Attachment-Mechanical and Hydraulic Snubbers	Visual, VT-3	No
D3.40	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Integral Attachment-Spring Type Supports	Visual, VT-3	No
D3.50	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Integral Attachment-Constant Load Type Supports	Visual, VT-3	No
D3.60	D-C	Systems in Support of RHR from Spent Fuel Storage Pool	Integral Attachment-Shock Absorbers	Visual, VT-3	No

5.0 CLASS 1, 2, AND 3 SUPPORTS WITH RELIEF REQUESTS

Table 4 provides a tabulation of the Class 1, 2, and 3 component supports subject to the inspection requirements of Subsection IWF, Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition with Addenda through Winter 1981. These components will be inspected in accordance with the requirements of Subsection IWF to the extent practical. This tabulation identifies the components to be inspected, the Section XI examination item and category, area to be examined, and the method of examination. Where relief from the inspection requirements of Subsection IWF is requested, information is provided which identifies the applicable Code requirements, justification for the relief request, and the examination method to be used as an alternative. Table IWF-2500-1 items not applicable to Plant Hatch have also been listed and identified in the interest of completeness.

Paragraph IWF-1230, Supports Exempt from Examination and Test, is in the course of preparation. Later Addenda through Winter 1984 of Section XI do not provide guidance for the exemption criteria for these components. Georgia Power company has therefore decided to incorporate the exemption criteria for Class 1, Class 2, and Class 3 component supports found in Paragraphs IWB-1220, IWC-1220, and IWD-1220 of ASME Section XI, respectively.

5.1 REQUESTS FOR RELIEF FROM ASME SECTION XI REQUIREMENTS

5.1.1 REQUIREMENT TO VERIFY HOT OR COLD SETTINGS ON SPRING CANS AND SNUBBERS

5.1.1.1 Requirement From Which Relief is Requested

Subparagraph IWF-3410(a)(5) of ASME Section XI states that a component support condition which is unacceptable for continued service is improper hot or cold positions for spring supports or snubbers. Relief from this requirement is requested.

5.1.1.2 Justification

There are no exact design positions on the scales for spring supports or snubbers but an operational range where the indicator should be located.

Georgia Power Company will verify that the spring support is in the operable range plus acceptable tolerances; i.e., within analyzed hot and cold load settings. The support may not exactly show the precise hot or cold setting because the analysis may have used a conservative temperature; i.e., the plant may not see the temperature analyzed of that specific system on the specific day when the inservice inspection was performed. The intent of the inspection is to verify that the spring can is not outside the range specified in the analysis and that the can is not bottomed out.

5.1.1.3 Testing in Lieu of Section XI Requirements

The visual examination will verify that the indicator falls within the operational limits.

5.1.2 TESTING OF HYDRAULIC AND MECHANICAL TYPE SNUBBERS

5.1.2.1 Requirement From Which Relief is Requested

Article IWF-5000 of ASME Section XI outlines the inservice test requirements for hydraulic and mechanical type snubbers. Relief from this requirement is requested.

5.1.2.2 Justification

Instead of using IWF-5000, the ongoing testing program per the Plant Technical Specifications will be performed. This testing program is designed to demonstrate the functional integrity of the snubbers and exceeds the requirements of Article IWF-5000/

5.1.2.3 Testing in Lieu of Section XI Requirements

As noted in 5.1.2.2, the testing program per the Plant Technical Specifications will be performed.

TABLE 4
 ISI PROGRAM FOR ASME CLASS 1, 2 AND 3 SUPPORT COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
F1.10	F-A	Plate and Shell Type Supports	Mechanical Connections to Pressure Retaining Components and Building Structure	Visual, VT-3	Not applicable to either Hatch unit
F1.20	F-A	Plate and Shell Type Supports	Weld Connections to Building Structure	Visual, VT-3	Not applicable to either Hatch unit
F1.30	F-A	Plate and Shell Type Supports	Weld and Mechanical Connections at Intermediate Joints in Multiconnected Integral and Nonintegral Supports	Visual, VT-3	Not applicable to either Hatch unit
F1.40	F-A	Plate and Shell Type Supports	Component Displacement Settings of Guides and Stops, Misalignment of Supports, Assembly of Support Items	Visual, VT-3	Not applicable to either Hatch unit

TABLE 4
 ISI PROGRAM FOR ASME CLASS 1, 2, AND 3 SUPPORT COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
F2.10	F-B	Linear Type Supports	Mechanical Connections to Pressure Retaining Components and Building Structures	Visual, VT-3	Not applicable to either Hatch unit
F2.20	F-B	Linear Type Supports	Weld Connections to Building Structure	Visual, VT-3	Not applicable to either Hatch unit
F2.30	F-B	Linear Type Supports	Weld and Mechanical Connections at Intermediate Joints in Multiconnected Integral and Nonintegral Supports	Visual, VT-3	Not applicable to either Hatch unit
F2.40	F-B	Linear Type Supports	Component Displacement Settings of Guides and Stops, Misalignment of Supports, Assembly of Support Items	Visual, VT-3	Not applicable to either Hatch unit

TABLE 4
 ISI PROGRAM FOR ASME CLASS 1, 2, AND 3 SUPPORT COMPONENTS
 EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

<u>Item No.</u>	<u>Examination Category</u>	<u>System or Component Description</u>	<u>Area(s) to Be Examined</u>	<u>Method of Examination</u>	<u>Code Relief Requested</u>
F3.10	F-C	Component Standard Supports	Mechanical Connections to Pressure Retaining Components and Building Structure	Visual, VT-3	No
F3.20	F-C	Component Standard Supports	Weld Connections to Building Structure	Visual, VT-3	No
F3.30	F-C	Component Standard Supports	Weld and Mechanical Connections at Intermediate Joints in Multiconnected Integral and Nonintegral Supports	Visual, VT-3	No
F3.40	F-C	Component Standard Supports	Component Displacement Settings of Guides and Stops, Misalignment of Supports, Assembly of Support Items	Visual, VT-3	Not applicable to either Hatch unit
F3.50	F-C	Component Standard Supports	Spring Type Supports, Constant Load Type Supports, Shock Absorbers, Hydraulic and Mechanical Type Snubbers.	Visual, VT-4	Yes; 5.1.1 and 5.1.2

6.0 Inservice Testing of Valves

GENERAL

The valve testing program for Hatch Nuclear Plant - Units 1 and 2 is based on the 1980 Edition of ASME Section XI with Addenda through Winter 1981. Valves in the program are listed by MPL in Tables 6-1 and 6-2 (where applicable) and by primary containment penetration number in Tables 6-3 and 6-4 for units 1 and 2 respectively, and will be tested in accordance with the Code unless otherwise specified in this program. Several features of the Hatch program are discussed below.

VALVES TO BE TESTED DURING COLD SHUTDOWN

The Code permits valves to be exercised during cold shutdowns where it is not practical to exercise them during plant operation. A justification for each valve that cannot be tested during power operation is given in the "Cold Shutdown Justifications" section and noted in Tables 6-1 thru 6-4. The following rules govern cold shutdown testing at Plant Hatch - Units 1 and 2.

- a. Georgia Power Company intends to commence testing as soon as the cold shutdown condition is achieved, but not later than 48 hours after shutdown, and continue until complete or the plant is ready to return to power.
- b. Completion of all valve testing is not a prerequisite to return to power.
- c. Any testing not completed during one cold shutdown should be performed during any subsequent cold shutdowns, starting from the last test performed at the previous cold shutdown.
- d. For planned cold shutdowns, where ample time is available and testing of all the valves identified for the cold shutdown test frequency in the IST Program will be accomplished, exceptions to the 48 hours may be taken.

VALVES TO BE TESTED DURING REFUELING

During refueling, any valve scheduled for a refueling test will be tested. Also, any valve identified to be tested at cold shutdown that has not been tested during the previous three months will be tested. A relief request for each valve that cannot be tested quarterly or during cold shutdowns is given in the "Relief Request" section and noted in Tables 6-1 thru 6-4.

STROKE TIMES FOR POWER OPERATED VALVES

The following bases are used to assign the limiting values of full-stroke times for power operated valves.

- a. Maximum valve stroke times are based on manufacturer requirements, Tech Spec limits, and system functional requirements. Additionally, maximum stroke times for some valves have been lowered so that valve degradation will be detected in a manner consistent with Section XI intent.

- b. All maximum valve stroke times have been reviewed to ensure that they are based on component performance and reflect actual operating valve experience.
- c. The limiting values for valve stroke times are included in the Unit 1 and Unit 2 Pump and Valve Test Plans. These documents are maintained on site and are available for NRC review.

PRESSURE ISOLATION VALVES (PIV)

Instrumentation to monitor the leakage downstream of the pressure isolation valves during power operation was not a design requirement of Plant Hatch. Therefore, a pressure test is performed each refueling outage to determine the leakage. The following criteria are used during the test.

- a. A valve that serves only as a pressure isolation valve (not as a dual function containment/pressure isolation valve) is tested at a reduced pressure as allowed by IWV-3423(e) using water as the test medium. The leakage observed during the test is then adjusted to a "function maximum pressure value" as required by IWV-3423(e). Allowable leakage for the test is 0.5 gpm (1892 cc/min) per inch of valve seat up to a maximum of 5 gpm (18,920 cc/min) total leakage.
- b. A valve that functions both as a PIV and as a containment isolation valve (CIV) is tested using CIV acceptance criteria since these criteria are more stringent. Acceptable leakage for these valves is always less than the PIV criterion of 1892 cc/min, even when the adjustment to the "function maximum pressure value" is performed.
- c. Georgia Power Company also conforms to the corrective action requirements of IWV-3427 (a) but requests relief from the requirements of IWV-3427(b). See Relief Request RR-V-37.

CONTAINMENT ISOLATION VALVES

All Category A or AC valves which are containment isolation valves are identified as "CIV" under Leakage in Tables 6-1 thru 6-4. Any changes in the Appendix J, Type C testing scope will be reflected in this document with appropriate changes to the tables.

Containment isolation valves will have a Type C leakage test performed per the requirements of 10 CFR 50, Appendix J. Georgia Power Company conforms to the requirements of IWV-3426 to the extent practical by assigning a specific leakage limit to each valve or penetration assembly. Limits are based on the type and size of each valve, the number of valves within the test boundary, and historical leakage data.

Georgia Power Company also conforms to the corrective action requirements of IWV-3427(a) but requests relief from the requirements of IWV-3427(b). See Relief Request RR-V-37.

As a rule, test configurations have the least number of boundary valves practical to perform the Type C test; however, the piping arrangement at Plant Hatch generally requires the pressurization of a combination of CIVs and block valves simultaneously. In these cases a leakage limit is applied to each penetration test configuration. During the testing of the penetration, if the measured leakage exceeds the limit for the penetration, causes are investigated and repairs made to specific valves as necessary. The intent of Section XI which is to detect degradation (and repair if necessary) of each valve due to service related conditions is therefore met.

The Category A CIVs are grouped by penetration number in Tables 6-3 and 6-4, for units 1 and 2 respectively.

REMOTE INDICATING LIGHTS

Valves with remote indicating lights will be observed at least once every 2 years to verify that the valve operation is accurately indicated.

FAIL-SAFE VALVES

Unless otherwise specified in the program tables, additional fail-safe testing will not be performed. Stroking the valve full cycle during normal testing causes loss of power to the actuator as required by IWV-3415. Therefore, additional testing to prove the fail-safe capability is not required.

PASSIVE POWER OPERATED VALVES

A passive power operated valve is a valve that does not perform a mechanical motion during the course of accomplishing a system safety function. These valves are identified as such in the "Function Description" in Tables 6-1 thru 6-4.

FULL FLOW TESTING OF CHECK VALVES

When flow through a check valve is used to indicate a full-stroke exercise of the check valve, it is designated "full flow" in the exercise column of Tables 6-1 thru 6-4. Verification of the maximum flow rate through the valve which is required to fulfill the safety-related function of the valve or system will be performed quarterly and is considered to be adequate demonstration of the full-stroke requirement.

Where, due to operational constraints or lack of supplied instrumentation, maximum safety-related flow cannot be demonstrated, a disassembly and internals inspection of the valve will be performed. This is designated by "disassemb" in the exercise column of Tables 6-1 thru 6-4. Associated relief requests are provided for each case.

STARTUP WITH INOPERABLE VALVES

When corrective action is required as a result of testing performed during a cold shutdown (or refueling), IWV-3417(b) and IWV-3523 require that the corrective action be completed prior to startup. If the Plant Technical Specifications allow startup with the subject valves inoperable, then startup will not be delayed. See Relief Request RR-V-4.

Hatch Nuclear Plant - Units 1 and 2
Valve Testing Program

NOTES

1. Closure of this pump discharge check valve is proven during pump surveillance testing. There are two pumps on each train; therefore, when one pump is being tested the other pump is not operating. For the pump being tested to pass the required parameters, the discharge check valve on the non-operating pump must close to prevent diverted flow. If the valve remained open, the pump test would be unsuccessful.
2. This normally closed valve is located on a pump minimum flow line. Required flow rate will be ensured to be passing through the line during quarterly pump testing.
3. The CRD cooling water check valves are exercised to their safety-related position (closed) during weekly CRD exercise tests (notch in/notch out). Insertion of CRD verifies that the required pressure boundary is intact and therefore, the check valve is closed.
4. These thermal relief valves on the RHR heat exchangers were supplied by the manufacturer to meet code requirements. The operability of these valves is not required since relief valves with much larger capacities were added to the system during design. The safety-related closed position of these valves is proven each refueling outage during leak rate testing.
5. Valves P41-F438A&B, 2P41-F306A&B, and 2P41-F334A&B will be verified to open quarterly during pump testing by observation of free flow through flow sight glasses located downstream of the check valves.
6. This valve is a self-modulating pressure control valve that is exempt from testing per IWV-1200(a). The fail-open position will be verified during pump testing by observing that the valve is open when there is no flow through the valve.
7. Each fuel oil transfer pump is tested monthly to verify its operability. During the test, the day tank is monitored to ensure that the tank level rises as the pump is running, which indicates that the check valve opens.
8. The CRD withdraw and insert solenoid valves (120, 121, 122, and 123) are exercised weekly during CRD exercise tests (notch in/notch out).

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
										Time Req'd	Relief CS Just.
** System - B21											
B21-F010A	1	AC	18" Check	E-3	H-16062	FW Inbrd. Cont. Iso.	O	RO	CIV	No	RR-V-1
B21-F010B	1	AC	18" Check	D-3	H-16062	FW Inbrd. Cont. Iso.	O	RO	CIV	No	RR-V-1
B21-F013A	1	BC	6" Relief	C-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013B	1	BC	6" Relief	C-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013C	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013D	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013E	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013F	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013G	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013H	1	BC	6" Relief	G-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013J	1	BC	6" Relief	G-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
										Time Req'd	Relief CS Just.
B21-F013K	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F013L	1	BC	6" Relief	F-6	H-16062	Main Steam Relief	C	RO	NA	No	RR-V-29
B21-F015A	1	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015B	1	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015C	1	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015D	1	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015E	1	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015F	1	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F015G	1	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord. P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.				Pos	Exercise		Time Req'd	Relief CS Just.
B21-F015H	1	AC	1* Excess Flow Ck C-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015J	1	AC	1* Excess Flow Ck D-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015K	1	AC	1* Excess Flow Ck C-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015L	1	AC	1* Excess Flow Ck D-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015M	1	AC	1* Excess Flow Ck C-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015N	1	AC	1* Excess Flow Ck D-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015P	1	AC	1* Excess Flow Ck C-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F015R	1	AC	1* Excess Flow Ck D-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
B21-F015S	1	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F016	1	A	3" MO Gate	E-8	H-16062	Main Steam Line C DRN. Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-2
B21-F019	1	A	3" MO Gate	E-9	H-16062	Main Steam Line C DRN. Outbrd. Iso.	C	Qtr	CIV	Yes	
B21-F022A	1	A	24" AO Globe	C-7	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F022B	1	A	24" AO Globe	E-7	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F022C	1	A	24" AO Globe	F-7	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F022D	1	A	24" AO Globe	G-7	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F028A	1	A	24" AO Globe	C-9	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F028B	1	A	24" AO Globe	E-9	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9
B21-F028C	1	A	24" AO Globe	F-9	H-16062	MSIV	0	CS	CIV	Yes	RR-V-10 CS-9

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
B21-F028D	1	A	24" AO Globe	G-9	H-16062	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
B21-F032A	1	AC	18" Check	E-2	H-16062	FW Outbrd. Iso.	O	RO	CIV	No	RR-V-1
B21-F032B	1	AC	18" Check	D-2	H-16062	FW Outbrd. Iso.	O	RO	CIV	No	RR-V-1
B21-F036A	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036B	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036C	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036D	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036E	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036F	2	AC	1" Check	E-4	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036G	2	AC	1" Check	E-4	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
B21-F036H	2	AC	1* Check	E-4	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036J	2	AC	1* Check	E-4	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036K	2	AC	1* Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F036L	2	AC	1* Check	E-4	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
B21-F037A	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037B	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037C	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037D	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037E	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037F	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
B21-F037G	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037H	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037J	3	C	6* Check	H-6	H-16052	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037K	3	C	6* Check	H-6	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F037L	3	C	6* Check	H-6	H-16052	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F041	1	AC	1* Excess Flow Ck	B-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F043A	1	AC	1* Excess Flow Ck	C-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F043B	1	AC	1* Excess Flow Ck	C-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F045A	1	AC	1* Excess Flow Ck	C-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F045B	1	AC	1* Excess Flow Ck	C-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord. P&ID	Function	Worm		Leakage	Stroke	Notes
	Class	Cat.				Pos	Exercise		Time Req'd	Relief CS Just.
B21-F047A	1	AC	1* Excess Flow Ck F-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F047B	1	AC	1* Excess Flow Ck F-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F049A	1	AC	1* Excess Flow Ck F-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F049B	1	AC	1* Excess Flow Ck F-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F051A	1	AC	1* Excess Flow Ck H-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F051B	1	AC	1* Excess Flow Ck H-5	H-16063	Instrument Excess Flow Check Valve	0	RC	NA	NA	RR-V-15
B21-F051C	1	AC	1* Excess Flow Ck H-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F051D	1	AC	1* Excess Flow Ck H-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
B21-F053A	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F053B	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F053C	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F053D	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F055	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F057	1	AC	1* Excess Flow Ck J-5	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F059A	1	AC	1* Excess Flow Ck H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B21-F059B	1	AC	1* Excess Flow Ck H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
B21-F059C	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059D	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059E	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059F	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059G	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059H	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059L	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B21-F059M	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
B21-F059N	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F059P	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F059R	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F059S	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	C	RO	NA	NA	RR-V-15
B21-F059T	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F059U	1	AC	1* Excess Flow Ck H-9	H-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F061	1	AC	1* Excess Flow Ck J-9	J-9	H-16063	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
B21-F065A	1	AC	1* Excess Flow Ck -	-	-	Instrument Excess Flow Check Valve	C	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
B21-F065B	1	AC	1" Excess Flow Ck -	-	-	Instrument Excess Flow Check Valve	C	RO	NA	NA	RR-V-15
B21-F110A	3	C	10" Check	H-7	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F110C	3	C	10" Check	H-7	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F110G	3	C	10" Check	H-7	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F110H	3	C	10" Check	H-7	H-16062	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
B21-F111	2	A	1" AO Gate	E-2	H-26384	Pass Sample Valves	C	Qtr	CIV	Yes	
B21-F112	2	A	1" AO Gate	E-2	H-26384	Pass Sample Valves	C	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - B31											
B31-F003A	1	AC	1* Excess Flow Ck G-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F003B	1	AC	1* Excess Flow Ck G-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F004A	1	AC	1* Excess Flow Ck G-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F004B	1	AC	1* Excess Flow Ck G-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F009A	1	AC	1* Excess Flow Ck C-10		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F009B	1	AC	1* Excess Flow Ck E-10		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F009C	1	AC	1* Excess Flow Ck D-10		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F009D	1	AC	1* Excess Flow Ck F-10		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
B31-F010A	1	AC	1" Excess Fl'w Ck D-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F010B	1	AC	1" Excess Flow Ck E-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F010C	1	AC	1" Excess Flow Ck D-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F010D	1	AC	1" Excess Flow Ck F-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F011A	1	AC	1" Excess Flow Ck D-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F011B	1	AC	1" Excess Flow Ck E-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F011C	1	AC	1" Excess Flow Ck E-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F011D	1	AC	1" Excess Flow Ck F-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
B31-F012A	1	AC	1" Excess Flow Ck D-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F012B	1	AC	1" Excess Flow Ck F-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F012C	1	AC	1" Excess Flow Ck E-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F012D	1	AC	1" Excess Flow Ck F-10	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
B31-F013A	1	AC	3/4" Check	F-3	H-16066	Recir. Pump Seal Wtr.	0	RO	CIV	No RR-V-5	
B31-F013B	1	AC	3/4" Check	F-3	H-16066	Recir. Pump Seal Wtr.	0	RO	CIV	No RR-V-5	
B31-F017A	1	AC	3/4" Check	F-2	H-16066	Recir. Pump Seal Wtr.	0	RO	CIV	No RR-V-5	
B31-F017B	1	AC	3/4" Check	F-2	H-16066	Recir. Pump Seal Wtr.	0	RO	CIV	No RR-V-5	
B31-F019	1	A	3/4" AO Globe	D-3	H-16066	Reac. Sample Sys. Inbrd. Iso.	0	Qir	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
331-F020	1	A	3/4" AO Globe	D-1	H-16066	Reac. Sample Sys. Outbrd. Iso.	0	Qtr	CIV	Yes	
B31-F031A	1	B	28" MO Gate	G-7	H-16066	Reactor Recirculation	0	CS	NA	Yes	CS-1
B31-F031B	1	B	28" MO Gate	H-7	H-16066	Reactor Recirculation	0	CS	NA	Yes	CS-1
B31-F040A	1	AC	1" Excess Flow Ck	G-8	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F040B	1	AC	1" Excess Flow Ck	H-8	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F040C	1	AC	1" Excess Flow Ck	G-8	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F040D	1	AC	1" Excess Flow Ck	H-8	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055B	1	AC	1" Excess Flow Ck	A-3	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055C	1	AC	1" Excess Flow Ck	B-3	H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
B31-F055D	1	AC	1* Excess Flow Ck B-3		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055E	1	AC	1* Excess Flow Ck C-3		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055F	1	AC	1* Excess Flow Ck C-3		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055G	1	AC	1* Excess Flow Ck C-3		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F055H	1	AC	1* Excess Flow Ck C-3		H-16006	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F057A	1	AC	1* Excess Flow Ck F-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
B31-F057B	1	AC	1* Excess Flow Ck F-2		H-16066	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
	Class	Cat.								Time Req'd	Relief CS Just.	
** System - C11												
C11-F010A	2	B	1" AO Globe	A-5	H-16065	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes		
C11-F010B	2	B	1" AO Globe	A-6	H-16065	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes		
C11-F011	2	B	2" AO Globe	D-8	H-16065	Scram Disch. Volume Drain Valve	C	Qtr	NA	Yes		
C11-F035A	2	B	1" AO Globe	A-5	H-16065	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes		
C11-F035B	2	B	1" AO Globe	A-6	H-16065	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes		
C11-F037	2	B	2" AO Globe	C-4	H-16065	Scram Disch. Volume Drain Valve	C	Qtr	NA	Yes		
C11-HCU-114	2	C	3/4" Check	A-6	H-16064	Scram Disch. Volume HCU Check Valve	C	RO	NA	No	RR-V-38	
C11-HCU-115	2	C	1/2" Check	C-6	H-16064	Charging Water HCU Check Valve	C	RO	NA	No	RR-V-26	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
C11-HCU-120	1	B	1/2* Solenoid	B-5	H-16064	CRD Drive Water C Insert	C	Note 8	NA	No	
C11-HCU-121	1	B	1/2* Solenoid	B-5	H-16064	CRD Drive Water C Withdraw	C	Note 8	NA	No	
C11-HCU-122	1	B	1/2* Solenoid	B-5	H-16064	CRD Drive Water C Withdraw	C	Note 8	NA	No	
C11-HCU-123	1	B	1/2* Solenoid	B-5	H-16064	CRD Drive Water C Insert	C	Note 8	NA	No	
C11-HCU-126	1	A	1* A0 Globe	B-4	H-16054	Scram Insert HCU Control Valve	C	RO	NA	No	RR-V-27
C11-HCU-127	1	A	3/4* A0 Globe	A-4	H-16064	Scram Disch. HCU Control Valve	C	RO	NA	No	RR-V-27
C11-HCU-138	1	AC	1/2* Check	C-4	H-16064	Cooling Water Header HCU Check Valve	C	Note 3	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - C41											
C41-F004A	2	D	1-1/2* Expl	D-3	H-16061	SLC Expl. Act.	C	IWV-3610	NA	No	
C41-F004B	2	D	1-1/2* Expl	F-3	H-16061	SLC Expl. Act.	C	IWV-3610	NA	No	
C41-F006	1	AC	1-1/2* Check	E-2	H-16061	SLC Outbrd Cont. Iso.	C	RO	CIV	No	RR-V-6
C41-F007	1	AC	1-1/2* Check	E-2	H-16061	SLC Inbrd. Cont. Iso.	C	RO	CIV	No	RR-V-6
C41-F029A	2	C	1* Relief	D-6	H-16061	SLC Pump Disch. Relief	C	IWV-3512	NA	No	
C41-F029B	2	C	1* Relief	G-6	H-16061	SLC Pump Disch. Relief	C	IWV-3512	NA	No	
C41-F033A	2	C	1-1/2* Check	E-5	H-16061	SLC Pump Disch.	C	Qtr	NA	No	
C41-F033B	2	C	1-1/2* Check	G-5	H-16061	SLC Pump Disch.	C	Qtr	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - C51											
C51-Ball A	2	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
C51-Ball B	2	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
C51-Ball C	2	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
C51-Ball D	2	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
C51-F3012	2	A	Solenoid	C-8	H-16561	TIP N2 Purge CIV	0	Qtr	CIV	Qtr	RR-V-32
C51-F3017	2	AC	Check	C-8	H-16561	TIP N2 Purge	0	RO	CIV	NA	RR-V-36
C51-Shear A	2	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
C51-Shear B	2	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
C51-Shear C	2	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
C51-Shear D	2	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - D11											
D11-F050	2	A	1" Solenoid	E-4	H-16173	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
D11-F051	2	A	1" Solenoid	C-5	H-16173	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
D11-F052	2	A	1" Solenoid	E-5	H-16173	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
D11-F053	2	A	1" Solenoid	C-6	H-16173	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - E11											
E11-F003A	2	B	16" MO Gate	D-9	H-16330	RHR Hx Shell Side Outlet	0	Qtr	NA	Yes	
E11-F003B	2	B	16" MO Gate	D-4	H-16329	RHR Hx Shell Side Outlet	0	Qtr	NA	Yes	
E11-F004A	2	A	24" MO Gate	F-10	H-16330	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
E11-F004B	2	A	24" MO Gate	F-3	H-16329	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
E11-F004C	2	A	24" MO Gate	F-10	H-16330	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
E11-F004D	2	A	24" MO Gate	F-3	H-16329	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
E11-F005A	3	C	14" Check	A-7	D-11004	RHR SW Pump Discharge	C	Full Flow	NA	NA	Note 1
E11-F005B	3	C	14" Check	D-7	D-11004	RHR SW Pump Discharge	C	Full Flow	NA	NA	Note 1
E11-F005C	3	C	14" Check	C-7	D-11004	RHR SW Pump Discharge	C	Full Flow	NA	NA	Note 1

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
E11-F005D	3	C	14" Check	E-7	D-11004	RHR SW Pump Discharge	C	Full Flow	NA	NA	Note 1
E11-F006A	2	B	20" MO Gate	F-10	H-16330	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
E11-F006B	2	B	20" MO Gate	F-2	H-16329	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
E11-F006C	2	B	20" MO Gate	F-10	H-16330	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
E11-F006D	2	B	20" MO Gate	F-2	H-16329	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
E11-F007A	2	A	4" MO Gate	E-7	H-16330	RHR Pump Min Flow Torus Iso.	O	Qtr	CIV	Yes	RR-V-2
E11-F007B	2	A	4" MO Gate	D-5	H-16329	RHR Pump Min Flow Torus Iso.	O	Qtr	CIV	Yes	RR-V-2
E11-F008	1	A	20" MO Gate	D-1	H-16329	RHR Shutdown Cooling Outbrd. Iso.	C	CS	PIV/CIV	Yes	CS-2
E11-F009	1	A	20" MO Gate	D-1	H-16329	RHR Shutdown Cooling Inbrd. Iso.	C	CS	PIV	Yes	RR-V-2 CS-2
E11-F011A	2	A	4" MO Gate	D-3	H-16330	RHR Cond. Disch. to Torus	C	Qtr	CIV	Yes	RR-V-2

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
E11-F011B	2	A	4" MO Gate	C-9	H-16329	RHR Cond. Disch. to Torus	C	Qtr	CIV	Yes	RR-V-2
E11-F015A	1	A	24" MO Gate	C-8	H-16330	LPCI Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
E11-F015B	1	A	24" MO Gate	C-4	H-16329	LPCI Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
E11-F016A	2	A	16" MO Gate	B-9	H-16330	Cont. Spray Outbrd. Iso.	C	Qtr	CIV	Yes	
E11-F016B	2	A	16" MO Gate	B-4	H-16329	Cont. Spray Outbrd. Iso.	C	Qtr	CIV	Yes	
E11-F017A	1	B	24" MO Gate	D-8	H-16330	LPCI	O	Qtr	NA	Yes	
E11-F017B	1	B	24" MO Gate	D-5	H-16329	LPCI	O	Qtr	NA	Yes	
E11-F021A	2	B	16" MO Gate	B-11	H-16330	Containment Spray	C	Qtr	NA	Yes	
E11-F021B	2	B	16" MO Gate	B-2	H-16329	Containment Spray	C	Qtr	NA	Yes	
E11-F023	2	A	4" MO Globe	A-2	H-16329	Passive Cont. Iso.	C	None	CIV	No	
E11-F024A	2	B	16" MO Globe	C-7	H-16330	Suppression Pool Cooling	C	Qtr	NA	Yes	
E11-F024B	2	B	16" MO Globe	C-6	H-16329	Suppression Pool Cooling	C	Qtr	NA	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
E11-F025A	2	AC	1* Relief	B-8	H-16330	LPCI Inj. Cont. Iso.	C	IWV-3512	CIV	No	
E11-F025B	2	AC	1* Relief	C-5	H-16329	LPCI Inj. Cont. Iso.	C	IWV-3512	CIV	No	
E11-F026A	2	A	4* MO Gate	D-3	H-16330	Cond. Disch to RCIC Cont. Iso.	C	Qtr	CIV	Yes	
E11-F026B	2	A	4* MO Gate	D-11	H-16329	Cond. Disch to RCIC Cont. Iso.	C	Qtr	CIV	Yes	
E11-F027A	2	B	6* MO Globe	D-3	H-16330	Suppression Pool Spray	C	Qtr	NA	Yes	
E11-F027B	2	B	6* MO Globe	D-11	H-16329	Suppression Pool Spray	C	Qtr	NA	Yes	
E11-F028A	2	A	16* MO Gate	B-8	H-16330	Suppression Pool Spray Outbrd Iso.	C	Qtr	CIV	Yes	
E11-F028B	2	A	16* MO Gate	B-5	H-16329	Suppression Pool Spray Ou*brd Iso.	C	Qtr	CIV	Yes	
E11-F029	2	AC	1* Relief	E-2	H-16329	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
E11-F030A	2	AC	1* Relief	F-9	H-16330	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
E11-F030B	2	AC	1* Relief	F-4	H-16329	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
E11-F030C	2	AC	1* Relief	F-11	H-16330	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
E11-F030D	2	AC	1* Relief	F-1	H-16329	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
E11-F031A	2	C	20* Check	H-6	H-16330	RHR Pump Discharge	C	Full Flow	NA	No	
E11-F031B	2	C	20* Check	H-6	H-16329	RHR Pump Discharge	C	Full Flow	NA	No	
E11-F031C	2	C	20* Check	H-10	H-16330	RHR Pump Discharge	C	Full Flow	NA	No	
E11-F031D	2	C	20* Check	H-2	H-16329	RHR Pump Discharge	C	Full Flow	NA	No	
E11-F040	2	B	4* MO Globe	E-5	H-26329	RHR to Radwaste	C	Qtr	NA	Yes	
E11-F046A	2	C	3* Check	H-7	H-16330	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
E11-F046B	2	C	3* Check	H-5	H-16329	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
E11-F046C	2	C	3* Check	H-11	H-16330	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time	Relief
										Req'd	CS Just.
E11-F046D	2	C	3" Check	H-2	H-16329	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
E11-F047A	2	B	16" MO Gate	E-6	H-16330	RHR Hx Shell Side Side Inlet	0	Qtr	NA	Yes	
E11-F047B	2	B	16" MO Gate	E-7	H-16329	RHR Hx Shell Side Side Inlet	0	Qtr	NA	Yes	
E11-F048A	2	B	24" MO Globe	B-8	H-16330	RHR Hx Shell Side Bypass	0	Qtr	NA	Yes	
E11-F048B	2	B	24" MO Globe	B-5	H-16329	RHR Hx Shell Side Bypass	0	Qtr	NA	Yes	
E11-F049	2	B	4" MO Globe	E-5	H-16329	RHR to Radwaste	C	Qtr	NA	Yes	
E11-F050A	1	AC	18" AO Check	D-6	H-16330	LPCI Injec. Iso.	C	Disassemb	PIV	No	RR-V-14
E11-F050B	1	AC	18" AO Check	D-7	H-16329	LPCI Injec. Iso.	C	Disassemb	PIV	No	RR-V-14
E11-F055A	2	AC	4" Relief	D-6	H-16330	RHR Hx Shell Relief Cont. Iso.	C	IWV-3512	CIV	No	
E11-F055B	2	AC	4" Relief	D-7	H-16329	RHR Hx Shell Relief Cont. Iso.	C	IWV-3512	CIV	No	
E11-F068A	3	B	10" MO Ball	H-6	H-16330	RHR Hx Ser. Wtr. Disc.	C	NA	NA	No	RR-V-22

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
E11-F068B	3	B	10" MO Ball	H-7	H-16329	RHR Hx Ser. Wtr. Disc.	C	NA	NA	No	RR-V-22
E11-F091A	2	B	6" MO Globe	E-2	H-16330	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
E11-F091B	2	B	6" MO Globe	E-11	H-16329	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
E11-F097	2	AC	3" Relief	D-11	H-16329	Steam Line Relief Cont. Iso.	C	IWV-3512	CIV	No	
E11-F103A	2	A	1" MO Globe	E-5	H-16330	RHR Hx Vent Cont. Iso.	C	Qtr	CIV	Yes	
E11-F103B	2	A	1" MO Globe	E-8	H-16329	RHR Hx Vent Cont. Iso.	C	Qtr	CIV	Yes	
E11-F122A	1	A	1" A0 Plug	D-10	H-16330	E11-F050A Bypass Valve	C	CS	PIV	Yes	CS-8
E11-F122B	1	A	1" A0 Plug	D-2	H-16329	E11-F050B Bypass Valve	C	CS	PIV	Yes	CS-8
E11-F126A	2	C	2" Stop Check	E-6	H-16328	Maintain RHR Water Level	O	Qtr	NA	No	
E11-F126B	2	C	2" Stop Check	E-4	H-16328	Maintain PHR Water Level	O	Qtr	NA	No	
E11-F140A	2	B	6" MO Gate	E-2	H-16330	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
E11-F140B	2	B	6" MO Gate	E-11	H-16329	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
E11-F200A	3	B	2" AO PCV	B-8	D-11004	RHR Service Water Pump Min. Flow	C	Qtr	NA	Yes	RR-V-24
E11-F200B	3	B	2" AO PCV	D-8	D-11004	RHR Service Water Pump Min. Flow	C	Qtr	NA	Yes	RR-V-24
E11-F200C	3	B	2" AO PCV	C-8	D-11004	RHR Service Water Pump Min. Flow	C	Qtr	NA	Yes	RR-V-24
E11-F200D	3	B	2" AO PCV	F-8	D-11004	RHR Service Water Pump Min. Flow	C	Qtr	NA	Yes	RR-V-24
E11-F3078A	2	AC	3/4" Relief	F-4	H-16330	RHR Hx A Thermal Relief Valve	C	Note 4	CIV	No	
E11-F3078B	2	AC	3/4" Relief	F-9	H-16329	RHR Hx B Thermal Relief Valve	C	Note 4	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
** System - E21											
E21-F001A	2	A	16" MO Gate	H-8	H-16331	CS Pump Suction Out	O	Qtr	CIV	Yes	
E21-F001B	2	A	16" MO Gate	J-8	H-16331	CS Pump Suction Out	O	Qtr	CIV	Yes	
E21-F003A	2	C	12" Check	F-9	H-16331	CS Pump Discharge	C	Full Flow	NA	No	
E21-F003B	2	C	12" Check	F-11	H-16331	CS Pump Discharge	C	Full Flow	NA	No	
E21-F004A	1	B	10" MO Gate	E-7	H-16331	CS Outbrd. Injection	O	Qtr	NA	Yes	
E21-F004B	1	B	10" MO Gate	B-7	H-16331	CS Outbrd. Injection	O	Qtr	NA	Yes	
E21-F005A	1	A	10" MO Gate	E-6	H-16331	CS Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
E21-F005B	1	A	10" MO Gate	B-6	H-16331	CS Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
E21-F006A	1	AC	10" AO Check	D-4	H-16331	CS Injection Pressure Iso.	C	Disassemb	PIV	No	RR-V-13
E21-F006B	1	AC	10" AO Check	C-4	H-16331	CS Injection Pressure Iso.	C	Disassemb	PIV	No	RR-V-13
E21-F012A	2	C	2" Relief	D-9	H-16331	CS Pump Disch. Relief	C	IWV-3512	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
E21-F012B	2	C	2" Relief	B-9	H-16331	CS Pump Disch. Relief	C	IWV-3512	NA	No	
E21-F015A	2	A	10" MO Globe	D-8	H-16331	Core Spray Test Bypass Cont. Iso.	C	Qtr	CIV	Yes	
E21-F015B	2	A	10" MO Globe	C-8	H-16331	Core Spray Test Bypass Cont. Iso.	C	Qtr	CIV	Yes	
E21-F018A	1	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E21-F018B	1	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E21-F018C	1	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E21-F031A	2	B	3" MO Gate	F-9	H-16331	CS Pump Min. Flow	O	Qtr	CIV	Yes	
E21-F031B	2	B	3" MO Gate	F-10	H-16331	CS Pump Min. Flow	O	Qtr	CIV	Yes	
E21-F036A	2	AC	3" Check	E-9	H-16331	CS Test Line Cont. Iso.	C	Full Flow	CIV	No	RR-V-21 Note 2

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code			Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.	Description							Time Req'd	Relief CS Just.
E21-F036B	2	AC	3* Check	E-10	H-16331	CS Test Line Cont. Iso.	C	Full Flow	CIV	No	RR-V-21 Note 2
E21-F037A	1	A	1* AO Plug	D-4	H-16331	Valve E21-F006A Bypass	C	CS	PIV	Yes	CS-8
E21-F037B	1	A	1* AO Plug	B-4	H-16331	Valve E21-F006B Bypass	C	CS	PIV	Yes	CS-8
E21-F040A	2	C	1-1/2* Stop Check	E-6	H-16328	Maintain CS Water Level	O	Qtr	NA	No	
E21-F040B	2	C	1-1/2* Stop Check	E-4	H-16328	Maintain CS Water Level	O	Qtr	NA	No	
E21-F044A	2	AC	2* Stop Check	F-5	H-16328	Jockey Pump Bypass Cont. Iso.	O	RO	CIV	No	RR-V-30
E21-F044B	2	AC	2* Stop Check	F-5	H-16328	Jockey Pump Bypass Cont. Iso.	O	RO	CIV	No	RR-V-30

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
	Class	Cat.								Time Req'd	Relief CS Just.	
** System - E41												
E41-F001	2	B	10" MO Gate	E-12	H-16332	HPCI Steam Supply Shutoff	C	Qtr	NA	Yes		
E41-F002	1	A	10" MO Gate	C-2	H-16332	HPCI Steam Supply Inbrd. Iso.	O	CS	CIV	Yes	RR-V-2 CS-7	
E41-F003	1	A	10" MO Gate	C-4	H-16332	HPCI Steam Supply Outbrd. Iso.	O	Qtr	CIV	Yes		
F41-F004	2	B	16" MO Gate	D-9	H-16332	HPCI Pump Suc. from Cond. Stor.	O	Qtr	NA	Yes		
E41-F005	2	C	14" Check	F-6	H-16332	HPCI Pump Disch.	C	Full Flow	NA	No		
E41-F006	2	A	14" MO Gate	E-5	H-16332	HPCI Pump Inbrd. Disch. Iso.	C	Qtr	PIV/CIV	Yes		
E41-F007	2	B	14" MO Gate	E-6	H-16332	HPCI Pump Outbrd. Disch.	O	Qtr	NA	Yes		
E41-F008	2	B	10" MO Globe	D-7	H-16332	HPCI Pump Test Bypass	C	Qtr	NA	Yes		
E41-F011	2	B	10" MO Gate	C-7	H-16332	HPCI Pump Redun. Shutoff to Cont. Stg.	C	Qtr	NA	Yes		

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
E41-F012	2	A	4" MO Globe	F-7	H-16332	HPCI Pump Min. Flow Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-2
E41-F019	2	C	16" Check	D-9	H-16332	HPCI Pump Suc. Cond. Stg.	C	Full Flow	NA	No	
E41-F021	2	AC	12" Stop Check	G-3	H-16332	HPCI Turb. Exh. Inbrd. Iso.	C	Qtr	CIV	No	RR-V-8
E41-F022	2	AC	2" Stop Check	G-4	H-16332	HPCI Turb. Exh. Drn. Torus Iso.	C	Qtr	CIV	No	RR-V-8
E41-F024A	1	AC	1" Excess Flow Ck C-4	C-4	H-16332	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E41-F024B	1	AC	1" Excess Flow Ck D-8	D-8	H-16332	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E41-F024C	1	AC	1" Excess Flow Ck C-4	C-4	H-16332	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E41-F024D	1	AC	1" Excess Flow Ck D-4	D-4	H-16332	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E41-F035	2	B	2" AO PCV	G-8	H-16332	HPCI Turb. Lube Oil Cooling	C	Note 6	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Req'd	Relief CS Just.
E41-F040	2	AC	2" Check	G-5	H-16332	HPCI Turb. Exh. Drn. Torus Iso.	C	Qtr	CIV	No	
E41-F041	2	B	16" MO Gate	D-8	H-16332	HPCI Pump Suc. Shutoff	C	Qtr	NA	Yes	
E41-F042	2	A	16" MO Gate	J-5	H-16332	HPCI Pump Suc. Torus Outbrd. Iso.	C	Qtr	CIV	Yes	
E41-F045	2	C	16" Check	J-7	H-16332	HPCI Pump Suction	C	Disassemb	NA	No	RR-V-7
E41-F046	2	AC	4" Check	F-8	H-16322	HPCI Pump Min Flow Outbrd. Iso.	C	Full Flow	CIV	No	Note 2
E41-F048	2	C	2" Check	H-9	H-16333	Lube Oil Cooling Wtr Return Check	C	RO	NA	No	RR-V-35
E41-F049	2	AC	20" Check	G-4	H-16332	HPCI Turb. Exh. Outbrd. Iso.	C	Qtr	CIV	No	
E41-F051	2	F	16" AO Bfly	J-4	H-16332	HPCI Pump Suc. Torus Inbrd. Iso.	O	Qtr	CIV	Yes	
E41-F057	2	C	2" Check	H-10	H-16333	Lube Oil Cooling Wtr Return Check	C	RO	NA	No	RR-V-35

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code			Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.	Description							Time Req'd	Relief CS Just.
E41-F059	2	B	2* MO Globe	F-8	H-16332	HPCI Turb. Lube Oil Cooling	C	Qtr	NA	Yes	
E41-F102	2	C	1* Check	G-2	H-16332	Vacuum Relief	C	RO	NA	NA	RR-V-23
E41-F103	2	C	1* Check	G-2	H-16332	Vacuum Relief	C	RO	NA	NA	RR-V-23
E41-F104	2	A	2* MO Gate	G-3	H-16332	HPCI Vac. Relief Outbrd. Torus Iso.	O	Qtr	CIV	Yes	
E41-F111	2	A	2* MO Gate	G-2	H-16332	HPCI Vac. Relief Inbrd. Torus Iso.	O	Qtr	CIV	Yes	
E41-F121	2	A	3/8* Solenoid	H-3	H-26384	Pass Sample Return	C	Qtr	CIV	Yes	RR-V-3
E41-F122	2	A	3/8* Solenoid	H-3	H-26384	Pass Sample Return	C	Qtr	CIV	Yes	RR-V-3

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - E51 E51-F001	2	AC	10" Stop Check	G-5	H-16334	RCIC Containment Iso. Valve	C	RO	CIV	No	RR-V-8 RR-V-9
E51-F002	2	AC	2" Stop Check	G-6	H-16334	RCIC Containment Iso. Valve	C	RO	CIV	No	RR-V-8 RR-V-9
E51-F003	2	A	6" AO Bfly	J-6	H-16334	RCIC Containment Iso. Valve	O	Qtr	CIV	Yes	
E51-F007	1	A	4" MO Gate	C-5	H-16334	RCIC Containment Iso. Valve	O	Qtr	CIV	Yes	RR-V-2
E51-F008	1	A	4" MO Gate	C-6	H-16334	RCIC Containment Iso. Valve	O	Qtr	CIV	Yes	
E51-F013	2	A	4" MO Gate	E-6	H-16334	RCIC Pressure Iso. Valve	C	Qtr	CIV/CIV	Yes	
E51-F019	2	A	2" MO Globe	F-7	H-16334	RCIC Containment Iso. Valve	C	Qtr	CIV	Yes	RR-V-2
E51-F021	2	AC	2" Check	F-8	H-16334	RCIC Containment Iso. Valve	C	RO	CIV	No	RR-V-9

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
E51-F028	2	AC	2" Check	G-7	H-16334	RCIC Containment Iso. Valve	C	RO	CIV	No	RR-V-9
E51-F031	2	A	6" MO Gate	J-6	H-16334	RCIC Containment Iso. Valve	O	Qtr	CIV	Yes	
E51-F040	2	AC	10" Check	G-5	H-16334	RCIC Containment Iso. Valve	C	RO	CIV	Yes	RR-V-9
E51-F044A	1	AC	1" Excess Flow Ck B-5	B-5	H-16334	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E51-F044B	1	AC	1" Excess Flow Ck D-5	D-5	H-16334	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E51-F044C	1	AC	1" Excess Flow Ck B-5	B-5	H-16334	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E51-F044D	1	AC	1" Excess Flow Ck D-5	D-5	H-16334	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
E51-F104	2	A	1-1/2" MO Gate	G-5	H-16334	RCIC Containment Iso. Valve	O	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Req'd	Relief CS Just.
E51-F105	2	A	1-1/2" MO Gate	G-5	H-16334	RCIC Containment Iso. Valve	0	Qtr	CIV	Yes	RR-V-2

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Req'd	Relief CS Just.
** System - G11											
G11-F003	2	A	3" AO Gate	B-3	H-16176	DW Flr. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
G11-F004	2	A	3" AO Gate	B-3	H-16176	DW Flr. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
G11-F019	2	A	3" AO Gate	E-3	H-16176	DW Equip. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
G11-F020	2	A	3" AO Gate	E-4	H-16176	DW Equip. Drns. Cont. Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - G31											
G31-F001	1	A	6" MO Gate	B-2	H-16188	RWCU Pump Suc. Inbrd. Iso.	0	Qtr	CIV	Yes	
G31-F004	1	A	6" MO Gate	B-3	H-16188	RWCU Pump Suc. Outbrd. Iso.	0	Qtr	CIV	Yes	
G31-F039	1	AC	4" Check	A-4	H-16183	RWCU Disch. Iso.	0	RO	CIV	No	RR-V-18
G31-F203	1	AC	3" Check	A-4	H-16188	RWCU Disch. Iso.	0	RO	CIV	No	RR-V-18

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - G51 G51-F002	2	A	8" Man Gate	D-4	H-16135	Passive Cont. Iso.	LC	None	CIV	No	
G51-F011	2	A	3" AO Control	C-5	H-16135	Torus Drain and C Purif. Cont. Iso.		Qtr	CIV	No	
G51-F012	2	A	3" AO Control	C-5	H-16135	Torus Drain and C Purif. Cont. Iso.		Qtr	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P21 P21-F353	2	A	2" Manual Gate	F-7	H-16015	Passive Cont. Iso.	LC	None	CIV	No	
P21-F420	2	A	1-1/2" Man Gate	F-8	H-16015	Passive Cont. Iso.	LC	None	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P33 P33-F002	2	A	1" A0 Control	B-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
P33-F003	2	A	1" A0 Control	D-4	H-16276	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
P33-F004	2	A	1" A0 Control	E-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
P33-F005	2	A	1/2" Solenoid	C-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
P33-F006	2	A	1" A0 Control	G-4	H-16276	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
P33-F007	2	A	1" A0 Control	H-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
P33-F010	2	A	1" A0 Control	B-5	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
P33-F011	2	A	1" A0 Control	D-5	H-16276	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
P33-F012	2	A	1" A0 Control	E-5	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
P33-F013	2	A	1/2" Solenoid	C-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
P33-F014	2	A	1" A0 Control	G-5	H-16276	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
P33-F015	2	A	1" AO Control	H-5	H-16276	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P41											
P41-F024A	3	C	1-1/2" Check	B-8	H-16011	HPCI Pump Room Cooler	C	Disassemb	NA	No	RR-V-19
P41-F024B	3	C	1-1/2" Check	C-8	H-16011	HPCI Pump Room Cooler	C	Disassemb	NA	No	RR-V-19
P41-F025A	3	C	3" Check	D-8	H-16011	RHR & CS Pump Room Cooler	C	Disassemb	NA	No	RR-V-19
P41-F025B	3	C	3" Check	D-8	H-16011	RHR & CS Pump Room Cooler	C	Disassemb	NA	No	RR-V-19
P41-F026A	3	C	3" Check	G-7	H-16011	RHR Pump Cooler	C	Disassemb	NA	No	RR-V-19
P41-F026B	3	C	3" Check	G-7	H-16011	RHR Pump Cooler	C	Disassemb	NA	No	RR-V-19
P41-F035A	3	B	2" AO Globe	B-9	H-16011	HPCI Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F035B	3	B	2" AO Globe	C-9	H-16011	HPCI Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F036A	3	B	3" AO Globe	D-9	H-16011	RHR & CS Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F036B	3	B	3" AO Globe	D-9	H-16011	RHR & CS Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F037A	3	B	1-1/2" AO Globe	H-8	H-16011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F037B	3	B	1-1/2" AO Globe	E-9	H-16011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
P41-F037C	3	B	1-1/2" AO Globe	J-8	H-16011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F037D	3	B	1-1/2" AO Globe	E-9	H-16011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F039A	3	B	3" AO Globe	G-8	H-16011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F039B	3	B	3" AO Globe	G-8	H-15011	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
P41-F049	2	A	8" MO Gate	F-6	H-16011	Drywell Air Cooler Iso	0	CS	CIV	Yes	CS-3
P41-F050	2	A	8" MO Gate	D-2	H-16011	Drywell Air Cooler Iso	0	CS	CIV	Yes	CS-3
P41-F064	3	C	6" Check	F-10	H-16011	Division 1 S.W. Supply	0	Full Flow	NA	No	
P41-F065	3	C	8" Check	G-10	H-16011	Division 2 S.W. Supply	0	Full Flow	NA	No	
P41-F310A	3	B	30" MO Bfly	D-6	H-11600	S.W. to Turbine Bldg. Shutoff	0	CS	NA	Yes	CS-4
P41-F310B	3	B	30" MO Bfly	F-5	H-11600	S.W. to Turbine Bldg. Shutoff	0	CS	NA	Yes	CS-4
P41-F310C	3	B	30" MO Bfly	D-6	H-11600	S.W. to Turbine Bldg. Shutoff	0	CS	NA	Yes	CS-4
P41-F310D	3	B	30" MO Bfly	F-5	H-11600	S.W. to Turbine Bldg. Shutoff	0	CS	NA	Yes	CS-4

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
P41-F311A	3	C	18" Check	D-2	D-11001	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
P41-F311B	3	C	18" Check	D-5	D-11001	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
P41-F311C	3	C	18" Check	D-3	D-11001	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
P41-F311D	3	C	18" Check	D-6	D-11001	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
P41-F340	3	B	6" AO Bfly	B-5	H-11600	Diesel Gen. Cooling	C	Qtr	NA	Yes	RR-V-20
P41-F438A	3	C	1 1/2" Check	B-3	D-11001	Service Water Motor Cooling Wtr Check	0	Qtr	NA	No	Note 5
P41-F438B	3	C	1 1/2" Check	A-6	D-11001	Service Water Motor Cooling Wtr Check	0	Qtr	NA	No	Note 5
P41-F552A	3	C	6" Check	B-7	H-11600	Diesel Gen. 1A SW Discharge	C	Full Flow	NA	No	Note 1
P41-F552C	3	C	6" Check	B-2	H-11600	Diesel Gen. 1C SW Discharge	C	Full Flow	NA	No	Note 1

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P42											
P42-F051	2	A	4" MO Gate	B-9	H-16009	RBCCW to Recir. 0 Cont. Iso.	CS		CIV	Yes	CS-5
P42-F052	2	A	4" MO Gate	E-9	H-16009	RBCCW to Recir. 0 Cont. Iso.	CS		CIV	Yes	CS-5

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P51											
P51-F513	2	A	2" Man. Globe	F-3	H-16013	Passive Cont. Iso.	LC	None	CIV	No	
P51-F514	2	A	2" Man. Globe	F-3	H-16015	Passive Cont. Iso.	LC	None	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - P70											
P70-F002	2	A	1* AO Control	F-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	
P70-F003	2	A	1* AO Control	F-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	
P70-F004	2	A	2* Solenoid	B-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
P70-F005	2	A	2* Solenoid	B-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
P70-F066	2	A	2* Solenoid	D-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
P70-F067	2	A	2* Solenoid	D-8	H-16286	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - R43											
R43-F015A	-	B	1 1/2" Solenoid	B-8	H-11631	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F015B	-	B	1 1/2" Solenoid	B-9	H-11638	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F015C	-	B	1 1/2" Solenoid	B-8	H-11631	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F016A	-	B	1 1/2" Solenoid	A-8	H-11631	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F016B	-	B	1 1/2" Solenoid	A-9	H-11638	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F016C	-	B	1 1/2" Solenoid	A-8	H-11631	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-33
R43-F009A	-	C	2" Check	C-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F009B	-	C	2" Check	C-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F009C	-	C	2" Check	A-9	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
R43-F009D	-	C	2" Check	A-9	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
R43-F010A	-	C	2* Check	D-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F010B	-	C	2* Check	D-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F010C	-	C	2* Check	B-8	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
R43-F010D	-	C	2* Check	B-8	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
R43-F011A	-	C	2* Check	B-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F011B	-	C	2* Check	B-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
R43-F011C	-	C	2* Check	A-10	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
R43-F011D	-	C	2* Check	A-10	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
R43-F3034A	-	C	3/4" Check	C-10	H-11631	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3034B	-	C	3/4" Check	C-9	H-11638	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3034C	-	C	3/4" Check	C-10	H-11631	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3035A	-	C	3/4" Check	C-10	H-11631	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3035B	-	C	3/4" Check	C-10	H-11638	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3035C	-	C	3/4" Check	C-10	H-11631	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
R43-F3036A	-	C	1/2" Relief	C-9	H-11631	Air Receiver Relief Valve	C	IWV-3512	NA	No	
R43-F3036B	-	C	1/2" Relief	C-9	H-11638	Air Receiver Relief Valve	C	IWV-3512	NA	No	
R43-F3036C	-	C	1/2" Relief	C-9	H-11631	Air Receiver Relief Valve	C	IWV-3512	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
R43-F3037A	-	C	1/2" Relief	C-11	H-11631	Air Receiver Relief Valve	C	IWV-3512	NA	No	
R43-F3037B	-	C	1/2" Relief	C-11	H-11638	Air Receiver Relief Valve	C	IVW-3512	NA	No	
R43-F3037C	-	C	1/2" Relief	C-11	H-11631	Air Receiver Relief Valve	C	IWV-3512	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - T23											
T23-F004	2	A	3/4" Man. Globe	D-3	H-16060	Passive Cont. Iso.	C	None	CIV	No	
T23-F005	2	A	3/4" Man. Globe	D-3	H-16060	Passive Cont. Iso.	C	None	CIV	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - T46 T46-F001A	3	B	18" AO Bfly	C-1	H-16020	Filter Bed Inlet from Reactor Bldg.	C	Qtr	NA	Yes	
T46-F001B	3	B	18" AO Bfly	G-1	H-16020	Filter Bed Inlet from Reactor Bldg.	C	Qtr	NA	Yes	
T46-F002A	3	B	18" AO Bfly	C-6	H-16174	SGTS Filter Outlet from Reactor Bldg.	C	Qtr	NA	Yes	
T46-F002B	3	B	18" AO Bfly	F-6	H-16174	SGTS Filter Outlet from Reactor Bldg.	C	Qtr	NA	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Form		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - T48 T48-F103	2	A	6" AO Bfly	F-2	H-16000	DW & Torus Supply Iso.	C	Qtr	CIV	Yes	
T48-F104	2	A	1" AO Control	G-4	H-16000	DW & Torus Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F113	2	A	2" AO Control	F-7	H-16000	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F114	2	A	2" AO Control	F-8	H-16000	DW Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F115	2	A	2" AO Control	G-7	H-16000	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F116	2	A	2" AO Control	G-8	H-16000	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F118A	2	A	1" Solenoid	G-5	H-16000	DW Makeup Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F118B	2	A	1" Solenoid	G-5	H-16000	Torus Makeup Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F307	2	A	18" AO Bfly	C-9	H-16024	DW Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F308	2	A	18" AO Bfly	C-10	H-16024	DW Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F309	2	A	18" AO Bfly	E-10	H-16024	Torus Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
T48-F310	2	A	20" AO Bfly	F-10	H-16024	Torus Purge Vac. Brker. Iso.	C	Qtr	CIV	Yes	
T48-F311	2	A	20" AO Bfly	F-9	H-16024	Torus Purge Vac. Brker. Iso.	C	Qtr	CIV	Yes	
T48-F318	2	A	18" AO Bfly	G-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F319	2	A	18" AO Bfly	D-4	H-16024	DW Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F320	2	A	18" AO Bfly	D-3	H-16024	DW Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F321	2	A	2" AO Control	J-7	H-16000	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F322	2	A	2" AO Control	J-8	H-16000	DW Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F323A	2	C	20" Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323B	2	C	20" Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323C	2	C	20" Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
T48-F323D	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323E	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323F	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323G	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323H	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323I	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323J	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323K	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F323L	2	C	20* Check	H-8	H-16024	DW to Torus Vac. Breaker	C	Qtr	NA	No	
T48-F324	2	A	18* AO Bfly	D-10	H-16024	Torus Purge Inlet Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F325	2	A	2* AO Control	H-7	H-16000	Torus Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
T48-F326	2	A	18" AO Bfly	G-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F327	2	A	2" AO Control	H-8	H-16000	Torus Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F328A	2	AC	20" AO Check	G-10	H-16024	Reactor Bldg to C Supp. Cham. Vac. Brker.		Qtr	CIV	No	
T48-F328B	2	AC	20" AO Check	G-9	H-16024	Reactor Bldg to C Supp. Cham. Vac. Brker.		Qtr	CIV	No	
T48-F332A	2	A	2" AO Control	E-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F332B	2	A	2" AO Control	F-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F333A	2	A	2" AO Control	E-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F333B	2	A	2" AO Control	F-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F334A	2	A	2" AO Control	B-3	H-16024	DW Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
T48-F334B	2	A	2" AO Control	C-3	H-16024	DW Purge Outlet C Outbrd. Iso.	C	Qtr	CIV	Yes	
T48-F335A	2	A	2" AO Control	B-4	H-16024	DW Purge Outlet C Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F335B	2	A	2" AO Control	C-4	H-16024	DW Purge Outlet C Inbrd. Iso.	C	Qtr	CIV	Yes	
T48-F338	2	A	2" Solenoid	H-2	H-16024	Bypass-Outbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F339	2	A	2" Solenoid	H-3	H-16024	Bypass-Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F340	2	A	2" Solenoid	D-4	H-16024	Bypass-Outbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F341	2	A	2" Solenoid	D-4	H-16024	Bypass-Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
T48-F342A	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342B	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342C	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord. P&ID		Function	Norm		Leakage	Stroke Notes	
	Class	Cat.		Pos	Exercise		Time Req'd	Relief CS Just.			
T48-F342D	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342E	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342F	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342G	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342H	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342I	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342J	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
T48-F342K	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31

Plant Hatch Unit 1 Valve Test Program
Table 6-1

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
T48-F342L	2	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
										Time Req'd	Relief CS Just.
** System - 2B21											
2B21-F010A	1	AC	19" Check	E-3	H-26000	FW Inbrd. Cont. Iso.	O	RO	CIV	NO	RR-V-1
2B21-F010B	1	AC	18" Check	F-3	H-26000	FW Inbrd. Cont. Iso.	O	RO	CIV	No	RR-V-1
2B21-F013A	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013B	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013C	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013D	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013E	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013F	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013G	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013H	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013K	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	PO	NA	No	RR-V-29

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2B21-F013L	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F013M	1	BC	6" Relief	D-6	H-26000	Main Steam Relief	C	RO	NA	No	RR-V-29
2B21-F016	1	A	3" MO Gate	E-8	H-26000	Main Steam Line C DRN. Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-2
2B21-F019	1	A	3" MO Gate	E-9	H-26000	Main Steam Line C DRN. Outbrd. Iso.	C	Qtr	CIV	Yes	
2B21-F022A	1	A	24" AO Globe	D-8	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F022B	1	A	24" AO Globe	D-8	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F022C	1	A	24" AO Globe	D-8	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F022D	1	A	24" AO Globe	D-8	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F028A	1	A	24" AO Globe	D-9	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F028B	1	A	24" AO Globe	D-9	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F028C	1	A	24" AO Globe	D-9	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F028D	1	A	24" AO Globe	D-9	H-26000	MSIV	O	CS	CIV	Yes	RR-V-10 CS-9
2B21-F036A	2	AC	1" Check	D-3	H-16299	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036B	2	AC	1" Check	D-3	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036C	2	AC	1" Check	E-4	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036D	2	AC	1" Check	E-4	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036E	2	AC	1" Check	D-3	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036F	2	AC	1" Check	D-3	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036G	2	AC	1" Check	E-4	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F036H	2	AC	1" Check	E-4	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036K	2	AC	1" Check	D-3	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036L	2	AC	1" Check	D-3	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F036M	2	AC	1" Check	E-4	H-28023	MSRV Accumulator Check Valve	C	RO	RR-V-28	NA	RR-V-28
2B21-F037A	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037B	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037C	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037D	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037E	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037F	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F037G	3	C	6" Check	H-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037H	3	C	6" Check	E-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037K	3	C	6" Check	E-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037L	3	C	6" Check	E-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F037M	3	C	6" Check	E-7	H-26000	Vac. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F041	1	AC	1" Excess Flow Ck	B-5	H-26001	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2B21-F043A	1	AC	1" Excess Flow Ck	C-5	H-26001	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2B21-F043B	1	AC	1" Excess Flow Ck	C-9	H-26001	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2B21-F045A	1	AC	1" Excess Flow Ck	C-5	H-26001	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2B21-F045B	1	AC	1" Excess Flow Ck	C-9	H-26001	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
										Time Req'd	Relief CS Just.
2B21-F047A	1	AC	1* Excess Flow Ck F-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F047B	1	AC	1* Excess Flow Ck F-9	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F049A	1	AC	1* Excess Flow Ck F-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F049B	1	AC	1* Excess Flow Ck F-9	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F051A	1	AC	1* Excess Flow Ck H-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F051B	1	AC	1* Excess Flow Ck H-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F051C	1	AC	1* Excess Flow Ck H-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F051D	1	AC	1* Excess Flow Ck H-5	H-26001		Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F053A	1	AC	1" Excess Flow Ck H-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F053B	1	AC	1" Excess Flow Ck H-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F053C	1	AC	1" Excess Flow Ck H-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F053D	1	AC	1" Excess Flow Ck H-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F055	1	AC	1" Excess Flow Ck J-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F057	1	AC	1" Excess Flow Ck J-5		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059A	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059B	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F059C	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059D	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059E	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059F	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059G	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059H	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059L	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059M	1	AC	1" Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F059N	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059P	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059R	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059S	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059T	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F059U	1	AC	1* Excess Flow Ck H-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F061	1	AC	1* Excess Flow Ck J-9		H-26001	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F070A	1	AC	1* Excess Flow Ck D-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B21-F070B	1	AC	1* Excess Flow Ck D-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F070C	1	AC	1* Excess Flow Ck D-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F070D	1	AC	1* Excess Flow Ck D-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F071A	1	AC	1* Excess Flow Ck B-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F071B	1	AC	1* Excess Flow Ck B-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F071C	1	AC	1* Excess Flow Ck B-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F071D	1	AC	1* Excess Flow Ck B-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B21-F072A	1	AC	1* Excess Flow Ck B-9		H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time	Relief
									Req'd	CS	Just.
2B21-F072B	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F072C	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F072D	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F073A	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F073B	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F073C	1	AC	1" Excess Flow Ck B-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F073D	1	AC	1" Excess Flow Ck L-9	H-26000	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B21-F076A	2	C	18" Check	E-2	H-26000 FW Check	0	CS	NA	No	CS-11	
2B21-F076B	2	C	18" Check	E-2	H-26000 FW Check	0	CS	NA	No	CS-11	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos.	Exercise		Time Req'd	Relief CS Just.
2B21-F077A	1	AC	18* Check	E-3	H-26000	FW Outbrd Iso.	0	CS	CIV	No	CS-10
2B21-F077B	1	AC	18* Check	E-3	H-26000	FW Outbrd Iso.	0	CS	CIV	No	CS-10
2B21-F110B	3	C	10* Check	H-7	H-26000	Val. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F110D	3	C	10* Check	H-7	H-26000	Val. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F110F	3	C	10* Check	H-7	H-26000	Val. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F110G	3	C	10* Check	H-7	H-26000	Val. Breaker MSRV Disch.	C	RO	NA	No	RR-V-11
2B21-F111	2	A	1* AO Gate	E-10	H-26384	Pass Sample Valves	C	Qtr	CIV	Yes	
2B21-F112	2	A	1* AO Gate	E-10	H-26384	Pass Sample Valves	C	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2B31											
2B31-F003A	1	AC	1* Excess Flow Ck G-2		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F003B	1	AC	1* Excess Flow Ck G-2		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F004A	1	AC	1* Excess Flow Ck G-2		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F004B	1	AC	1* Excess Flow Ck G-2		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F009A	1	AC	1* Excess Flow Ck D-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F009B	1	AC	1* Excess Flow Ck E-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F009C	1	AC	1* Excess Flow Ck E-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F009D	1	AC	1* Excess Flow Ck F-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B31-F010A	1	AC	1* Excess Flow Ck D-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F010B	1	AC	1* Excess Flow Ck F-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F010C	1	AC	1* Excess Flow Ck E-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F010D	1	AC	1* Excess Flow Ck F-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F011A	1	AC	1* Excess Flow Ck D-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F011B	1	AC	1* Excess Flow Ck F-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F011C	1	AC	1* Excess Flow Ck E-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	
2B31-F011D	1	AC	1* Excess Flow Ck G-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B31-F012A	1	AC	1" Excess Flow Ck E-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F012B	1	AC	1" Excess Flow Ck F-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F012C	1	AC	1" Excess Flow Ck E-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F012D	1	AC	1" Excess Flow Ck G-9		H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F013A	1	AC	3/4" Check	G-3	H-26003	Recir. Pump Seal Wtr.	0	RO	CIV	No	RR-V-5
2B31-F013B	1	AC	3/4" Check	G-3	H-26003	Recir. Pump Seal Wtr.	0	RO	CIV	No	RR-V-5
2B31-F017A	1	AC	3/4" Check	G-2	H-26003	Recir. Pump Seal Wtr.	0	RO	CIV	No	RR-V-5
2B31-F017B	1	AC	3/4" Check	G-2	H-26003	Recir. Pump Seal Wtr.	0	RO	CIV	No	RR-V-5
2B31-F019	1	A	1" AO Globe	E-4	H-26003	Reac. Sample Sys. Inbrd. Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2B31-F020	1	A	1" AO Globe	E-2	H-26003	Reac. Sample Sys. Outbrd. Iso.	0	Qtr	CIV	Yes	
2B31-F031A	1	B	28" MO Gate	G-7	H-26003	Reactor Recirculation	0	CS	NA	Yes	CS-1
2B31-F031B	1	B	28" MO Gate	G-7	H-26003	Reactor Recirculation	0	CS	NA	Yes	CS-1
2B31-F040A	1	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F040B	1	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F040C	1	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F040D	1	AC	1" Excess Flow Ck	H-9	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F057A	1	AC	1" Excess Flow Ck	F-2	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2B31-F057B	1	AC	1" Excess Flow Ck	F-2	H-26003	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Req'd	Relief CS Just.
** System - 2C11											
2C11-F010A	2	B	1" A0 Globe	A-5	H-26007	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes	
2C11-F010B	2	B	1" A0 Globe	A-5	H-26007	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes	
2C11-F011	2	B	2" A0 Globe	B-3	H-26007	Scram Disch. Volume Drain Valve	C	Qtr	NA	Yes	
2C11-F035A	2	B	1" A0 Globe	A-5	H-26007	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes	
2C11-F035B	2	B	1" A0 Globe	A-5	H-26007	Scram Disch. Volume Vent Valve	C	Qtr	NA	Yes	
2C11-F037	2	B	2" A0 Globe	B-3	H-26007	Scram Disch. Volume Drain Valve	C	Qtr	NA	Yes	
2C11-HCU-114	2	C	3/4" Check	A-6	H-26006	Scram Disch. Volume HCU Check Valve	C	RO	NA	No	RR-V-38
2C11-HCU-115	2	C	1/2" Check	C-6	H-26006	Charging Water HCU Check Valve	C	RO	NA	No	RR-V-26

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2C11-HCU-120	1	B	1/2" Solenoid	B-6	H-26006	CRD Drive Water C Insert	C	Note 8	NA	No	
2C11-HCU-121	1	B	1/2" Solenoid	B-6	H-26006	CRD Drive Water C Withdraw	C	Note 8	NA	No	
2C11-HCU-122	1	B	1/2" Solenoid	B-5	H-26006	CRD Drive Water C Insert	C	Note 8	NA	No	
2C11-HCU-123	1	B	1/2" Solenoid	B-5	H-26006	CRD Drive Water C Withdraw	C	Note 8	NA	No	
2C11-HCU-126	1	B	1" AO Globe	C-5	H-26006	Scram Insert HCU Control Valve	C	RO	NA	No	RR-V-27
2C11-HCU-127	1	B	3/4" AO Globe	B-5	H-26006	Scram Disch. HCU Control Valve	C	RO	NA	No	RR-V-27
2C11-HCU-138	1	C	1/2" Check	C-4	H-26006	Cooling Water Header HCU Check Valve	C	Note 3	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2C41											
2C41-F004A	2	D	1-1/2* Expl	E-2	H-26009	SLC Expl. Act.	C	IWV-3610	NA	No	
2C41-F004B	2	D	1-1/2* Expl	E-2	H-26009	SLC Expl. Act.	C	IWV-3610	NA	No	
2C41-F006	1	AC	1-1/2* Check	E-2	H-26009	SLC Outbrd Cont. Iso.	C	RO	CIV	No	RR-V-6
2C41-F007	1	AC	1-1/2* Check	E-2	H-26009	SLC Inbrd. Cont. Iso.	C	RO	CIV	No	RR-V-6
2C41-F029A	2	C	1* Relief	E-5	H-26009	SLC Pump Disch. Relief	C	IWV-3512	NA	No	
2C41-F029B	2	C	1* Relief	H-5	H-26009	SLC Pump Disch. Relief	C	IWV-3512	NA	No	
2C41-F033A	2	C	1-1/2* Check	F-4	H-26009	SLC Pump Disch.	C	Qtr	NA	No	
2C41-F033B	2	C	1-1/2* Check	G-4	H-26009	SLC Pump Disch.	C	Qtr	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2C51											
2C51-Ball A	2	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2C51-Ball B	2	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2C51-Ball C	2	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2C51-Ball D	2	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2C51-F3012	2	A	Solenoid	F-13	H-26993	TIP N2 Purge	0	Qtr	CIV	Yes	RR-V-32
2C51-F3017	2	AC	Check	E-13	H-26993	TIP N2 Purge	C	RO	CIV	NA	RR-V-36
2C51-Shear A	2	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
2C51-Shear B	2	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
2C51-Shear C	2	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	
2C51-Shear D	2	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	IWV-3610	NA	NA	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2D11											
2D11-F050	2	A	1" AO Control	D-5	H-26016	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2D11-F051	2	A	1" AO Control	F-5	H-26016	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2D11-F052	2	A	1" AO Control	D-6	H-26016	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2D11-F053	2	A	1" AO Control	F-6	H-26016	Fission Prod. Mon. Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3
2D11-F058	2	A	1" Manual Globe	G-3	H-26016	Fission Prod. Mon. Cont. Iso.	LC	NA	CIV	No	
2D11-F065	2	A	1" Manual Globe	F-8	H-26016	Fission Prod. Mon. Cont. Iso.	LC	NA	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2E11											
2E11-F003A	2	B	16" MO Gate	D-4	H-26015	RHR Hx Shell Side Outlet	0	Qtr	NA	Yes	
2E11-F003B	2	B	16" MO Gate	E-8	H-26014	RHR Hx Shell Side Outlet	0	Qtr	NA	Yes	
2E11-F004A	2	A	24" MO Gate	E-8	H-26015	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
2E11-F004B	2	A	24" MO Gate	F-3	H-26014	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
2E11-F004C	2	A	24" MO Gate	E-9	H-26015	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
2E11-F004D	2	A	24" MO Gate	F-2	H-26014	RHR Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
2E11-F005A	3	C	14" Check	C-5	H-21039	RHR SW Pump Disch. Check Valve	C	Full Flow	NA	NA	Note 1
2E11-F005B	3	C	14" Check	F-5	H-21039	RHR SW Pump Disch. Check Valve	C	Full Flow	NA	NA	Note 1
2E11-F005C	3	C	14" Check	D-4	H-21039	RHR SW Pump Disch. Check Valve	C	Full Flow	NA	NA	Note 1

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2E11-F005D	3	C	14" Check	G-4	H-21039	RHR SW Pump Disch. Check Valve	C	Full Flow	NA	NA	Note 1
2E11-F006A	2	B	20" MO Gate	F-8	H-26015	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
2E11-F006B	2	B	20" MO Gate	F-3	H-26014	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
2E11-F006C	2	B	20" MO Gate	F-10	H-26015	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
2E11-F006D	2	B	20" MO Gate	F-2	H-26014	RHR Shutdown Cooling Sys	C	Qtr	NA	Yes	
2E11-F007A	2	A	4" MO Gate	D-5	H-26014	RHR Pump Min Flow Torus Iso.	O	Qtr	CIV	Yes	RR-V-2
2E11-F007B	2	A	4" MO Gate	D-6	H-26014	RHR Pump Min Flow Torus Iso.	O	Qtr	CIV	Yes	RR-V-2
2E11-F008	1	A	20" MO Gate	D-10	H-26015	RHR Shutdown Cooling Outbrd. Iso.	C	CS	PIV/CIV	Yes	CS-2
2E11-F009	1	A	20" MO Gate	D-10	H-26015	RHR Shutdown Cooling Outbrd. Iso.	C	CS	PIV	Yes	RR-V-2 CS-2
2E11-F011A	2	A	4" MO Gate	D-3	H-26015	RHR Cond. Disch. to Torus	C	Qtr	CIV	Yes	RR-V-2

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2E11-F011B	2	A	4" MO Gate	D-8	H-26014	RHR Cond. Disch. to Torus	C	Qtr	CIV	Yes	RR-V-2
2E11-F015A	1	A	24" MO Gate	D-7	H-26015	LPCI Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
2E11-F015B	1	A	24" MO Gate	D-4	H-26014	LPCI Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
2E11-F016A	2	A	16" MO Globe	B-7	H-26015	Cont. Spray Outbrd. Iso.	C	Qtr	CIV	Yes	
2E11-F016B	2	A	16" MO Globe	B-4	H-26014	Cont. Spray Outbrd. Iso.	C	Qtr	CIV	Yes	
2E11-F017A	1	B	24" MO Globe	D-7	H-26015	LPCI	O	Qtr	NA	Yes	
2E11-F017B	1	B	24" MO Globe	D-4	H-26014	LPCI	O	Qtr	NA	Yes	
2E11-F021A	2	B	16" MO Gate	B-9	H-26015	Containment Spray	C	Qtr	NA	Yes	
2E11-F021B	2	B	16" MO Gate	C-2	H-26014	Containment Spray	C	Qtr	NA	Yes	
2E11-F023	2	A	4" MO Globe	B-3	H-26014	Passive Cont. Iso.	C	None	CIV	No	
2E11-F024A	2	B	16" MO Globe	C-6	H-26015	Suppression Pool Cooling	C	Qtr	NA	Yes	
2E11-F024B	2	B	16" MO Globe	D-6	H-26014	Suppression Pool Cooling	C	Qtr	NA	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
										Req'd	Relief CS Just.
2E11-F025A	2	AC	1" Relief	C-7	H-26015	LPCI Inj. Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F025B	2	AC	1" Relief	C-4	H-26014	LPCI Inj. Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F026A	2	A	4" MO Gate	D-2	H-26015	Cond. Disch to RCIC Cont. Iso.	C	Qtr	CIV	Yes	
2E11-F026B	2	A	4" MO Gate	E-9	H-26014	Cond. Disch to RCIC Cont. Iso.	C	Qtr	CIV	Yes	
2E11-F027A	2	B	6" MO Globe	C-7	H-26015	Suppression Pool Spray	C	Qtr	NA	Yes	
2E11-F027B	2	B	6" MO Globe	D-5	H-26014	Suppression Pool Spray	C	Qtr	NA	Yes	
2E11-F028A	2	A	16" MO Gate	C-6	H-26015	Suppression Pool Spray Outbrd Iso.	C	Qtr	CIV	Yes	
2E11-F028B	2	A	16" MO Gate	C-7	H-26014	Suppression Pool Spray Outbrd Iso.	C	Qtr	CIV	Yes	
2E11-F029	2	AC	1" Relief	E-9	H-26015	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F030A	2	AC	1" Relief	F-8	H-26014	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code			Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.	Description				Pos	Exercise		Time Req'd	Relief CS Just.
2E11-F030B	2	AC	1* Relief	F-4	H-26015	RHR Pump Suc Cont. Iso.	2	IWV-3512	CIV	No	
2E11-F030C	2	AC	1* Relief	F-10	H-26014	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F030D	2	AC	1* Relief	F-2	H-26015	RHR Pump Suc Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F031A	2	C	20* Check	H-6	H-26015	RHR Pump Discharge	C	Full Flow	NA	No	
2E11-F031B	2	C	20* Check	H-6	H-26014	RHR Pump Discharge	C	Full Flow	NA	No	
2E11-F031C	2	C	20* Check	H-9	H-26015	RHR Pump Discharge	C	Full Flow	NA	No	
2E11-F031D	2	C	20* Check	H-3	H-26014	RHR Pump Discharge	C	Full Flow	NA	No	
2E11-F040	2	B	4* MO Globe	B-6	H-26014	RHR to Radwaste	C	Qtr	NA	Yes	
2E11-F041A	2	A	1* AO Control	C-8	H-26015	RHR Inst. Iso.	0	Qtr	CIV	Yes	
2E11-F041B	2	A	1* AO Control	D-2	H-26014	RHR Inst. Iso.	0	Qtr	CIV	Yes	
2E11-F041C	2	A	1* AO Control	C-8	H-26015	RHR Inst. Iso.	0	Qtr	CIV	Yes	
2E11-F041D	2	A	1* AO Control	C-2	H-26014	RHR Inst. Iso.	0	Qtr	CIV	Yes	
2E11-F046A	2	C	3* Check	G-6	H-26015	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord. P&ID		Function	Norm			Stroke Notes	
	Class	Cat.		Pos	Exercise		Leakage	Time Req'd	Relief CS Just.		
2E11-F046B	2	C	3" Check	H-5	H-26014	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
2E11-F046C	2	C	3" Check	G-9	H-26015	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
2E11-F046D	2	C	3" Check	G-2	H-26014	RHR Minimum Flow Line	C	Full Flow	NA	No	Note 2
2E11-F047A	2	B	16" MO Gate	E-5	H-26015	RHR Hx Shell Side Side Inlet	O	Qtr	NA	Yes	
2E11-F047B	2	B	16" MO Gate	E-6	H-26014	RHR Hx Shell Side Side Inlet	O	Qtr	NA	Yes	
2E11-F048A	2	B	24" MO Globe	D-5	H-26015	RHR Hx Shell Side Bypass	O	Qtr	NA	Yes	
2E11-F048B	2	B	24" MO Globe	E-6	H-26014	RHR Hx Shell Side Bypass	O	Qtr	NA	Yes	
2E11-F049	2	B	4" MO Globe	B-5	H-26014	RHR to Radwaste	C	Qtr	NA	Yes	
2E11-F050A	1	AC	18" AO Check	D-9	H-26015	LPCI Injec. Iso.	C	Disassemb	PIV	No	RR-V-17
2E11-F050B	1	AC	18" AO Check	D-3	H-26014	LPCI Injec. Iso.	C	Disassemb	PIV	No	RR-V-17
2E11-F055A	2	AC	4" Relief	F-4	H-26015	RHR Hx Shell Relief Cont. Iso.	C	IWV-3512	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code			Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.	Description				Pos	Exercise		Time Req'd	Relief CS Just.
2E11-F055B	2	AC	4" Relief	F-7	H-26014	RHR Hx Shell Relief Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F068A	3	B	10" MO Ball	H-10	H-26015	RHR Hx Ser. Wtr. Disc.	C	NA	NA	No	RR-V-22
2E11-F068B	3	B	10" MO Ball	H-10	H-26014	RHR Hx Ser. Wtr. Disc.	C	NA	NA	No	RR-V-22
2E11-F091A	2	B	6" MO Globe	E-2	H-26015	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
2E11-F091B	2	B	6" MO Globe	E-9	H-26014	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
2E11-F097	2	AC	3" Relief	E-9	H-26015	Steam Line Relief Cont. Iso.	C	IWV-3512	CIV	No	
2E11-F103A	2	A	1" MO Globe	E-4	H-26015	RHR Hx Vent Cont. Iso.	C	Qtr	CIV	Yes	
2E11-F103B	2	A	1" MO Globe	E-7	H-26014	RHR Hx Vent Cont. Iso.	C	Qtr	CIV	Yes	
2E11-F122A	1	A	1" AO Plug	D-8	H-26015	2E11-F050A Bypass Valve	C	CS	PIV	Yes	CS-8
2E11-F122B	1	A	1" AO Plug	D-3	H-26014	2E11-F050B Bypass Valve	C	CS	PIV	Yes	CS-8

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2E11-F124A	2	C	2* Stop Check	D-4	H-26019	Maintain RHR Water Level	0	Qtr	NA	No	
2E11-F124B	2	C	2* Stop Check	D-6	H-26019	Maintain RHR Water Level	0	Qtr	NA	No	
2E11-F140A	2	B	6* NO Gate	E-2	H-26015	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
2E11-F140B	2	B	6* NO Gate	E-9	H-26014	Steam Line to RHR Hx Shutdown	C	Qtr	NA	Yes	
2E11-F207A	3	B	2* AO PCV	B-4	H-21034	RHR Service Water Pump Min. Flow	C	Qtr	NA	No	RR-V-24
2E11-F207B	3	B	2* AO PCV	F-4	H-21034	RHR Service Water Pump Min. Flow	C	Qtr	NA	No	RR-V-24
2E11-F207C	3	B	2* AO PCV	D-4	H-21034	RHR Service Water Pump Min. Flow	C	Qtr	NA	No	RR-V-24
2E11-F207D	3	B	2* AO PCV	G-4	H-21034	RHR Service Water Pump Min. Flow	C	Qtr	NA	No	RR-V-24
2E11-F3078A	2	AC	3/4* Relief	F-4	H-26015	RHR Hx A Thermal Relief Valve	C	Note 4	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code			Coord. P&ID	Function	Norm			Stroke Notes	
	Class	Cat.	Description			Pos	Exercise	Leakage	Time Req'd	Relief CS Just.
2E11-F3078B	2	AC	3/4" Relief	F-7	H-26014 RHR Hx B Thermal Relief Valve	C	Note 4	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord. P&ID		Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.		P&ID	P&ID					Time Req'd	Relief CS Just.
** System - 2E21											
2E21-F001A	2	A	20" MO Gate	G-7	H-26018	CS Pump Suction Out	O	Qtr	CIV	Yes	
2E21-F001B	2	A	20" MO Gate	H-7	H-26018	CS Pump Suction Out	O	Qtr	CIV	Yes	
2E21-F003A	2	C	12" Check	F-7	H-26018	CS Pump Discharge	C	Full Flow	NA	No	
2E21-F003B	2	C	12" Check	F-9	H-26018	CS Pump Discharge	C	Full Flow	NA	No	
2E21-F004A	1	B	10" MO Gate	E-6	H-26018	CS Outbrd. Injection	O	Qtr	NA	Yes	
2E21-F004B	1	B	10" MO Gate	C-6	H-26018	CS Outbrd. Injection	O	Qtr	NA	Yes	
2E21-F005A	1	A	10" MO Gate	E-5	H-26018	CS Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
2E21-F005B	1	A	10" MO Gate	C-5	H-26018	CS Outbrd. Cont. Iso.	C	Qtr	PIV/CIV	Yes	
2E21-F006A	1	AC	10" AO Check	D-4	H-26018	CS Injection Pressure Iso.	C	Disassemb	PIV	No	RR-V-16
2E21-F006B	1	AC	10" AO Check	D-4	H-26018	CS Injection Pressure Iso.	C	Disassemb	PIV	No	SR-V-16
2E21-F012A	2	C	2" Relief	E-7	H-26018	CS Pump Disch. Relief	C	IWV-3512	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2E21-F012B	2	C	2" Relief	E-7	H-26018	CS Pump Disch. Relief	C	IWV-3512	NA	No	
2E21-F015A	2	A	10" MO Globe	D-7	H-26018	Core Spray Test Bypass Cont. Iso.	C	Qtr	CIV	Yes	
2E21-F015B	2	A	10" MO Globe	D-7	H-26018	Core Spray Test Bypass Cont. Iso.	C	Qtr	CIV	Yes	
2E21-F018A	1	AC	1" Excess Flow Ck B-3	B-3	H-26018	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E21-F018B	1	AC	1" Excess Flow Ck B-3	B-3	H-26018	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E21-F018C	1	AC	1" Excess Flow Ck B-4	B-4	H-26018	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E21-F031A	2	B	3" MO Gate	F-8	H-26018	CS Pump Min. Flow	O	Qtr	NA	Yes	
2E21-F031B	2	B	3" MO Gate	F-9	H-26018	CS Pump Min. Flow	O	Qtr	NA	Yes	
2E21-F036A	2	AC	3" Check	E-8	H-26018	CS Test Line Cont. Iso.	C	Full Flow	CIV	No	RR-V-21 Note 2

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2E21-F036B	2	AC	3" Check	E-9	H-26018	CS Test Line Cont. Iso.	C	Full Flow	CIV	No	RR-V-21 Note 2
2E21-F037A	1	A	1" AO Plug	D-4	H-26018	2E21-F006A Bypass Valve	C	CS	PIV	Yes	CS-8
2E21-F037B	1	A	1" AO Plug	C-4	H-26018	2E21-F006B Bypass Valve	C	CS	PIV	Yes	CS-8
2E21-F040A	2	C	1-1/2" Stop Check	D-5	H-26019	Maintain CS Water Level	O	Qtr	NA	No	
2E21-F040B	2	C	1-1/2" Stop Check	D-6	H-26019	Maintain CS Water Level	O	Qtr	NA	No	
2E21-F044A	2	AC	1-1/2" Stop Check	E-1	H-26019	Jockey Pump Bypass Cont. Iso.	O	RO	CIV	No	RR-V-30
2E21-F044B	2	AC	1-1/2" Stop Check	E-9	H-26019	Jockey Pump Bypass Cont. Iso.	O	RO	CIV	No	RR-V-30

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat. Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
									Time Req'd	Relief CS Just.	
** System - 2E32											
2E32-F001B	1	A	1-1/2"	MO Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	Qtr	CIV	Yes
2E32-F001F	1	A	1-1/2"	MO Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	Qtr	CIV	Yes
2E32-F001K	1	A	1-1/2"	MO Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	Qtr	CIV	Yes
2E32-F001P	1	A	1-1/2"	MO Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	Qtr	CIV	Yes
2E32-F002B	2	B	1-1/2"	MO Globe	E-7	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes
2E32-F002F	2	B	1-1/2"	MO Globe	E-7	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes
2E32-F002K	2	B	1-1/2"	MO Globe	E-7	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes
2E32-F002P	2	B	1-1/2"	MO Globe	E-7	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes
2E32-F003B	2	B	1-1/2"	MO Globe	E-5	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2E32-F003F	2	B	1-1/2" MO Globe	E-5	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes	
2E32-F003K	2	B	1-1/2" MO Globe	E-5	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes	
2E32-F003P	2	B	1-1/2" MO Globe	E-5	H-26022	MSIV Leakage Control	C	Qtr	NA	Yes	
2E32-F006	2	B	1-1/2" MO Globe	C-11	H-26022	MSIV Leakage Control	C	CS	NA	Yes	CS-6
2E32-F007	2	B	1-1/2" MO Globe	D-11	H-26022	MSIV Leakage Control	C	CS	NA	Yes	CS-6
2E32-F008	2	B	1-1/2" MO Globe	C-10	H-26022	MSIV Leakage Control	C	CS	NA	Yes	CS-6
2E32-F009	2	B	1-1/2" MO Globe	D-10	H-26022	MSIV Leakage Control	C	CS	NA	Yes	CS-6

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2E41											
2E41-F001	2	B	10" MO Gate	E-10	H-26020	HPCI Steam Supply Shutoff	C	Qtr	NA	Yes	
2E41-F002	1	A	10" MO Gate	C-3	H-26020	HPCI Steam Supply Inbrd. Iso.	O	CS	CIV	Yes	RR-V-2 CS-7
2E41-F003	1	A	10" MO Gate	C-4	H-26020	HPCI Steam Supply Outbrd. Iso.	O	Qtr	CIV	Yes	
2E41-F004	2	B	16" MO Gate	D-7	H-26020	HPCI Pump Suc. from Cond. Stor.	O	Qtr	NA	Yes	
2E41-F005	2	C	14" Check	E-5	H-26020	HPCI Pump Disch.	C	Full Flow	NA	No	
2E41-F006	2	A	14" MO Gate	E-4	H-26020	HPCI Pump Inbrd. Disch. Iso.	C	Qtr	PIV	Yes	
2E41-F007	2	B	14" MO Gate	E-5	H-26020	HPCI Pump Outbrd. Disch.	O	Qtr	NA	Yes	
2E41-F008	2	B	10" MO Globe	D-7	H-26020	HPCI Pump Test Bypass	C	Qtr	NA	Yes	
2E41-F011	2	B	10" MO Gate	C-6	H-26020	HPCI Pump Redun. Shutoff to Cont. Stg.	C	Qtr	NA	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time	Relief
										Req'd	CS Just.
2E41-F012	2	A	4" MO Globe	F-6	H-26020	HPCI Pump Min. Flow Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-2
2E41-F019	2	C	16" Check	D-7	H-26020	HPCI Pump Suc. Cond. Stg.	C	Full Flow	NA	No	
2E41-F021	2	AC	12" Stop Check	G-3	H-26020	HPCI Turb. Exh. Inbrd. Iso.	C	Qtr	CIV	No	RR-V-8
2E41-F022	2	AC	2" Stop Check	G-3	H-26020	HPCI Turb. Exh. Drn. Torus Iso.	C	Qtr	CIV	No	RR-V-8
2E41-F024A	1	AC	1" Excess Flow Ck C-4	C-4	H-26020	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E41-F024B	1	AC	1" Excess Flow Ck D-4	D-4	H-26020	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E41-F024C	1	AC	1" Excess Flow Ck C-4	C-4	H-26020	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E41-F024D	1	AC	1" Excess Flow Ck E-4	E-4	H-26020	Instrument Excess Flow Check Valve	O	RO	NA	NA	RR-V-15
2E41-F035	2	B	2" AO PCV	F-7	H-26021	HPCI Turb. Lube Oil Cooling	C	Note 6	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
										Time Req'd	Relief CS Just.
2E41-F040	2	AC	2" Check	G-4	H-26020	HPCI Turb. Exh. Drn. Torus Iso.	C	Qtr	CIV	No	
2E41-F041	2	B	16" MO Gate	D-7	H-26020	HPCI Pump Suc. Shutoff	C	Qtr	NA	Yes	
2E41-F042	2	A	16" MO Gate	H-4	H-26020	HPCI Pump Suc. Torus Outbrd. Iso.	C	Qtr	CIV	Yes	
2E41-F045	2	C	16" Check	H-5	H-26020	HPCI Pump Suction	C	Disassemb	NA	No	RR-V-12
2E41-F046	2	AC	4" Check	F-6	H-26020	HPCI Pump Min Flow Outbrd. Iso.	C	Full Flow	CIV	No	Note 2
2E41-F048	2	C	2" Check	G-8	H-26021	Lube Oil Cooling Wtr Return Check	C	RO	NA	No	RR-V-36
2E41-F049	2	AC	20" Check	G-4	H-26020	HPCI Turb. Exh. Outbrd. Iso.	C	Qtr	CIV	No	
2E41-F051	2	A	16" AO Bfly	H-4	H-26020	HPCI Pump Suc. Torus Inbrd. Iso.	O	Qtr	CIV	Yes	
2E41-F057	2	C	2" Check	G-9	H-26021	Lube Oil Cooling Wtr Return Check	C	RO	NA	No	RR-V-36

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time	Relief
									Req'd	CS	Just.
2E41-F059	2	B	2" MO Globe	F-7	H-26020	HPCI Turb. Lube Oil Cooling	C	Qtr	NA	Yes	
2E41-F102	2	C	1" Check	F-2	H-26020	Vacuum Relief	C	RO	NA	NA	RR-V-23
2E41-F103	2	C	1" Check	F-2	H-26020	Vacuum Relief	C	RO	NA	NA	RR-V-23
2E41-F104	2	A	2" MO Gate	F-2	H-26020	HPCI Vac. Relief Outbrd. Torus Iso.	O	Qtr	CIV	Yes	
2E41-F111	2	A	2" MO Gate	G-1	H-26020	HPCI Vac. Relief Inbrd. Torus Iso.	O	Qtr	CIV	Yes	
2E41-F121	2	A	3/8" Solenoid	H-9	H-26384	Pass Sample Return	C	Qtr	CIV	Yes	RR-V-3
2E41-F122	2	A	3/8" Solenoid	H-9	H-26384	Pass Sample Return	C	Qtr	CIV	Yes	RR-V-3

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Time Req'd	Notes Relief CS Just.
** System - 2E51											
2E51-F001	2	AC	10" Stop Check	G-5	H-26023	RCIC Turb. Exh. to Torus Iso.	C	RO	CIV	No	RR-V-8 RR-V-9
2E51-F002	2	AC	2" Stop Check	G-5	H-26023	RCIC Vac Pump Disch. to Torus Iso.	C	RO	CIV	No	RR-V-8 RR-V-9
2E51-F003	2	A	6" AO Bfly	H-6	H-26023	RCIC Pump Suction Torus Iso.	O	Qtr	CIV	Yes	
2E51-F007	1	A	4" MO Gate	C-5	H-26023	RCIC Steam Suppy Inbrd. Iso.	O	Qtr	CIV	Yes	RR-V-2
2E51-F008	1	A	4" MO Gate	C-6	H-26023	RCIC Steam Suppy Outbrd. Iso.	O	Qtr	CIV	Yes	
2E51-F013	2	A	4" MO Gate	D-6	H-26023	RCIC Feedwater Inj.	C	Qtr	PIV	Yes	
2E51-F019	2	A	2" MO Globe	E-7	H-26023	RCIC Pump Min. Flow Torus Iso.	C	Qtr	CIV	Yes	RR-V-2
2E51-F021	2	AC	2" Check	E-7	H-26023	RCIC Pump Min. Flow Torus Iso.	C	RO	CIV	No	RR-V-9
2E51-F028	2	AC	2" Check	F-7	H-26023	RCIC Vac. Pump Disch. Torus Iso.	C	RO	CIV	No	RR-V-9

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke	Notes
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2E51-F031	2	A	6" MO Gate	H-6	H-26023	RCIC Pump Suction Torus Iso.	0	Qtr	CIV	Yes	
2E51-F040	2	AC	10" Check	F-5	H-26023	RCIC Turb. Exh. Torus Iso.	C	RO	CIV	Yes	RR-V-9
2E51-F044A	1	AC	1" Excess Flow Ck	A-5	H-26023	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2E51-F044B	1	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2E51-F044C	1	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2E51-F044D	1	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	RO	NA	NA	RR-V-15
2E51-F104	2	A	1-1/2" MO Gate	F-5	H-26023	RCIC Vac. Brker. Torus Iso.	0	Qtr	CIV	Yes	
2E51-F105	2	A	1-1/2" MO Gate	F-4	H-26023	RCIC Vac. Brker. Torus Iso.	0	Qtr	CIV	Yes	RR-V-2

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2G11											
2G11-F003	2	A	4" AO Gate	B-3	H-26026	DW Flr. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
2G11-F004	2	A	4" AO Gate	B-4	H-26026	DW Flr. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
2G11-F019	2	A	4" AO Gate	E-4	H-26026	DW Equip. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
2G11-F020	2	A	4" AO Gate	E-4	H-26026	DW Equip. Drns. Cont. Iso.	0	Qtr	CIV	Yes	
2G11-F852	2	A	1-1/2" Man Gate	E-11	H-26026	Chem. drains Cont. Iso.	LC	NA	CIV	No	
2G11-F853	2	A	1-1/2" Man Gate	D-11	H-26026	Chem. drains Cont. Iso.	LC	NA	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2G31											
2G31-F001	1	A	6" MO Gate	C-2	H-26036	RWCU Pump Suc. Inbrd. Iso.	0	Qtr	CIV	Yes	
2G31-F004	1	A	6" MO Gate	C-3	H-26036	RWCU Pump Suc. Outbrd. Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2G51											
2G51-F002	2	A	8" Man Gate	D-4	H-26042	Passive Cont. Iso.	LC	None	CIV	No	
2G51-F011	2	A	3" AO Control	C-5	H-26042	Torus Drain and C Purif. Cont. Iso.		Qtr	CIV	No	
2G51-F012	2	A	3" AO Control	C-5	H-26042	Torus Drain and C Purif. Cont. Iso.		Qtr	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valvr. No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2P21											
2P21-F032	2	A	2" Manual Gate	F-2	H-26047	Demin. Water Cont. Iso.	LC	NA	CIV	No	
2P21-F034	2	A	2" Manual Gate	F-2	H-26047	Demin. Water Cont. Iso.	LC	NA	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2P33											
2P33-F002	2	A	1" AO Control	B-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F003	2	A	1" AO Control	C-4	H-26048	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
2P33-F004	2	A	1" AO Control	D-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F005	2	A	1" AO Control	E-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F006	2	A	1" AO Control	F-4	H-26048	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
2P33-F007	2	A	1" AO Control	H-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F010	2	A	1" AO Control	B-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F011	2	A	1" AO Control	C-5	H-26048	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	
2P33-F012	2	A	1" AO Control	D-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F013	2	A	1" AO Control	E-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	
2P33-F014	2	A	1" AO Control	F-5	H-26048	H2 & O2 Analy. Cont. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2P33-F015	2	A	1" AO Control	H-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
	Class	Cat.								Time Req'd	Relief CS Just.	
** System - 2P41												
2P41-F024A	3	C	2" Check	D-4	H-26051	HPCI Pump Room Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F024B	3	C	2" Check	D-5	H-26051	HPCI Pump Room Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F025A	3	C	3" Check	D-6	H-26051	RHR & CS Pump Room Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F025B	3	C	3" Check	D-6	H-26051	RHR & CS Pump Room Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F026A	3	C	3" Check	C-8	H-26050	RHR Pump Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F026B	3	C	3" Check	C-9	H-26050	RHR Pump Cooler	C	Disassemb	NA	No	RR-V-19	
2P41-F035A	3	B	2" AO Globe	C-4	H-26051	HPCI Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20	
2P41-F035B	3	B	2" AO Globe	C-5	H-26051	HPCI Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20	
2P41-F036A	3	B	3" AO Globe	C-5	H-26051	RHR & CS Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20	
2P41-F036B	3	B	3" AO Globe	C-6	H-26051	RHR & CS Pump Room Cooler	C	Qtr	NA	Yes	RR-V-20	
2P41-F037A	3	B	1-1/2" AO Globe	D-7	H-26050	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20	
2P41-F037B	3	B	1-1/2" AO Globe	C-9	H-26051	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2P41-F037C	3	B	1-1/2" AO Globe	D-8	H-26050	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
2P41-F037D	3	B	1-1/2" AO Globe	C-8	H-26051	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
2P41-F039A	3	B	3" AO Globe	D-9	H-26050	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
2P41-F039B	3	B	3" AO Globe	D-9	H-26050	RHR Pump Cooler	C	Qtr	NA	Yes	RR-V-20
2P41-F064	3	C	10" Check	E-10	H-26050	Division 1 S.W. Supply	0	Full Flow	NA	No	
2P41-F065	3	C	10" Check	B-10	H-26051	Division 2 S.W. Supply	0	Full Flow	NA	No	
2P41-F306A	3	C	1-1/2" Check	B-7	H-21033	Service Wtr. Motor Cooling	0	Qtr	NA	No	Note 5
2P41-F306B	3	C	1-1/2" Check	G-7	H-21033	Service Wtr. Motor Cooling	0	Qtr	NA	No	Note 5
2P41-F311A	3	C	18" Check	B-3	H-21033	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
2P41-F311B	3	C	18" Check	C-3	H-21033	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
2P41-F311C	3	C	18" Check	E-3	H-21033	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25
2P41-F311D	3	C	18" Check	D-3	H-21033	S.W. Pump Discharge	0	Full Flow	NA	No	RR-V-25

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2P41-F316A	3	B	30" MO Bfly	A-9	H-21033	S.W. to Turbine 0 Bldg. Shutoff	0	CS	NA	Yes	CS-4
2P41-F316B	3	B	30" MO Bfly	F-9	H-21033	S.W. to Turbine 0 Bldg. Shutoff	0	CS	NA	Yes	CS-4
2P41-F316C	3	B	30" MO Bfly	A-10	H-21033	S.W. to Turbine 0 Bldg. Shutoff	0	CS	NA	Yes	CS-4
2P41-F316D	3	B	30" MO Bfly	F-10	H-21033	S.W. to Turbine 0 Bldg. Shutoff	0	CS	NA	Yes	CS-4
2P41-F321	3	C	6" Check	J-2	H-21033	Stby. Diesel SW Pump Discharge	C	Full Flow	NA	No	
2P41-F334A	3	C	1" AO PCV	C-7	H-21033	S.W. Pump Cooling Water Press. Reg.	-	Qtr	NA	No	Note 5
2P41-F334B	3	C	1" AO PCV	G-1	H-21033	S.W. Pump Cooling Water Press. Reg.	-	Qtr	NA	No	Note 5
2P41-F339A	3	B	6" AO Bfly	H-9	H-21033	Diesel Gen. Cooling	C	Qtr	NA	Yes	RR-V-20
2P41-F339B	3	B	6" AO Bfly	H-7	H-21033	Diesel Gen. Cooling	C	Qtr	NA	Yes	RR-V-20

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2P42											
2P42-F051	2	A	6" MO Gate	B-5	H-26055	RBCCW to Recir. Cont. Iso.	0	CS	CIV	Yes	CS-5
2P42-F052	2	A	6" MO Gate	C-5	H-26055	RBCCW to Recir. Cont. Iso.	0	CS	CIV	Yes	CS-5

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2P51											
2P51-F513	2	A	2" Man. Globe	F-3	H-26058	Ser. Air Cont. Iso.	LC	None	CIV	No	
2P51-F651	2	A	2" Man. Globe	F-3	H-26058	Ser. Air Cont. Iso.	LC	NA	CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2P64 2P64-F045	2	A	6" MO Globe	G-11	H-26081	Chilled Water Cont. Iso.	0	CS	CIV	Yes	CS-3
2P64-F047	2	A	6" MO Globe	G-8	H-26081	Chilled Water Cont. Iso.	0	CS	CIV	Yes	CS-3

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
	Class	Cat.								Time Req'd	Relief CS Just.	
** System - 2P70												
2P70-F002	2	A	1* AO Control	F-8	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes		
2P70-F003	2	A	1* AO Control	F-8	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes		
2P70-F004	2	A	2* Solenoid	B-9	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3	
2P70-F005	2	A	2* Solenoid	B-9	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3	
2P70-F066	2	A	2* Solenoid	D-9	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3	
2P70-F067	2	A	2* Solenoid	D-9	H-26066	DW Pneumatic Cont. Iso.	0	Qtr	CIV	Yes	RR-V-3	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
** System - 2R43											
2R43-F012A	-	C	2* Check	E-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
2R43-F012B	-	C	2* Check	E-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
2R43-F012C	-	C	2* Check	B-7	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
2R43-F012D	-	C	2* Check	B-7	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
2R43-F013A	-	C	2* Check	G-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
2R43-F013B	-	C	2* Check	F-2	H-11037	D.G. Fuel Oil Pump Discharge Check	C	Qtr	NA	No	Note 7
2R43-F013C	-	C	2* Check	B-6	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7
2R43-F013D	-	C	2* Check	B-7	H-11037	D.G. Fuel Oil Day Tank Inlet Check	C	Qtr	NA	No	Note 7

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
										Time Req'd	Relief CS Just.
2R43-F029A	-	C	3/4" Check	C-10	H-21074	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
2R43-F029C	-	C	3/4" Check	C-10	H-21074	Air Receiver Inlet Check Valve	C	Qtr	NA	No	
2R43-F032A	-	C	1/2" Relief	B-9	H-21074	Air Receiver Relief Valve	C	IWV-3512	NA	No	
2R43-F032C	-	C	1/2" Relief	B-9	H-21074	Air Receiver Relief Valve	C	IWV-3512	NA	No	
2R43-F033A	-	C	1/2" Relief	B-11	H-21074	Air Receiver Relief Valve	C	IWV-3512	NA	No	
2R43-F033C	-	C	1/2" Relief	B-11	H-21074	Air Receiver Relief Valve	C	IWV-3512	NA	No	
2R43-F042A	-	B	1 1/2" Solenoid	B-7	H-21074	D.G. Air Start Valve	C	Qtr	NA	No	RR-V-34
2R43-F042C	-	B	1 1/2" Solenoid	B-7	H-21074	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-34
2R43-F044A	-	B	1 1/2" Solenoid	A-7	H-21074	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-34
2R43-F044C	-	B	1 1/2" Solenoid	A-7	H-21074	D.G. Air Start Valve	C	Qtr	NA	Yes	RR-V-34

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2R43-F095A	-	C	3/4" Check	C-10	H-21074	Air Inlet Check Valve	C	Qtr	NA	No	
2R43-F095C	-	C	3/4" Check	C-10	H-21074	Air Inlet Check Valve	C	Qtr	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
** System - 2T23											
2T23-F004	2	A	1" Man. Globe	D-3	H-26057	ILRT Cont. Iso. C	None		CIV	No	
2T23-F005	2	A	1" Man. Globe	D-3	H-26057	ILRT Cont. Iso. C	None		CIV	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Req'd	Relief CS Just.
** System - 2T46 2T46-F001A	3	B	18" AO Bfly	C-2	H-26078	Filter Bed Inlet from Reactor Bldg.	C	Qtr	NA	Yes	
2T46-F001B	3	B	18" AO Bfly	G-2	H-26078	Filter Bed Inlet from Reactor Bldg.	C	Qtr	NA	Yes	
2T46-F002A	3	B	18" AO Bfly	C-5	H-260/8	SGTS Filter Outlet from Reactor Bldg.	C	Qtr	NA	Yes	
2T46-F002B	3	B	18" AO Bfly	G-5	H-26078	SGTS Filter Outlet from Reactor Bldg.	C	Qtr	NA	Yes	
2T46-F003A	3	B	18" AO Bfly	C-2	H-26078	SGTS Filter Bed C Inlet from Refuel Floor	C	Qtr	NA	Yes	
2T46-F003B	3	B	18" AO Bfly	G-2	H-26078	SGTS Filter Bed C Inlet from Refuel Floor	C	Qtr	NA	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
										Time Req'd	Relief CS Just.
** System - 2T48											
2T48-F103	2	A	6" AO Bfly	D-10	H-26083	DW & Torus Supply Iso.	C	Qtr	CIV	Yes	
2T48-F104	2	A	2" AO Control	G-4	H-26083	DW & Torus Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F113	2	A	2" AO Control	G-9	H-26083	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F114	2	A	2" AO Control	H-9	H-26083	DW Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F115	2	A	2" AO Control	G-10	H-26083	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F116	2	A	2" AO Control	H-10	H-26083	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F118A	2	A	1" AO Control	J-4	H-26083	DW Makeup Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
2T48-F118B	2	A	1" AO Control	J-5	H-26083	Torus Makeup Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
2T48-F209	2	A	4" AO Gate	C-8	H-26079	Inboard Isolation	C	Qtr	CIV	Yes	
2T48-F210	2	A	4" AO Gate	C-9	H-26079	Outboard Isolation	C	Qtr	CIV	Yes	
2T48-F211	2	A	4" AO Gate	E-6	H-26079	Inboard Isolation	C	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2T48-F212	2	A	4" AO Gate	E-8	H-26079	Outboard Isolation	C	Qtr	CIV	Yes	
2T48-F307	2	A	18" AO Bfly	C-9	H-26084	DW Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F308	2	A	18" AO Bfly	C-10	H-26084	DW Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F309	2	A	18" AO Bfly	E-10	H-26084	Torus Purge Inlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F310	2	A	20" AO Bfly	F-10	H-26084	Torus Purge Vac. Brker. Iso.	C	Qtr	CIV	Yes	
2T48-F311	2	A	20" AO Bfly	F-9	H-26084	Torus Purge Vac. Brker. Iso.	C	Qtr	CIV	Yes	
2T48-F318	2	A	18" AO Bfly	G-4	H-26084	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F319	2	A	18" AO Bfly	C-4	H-26084	DW Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F320	2	A	18" AO Bfly	C-3	H-26084	DW Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F321	2	A	2" AO Control	G-7	H-26083	DW Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code Class	Cat.	Description	Coord.	S&ID	Function	Worm Pos	Exercise	Leakage	Stroke Notes	
										Time Req'd	Relief CS Just.
2T48-F322	2	A	2" AO Control	H-7	H-26083	DW Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F323A	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323B	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323C	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323D	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323E	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323F	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323G	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323H	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323I	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323J	2	C	18" AO Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2T48-F323K	2	C	18" A0 Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F323L	2	C	18" A0 Check	G-8	H-26084	DW to Torus Vac. Breaker	C	Qtr	NA	No	
2T48-F324	2	A	18" A0 Bfly	D-10	H-26084	Torus Purge Inlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F325	2	A	2" A0 Control	G-8	H-26083	Torus Inerting Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F326	2	A	18" A0 Bfly	G-3	H-26084	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F327	2	A	2" A0 Control	H-8	H-26083	Torus Inerting Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F328A	2	AC	20" A0 Check	G-10	H-26084	Reactor Bldg to C Supp. Cham. Vac. Brker.	C	Qtr	CIV	No	
2T48-F328B	2	AC	20" A0 Check	G-10	H-26084	Reactor Bldg to C Supp. Cham. Vac. Brker.	C	Qtr	CIV	No	
2T48-F332A	2	A	2" A0 Control	E-3	H-26084	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2T48-F332B	2	A	2" AO Control	G-3	H-26084	Torus Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F333A	2	A	2" AO Control	E-4	H-26084	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F333B	2	A	2" AO Control	G-4	H-26084	Torus Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F334A	2	A	2" AO Control	B-3	H-26084	DW Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F334B	2	A	2" AO Control	C-3	H-26084	DW Purge Outlet Outbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F335A	2	A	2" AO Control	B-4	H-26084	DW Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F335B	2	A	2" AO Control	C-4	H-26084	DW Purge Outlet Inbrd. Iso.	C	Qtr	CIV	Yes	
2T48-F338	2	A	2" AO Control	H-2	H-26084	Bypass-Outbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
2T48-F339	2	A	2" AO Control	H-3	H-26084	Bypass-Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
2T48-F340	2	A	2" AO Control	D-2	H-26084	Bypass-Outbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2T48-F341	2	A	2" AO Control	E-4	H-26084	Bypass-Inbrd. Iso.	C	Qtr	CIV	Yes	RR-V-3
2T48-F342A	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342B	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342C	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342D	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342E	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342F	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342G	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342H	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke	Notes
	Class	Cat.								Time Req'd	Relief CS Just.
2T48-F342I	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342J	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342K	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F342L	2	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	RO	CIV	No	RR-V-31
2T48-F361A	2	A	1" AO Control	G-9	H-26084	Torus Water Level Iso.	O	Qtr	CIV	Yes	
2T48-F361B	2	A	1" AO Control	G-5	H-26084	Torus Water Level Iso.	O	Qtr	CIV	Yes	
2T48-F362A	2	A	1" AO Control	H-9	H-26084	Torus Water Level Iso.	O	Qtr	CIV	Yes	
2T48-F362B	2	A	1" AO Control	H-5	H-26084	Torus Water Level Iso.	O	Qtr	CIV	Yes	
2T48-F363A	2	A	1" AO Control	E-8	H-26084	Press. Transmitter Iso.	O	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm		Leakage	Stroke Notes	
	Class	Cat.					Pos	Exercise		Time Req'd	Relief CS Just.
2T48-F363B	2	A	1" AO Control	D-6	H-26084	Press. Transmitter Iso.	0	Qtr	CIV	Yes	
2T48-F364A	2	A	1" AO Control	G-8	H-26084	Press. Transmitter Iso.	0	Qtr	CIV	Yes	
2T48-F364B	2	A	1" AO Control	G-5	H-26084	Press. Transmitter Iso.	0	Qtr	CIV	Yes	

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes		
	Class	Cat.								Req'd	Relief CS Just.	
** System - 2T49												
2T49-F001A	2	B	4" MO Gate	C-3	H-26068	Hydrogen Recom. DW Shutoff	C	Qtr	NA	Yes		
2T49-F001B	2	B	4" MO Gate	C-3	H-26068	Hydrogen Recom. DW Shutoff	C	Qtr	NA	Yes		
2T49-F002A	2	A	4" MO Gate	C-4	H-26068	Hydrogen Recom. DW Iso.	C	Qtr	CIV	Yes		
2T49-F002B	2	A	4" MO Gate	C-4	H-26068	Hydrogen Recom. DW Iso.	C	Qtr	CIV	Yes		
2T49-F004A	2	A	4" MO Gate	F-5	H-26068	Hydrogen Recom. Gas & Water Iso.	C	Qtr	CIV	Yes		
2T49-F004B	2	A	4" MO Gate	F-5	H-26068	Hydrogen Recom. Gas & Water Iso.	C	Qtr	CIV	Yes		
2T49-F005A	2	B	4" MO Gate	F-4	H-26068	Gas & Water Return	C	Qtr	NA	Yes		
2T49-F005B	2	B	4" MO Gate	F-4	H-26068	Gas & Water Return	C	Qtr	NA	Yes		
2T49-F006A	2	B	3/4" MO Globe	H-5	H-26068	Water Feed from RHR	C	Qtr	NA	Yes		
2T49-F006B	2	B	3/4" MO Globe	H-5	H-26068	Water Feed from RHR	C	Qtr	NA	Yes		

Plant Hatch Unit 2 Valve Test Program
Table 6-2

Valve No.	Code		Description	Coord.	P&ID	Function	Norm Pos	Exercise	Leakage	Stroke Notes	
	Class	Cat.								Time Req'd	Relief CS Just.
2T49-F009A	2	AC	1" Relief	F-4	H-26068	Relief/Cont. Iso. Valve	C	IWV-3512	CIV	No	
2T49-F009B	2	AC	1" Relief	F-4	H-26068	Relief/Cont. Iso. Valve	C	IWV-3512	CIV	No	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-7A	B21-F022A	A	24" A0 Globe	C-7	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7A	B21-F028A	A	24" A0 Globe	C-9	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7B	B21-F022B	A	24" A0 Globe	E-7	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7B	B21-F028B	A	24" A0 Globe	E-9	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7C	B21-F022C	A	24" A0 Globe	F-7	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7C	B21-F028C	A	24" A0 Globe	F-9	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7D	B21-F022D	A	24" A0 Globe	G-7	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-7D	B21-F028D	A	24" A0 Globe	G-9	H-16062	MSIV	0	CIV	RR-V-10 CS-9
X-8	B21-F016	A	3" M0 Gate	E-8	H-16062	Main Steam Line C DRN. Inbrd. Iso.	0	CIV	RR-V-2
X-8	B21-F019	A	3" M0 Gate	E-9	H-16062	Main Steam Line C DRN. Outbrd. Iso.	0	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-9A	B21-F010B	AC	18" Check	D-3	H-16062	FW Inbrd. Cont. Iso.	O	CIV	RR-V-1
X-9A	B21-F032B	AC	18" Check	D-2	H-16062	FW Outbrd. Iso.	O	CIV	RR-V-1
X-9A	E41-F006	A	14" MO Gate	E-5	H-16332	HPCI Pump Inbrd. Disch. Iso.	C	PIV/CIV	
X-9A	G31-F203	AC	3" Check	A-4	H-16188	RWCU Disch. Iso.	O	CIV	RR-V-18
X-9B	B21-F010A	AC	18" Check	E-3	H-16062	FW Inbrd. Cont. Iso.	O	CIV	RR-V-1
X-9B	B21-F032A	AC	18" Check	E-2	H-16062	FW Outbrd. Iso.	O	CIV	RR-V-1
X-9B	E51-F013	A	4" MO Gate	E-6	H-16334	RCIC Pressure Iso. Valve	C	PIV/CIV	
X-9B	G31-F039	AC	4" Check	A-4	H-16188	RWCU Disch. Iso.	O	CIV	RR-V-18
X-10	E51-F007	A	4" MO Gate	C-5	H-16334	RCIC Containment Iso. Valve	O	CIV	RR-V-2
X-10	E51-F008	A	4" MO Gate	C-6	H-16334	RCIC Containment Iso. Valve	O	CIV	
X-11	E41-F002	A	10" MO Gate	C-2	H-16332	HPCI Steam Supply Inbrd. Iso.	O	CIV	RR-V-2 CS-7

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-11	E41-F003	A	10" MO Gate	C-4	H-16332	HPCI Steam Supply Outbrd. Iso.	O	CIV	
X-12	E11-F008	A	20" MO Gate	D-1	H-16329	RHR Shutdown Cooling Outbrd. Iso.	C	PIV/CIV	CS-2
X-13A	E11-F015A	A	24" MO Gate	C-8	H-16330	LPCI Outbrd. Cont. Iso.	C	PIV/CIV	
X-13B	E11-F015B	A	24" MO Gate	C-4	H-16329	LPCI Outbrd. Cont. Iso.	C	PIV/CIV	
X-14	G31-F001	A	6" MO Gate	B-2	H-16188	RWCU Pump Suc. Inbrd. Iso.	O	CIV	
X-14	G31-F004	A	6" MO Gate	B-3	H-16188	RWCU Pump Suc. Outbrd. Iso.	O	CIV	
X-16A	E21-F005A	A	10" MO Gate	E-6	H-16331	CS Outbrd. Cont. Iso.	C	PIV/CIV	
X-16B	E21-F005B	A	10" MO Gate	B-6	H-16331	CS Outbrd. Cont. Iso.	C	PIV/CIV	
X-17	E11-F023	A	4" MO Globe	A-2	H-16329	Passive Cont. Iso.	C	CIV	
X-18	G11-F019	A	3" AO Gate	E-3	H-16176	DW Equip. Drns. Cont. Iso.	O	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-18	G11-F020	A	3" AO Gate	E-4	H-16176	DW Equip. Drns. Cont. Iso.	0	CIV		
X-19	G11-F003	A	3" AO Gate	B-3	H-16176	DW Flr. Drns. Cont. Iso.	0	CIV		
X-19	G11-F004	A	3" AO Gate	B-3	H-16176	DW Flr. Drns. Cont. Iso.	0	CIV		
X-20	P41-F049	A	8" MO Gate	F-6	H-16011	Drywell Air Cooler Iso	0	CIV	CS-3	
X-21	P51-F513	A	2" Man. Globe	F-3	H-16013	Passive Cont. Iso.	LC	CIV		
X-21	P51-F514	A	2" Man. Globe	F-3	H-16013	Passive Cont. Iso.	LC	CIV		
X-22	P70-F004	A	2" Solenoid	B-8	H-16286	DW Pneumatic Cont. Iso.	0	CIV	RR-V-3	
X-22	P70-F005	A	2" Solenoid	B-8	H-16286	DW Pneumatic Cont. Iso.	0	CIV	RR-V-3	
X-23	P42-F051	A	4" MO Gate	B-9	H-16009	RBCCW to Recir. Cont. Iso.	0	CIV	CS-5	
X-24	P42-F052	A	4" MO Gate	E-9	H-16009	RBCCW to Recir. Cont. Iso.	0	CIV	CS-5	
X-25	T48-F113	A	2" AO Control	F-7	H-16000	DW Inerting Outbrd. Iso.	C	CIV		

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-25	T48-F114	A	2" AO Control	F-8	H-16000	DW Inerting Inbrd. Iso.	C	CIV		
X-25	T48-F118A	A	1" Solenoid	G-5	H-16000	DW Makeup Inbrd. Iso.	C	CIV	RR-V-3	
X-25	T48-F307	A	18" AO Bfly	C-9	H-16024	DW Purge Inlet Inbrd. Iso.	C	CIV		
X-25	T48-F308	A	18" AO Bfly	C-10	H-16024	DW Purge Inlet Inbrd. Iso.	C	CIV		
X-25	T48-F321	A	2" AO Control	J-7	H-16000	DW Inerting Outbrd. Iso.	C	CIV		
X-25	T48-F322	A	2" AO Control	J-8	H-16000	DW Inerting Inbrd. Iso.	C	CIV		
X-25&205	T48-F103	A	6" AO Bfly	F-2	H-16000	DW & Torus Supply Iso.	C	CIV		
X-25&205	T48-F104	A	1" AO Control	G-4	H-16000	DW & Torus Outbrd. Iso.	C	CIV		
X-26	P33-F002	A	1" AO Control	B-4	H-16276	H2 & O2 Analy. Cont. Iso.	O	CIV		
X-26	P33-F010	A	1" AO Control	B-5	H-16276	H2 & O2 Analy. Cont. Iso.	O	CIV		
X-26	T48-F319	A	18" AO Bfly	D-4	H-16024	DW Purge Outlet Inbrd. Iso.	C	CIV		

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-26	T48-F320	A	18" A0 Bfly	D-3	H-16024	DW Purge Outlet C Outbrd. Iso.	C	CIV		
X-26	T48-F335A	A	2" A0 Control	B-4	H-16024	DW Purge Outlet C Inbrd. Iso.	C	CIV		
X-26	T48-F335B	A	2" A0 Control	C-4	H-16024	DW Purge Outlet C Inbrd. Iso.	C	CIV		
X-26	T48-F340	A	2" Solenoid	D-4	H-16024	Bypass-Outbrd. Iso.	C	CIV	RR-V-3	
X-26	T48-F341	A	2" Solenoid	D-4	H-16024	Bypass-Inbrd. Iso.	C	CIV	RR-V-3	
X-27A	D11-F051	A	1" Solenoid	C-5	H-16173	Fission Prod. Mon. Cont. Iso.	O	CIV	RR-V-3	
X-27A	D11-F053	A	1" Solenoid	C-6	H-16173	Fission Prod. Mon. Cont. Iso.	O	CIV	RR-V-3	
X-27F	P70-F066	A	2" Solenoid	D-8	H-16286	DW Pneumatic Cont. Iso.	O	CIV	RR-V-3	
X-27F	P70-F067	A	2" Solenoid	D-8	H-16286	DW Pneumatic Cont. Iso.	O	CIV	RR-V-3	
X-28A	B31-F019	A	3/4" A0 Globe	D-3	H-16066	Reac. Sample Sys. Inbrd. Iso.	O	CIV		
X-28A	B31-F020	A	3/4" A0 Globe	D-1	H-16066	Reac. Sample Sys. Outbrd. Iso.	O	CIV		

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-28B	B21-F047B	AC	1* Excess Flow Ck	F-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-28C	B21-F045B	AC	1* Excess Flow Ck	C-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-28D	B21-F049B	AC	1* Excess Flow Ck	F-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-28D	B21-F065B	AC	1* Excess Flow Ck	-	-	Instrument Excess Flow Check Valve	C	NA	RR-V-15
X-28E	B21-F043B	AC	1* Excess Flow Ck	C-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-28F	P33-F003	A	1* A0 Control	D-4	H-16276	H2 & O2 Analy. Cont. Iso.	C	CIV	
X-28F	P33-F011	A	1* A0 Control	D-5	H-16276	H2 & O2 Analy. Cont. Iso.	C	CIV	
X-29B	B21-F047A	AC	1* Excess Flow Ck	F-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-29C	B21-F045A	AC	1* Excess Flow Ck	C-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-29D	B21-F049A	AC	1" Excess Flow Ck	F-5	H-16063	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-29D	B21-F065A	AC	1" Excess Flow Ck	-	-	Instrument Excess Flow Check Valve	C	NA	RR-V-15
X-29E	B21-F043A	AC	1" Excess Flow Ck	C-5	H-16063	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-29F	B21-F041	AC	1" Excess Flow Ck	B-5	H-16063	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-30A	B21-F055	AC	1" Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-30B	B21-F057	AC	1" Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-30C	B21-F015G	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-30D	B21-F015H	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	O	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-30E	E41-F024B	AC	1" Excess Flow Ck	D-8	H-16332	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30F	E41-F024D	AC	1" Excess Flow Ck	D-4	H-16332	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31A	B31-F009A	AC	1" Excess Flow Ck	C-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31A	B31-F009D	AC	1" Excess Flow Ck	F-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31B	B31-F010A	AC	1" Excess Flow Ck	D-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31B	B31-F010D	AC	1" Excess Flow Ck	F-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31D	P33-F004	A	1" AO Control	E-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-31D	P33-F012	A	1" AO Control	E-5	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-31F	B31-F013A	AC	3/4" Check	F-3	H-16066	Recir. Pump Seal Wtr.	0	CIV	RR-V-5

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-31F	B31-F017A	AC	3/4" Check	F-2	H-16066	Recir. Pump Seal Wtr.	0	CIV	RR-V-5	
X-32A	B31-F040A	AC	1" Excess Flow Ck	G-8	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-32B	B31-F040C	AC	1" Excess Flow Ck	G-8	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-32C	B31-F057A	AC	1" Excess Flow Ck	F-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-32E	B31-F003A	AC	1" Excess Flow Ck	G-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-32F	B31-F004A	AC	1" Excess Flow Ck	G-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-33A	B31-F011A	AC	1" Excess Flow Ck	D-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-33A	B31-F011D	AC	1" Excess Flow Ck	F-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-33B	B31-F012A	AC	1" Excess Flow Ck	D-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-33B	B31-F012D	AC	1" Excess Flow Ck	F-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-33C	D11-F050	A	1" Solenoid	E-4	H-16173	Fission Prod. Mon. Cont. Iso.	0	CIV	RR-V-3
X-33C	D11-F052	A	1" Solenoid	E-5	H-16173	Fission Prod. Mon. Cont. Iso.	0	CIV	RR-V-3
X-34A	B31-F040B	AC	1" Excess Flow Ck	H-8	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34B	B31-F040D	AC	1" Excess Flow Ck	H-8	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34C	B31-F003B	AC	1" Excess Flow Ck	G-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34D	B31-F004B	AC	1" Excess Flow Ck	G-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34E	P33-F005	A	1/2" Solenoid	C-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV	RR-V-3
X-34E	P33-F013	A	1/2" Solenoid	C-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV	RR-V-3

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes Relief CS Just.
X-34F	B31-F057B	AC	1" Excess Flow Ck	F-2	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-35A	C51-Ball A	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35A	C51-Shear A	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	NA	
X-35B	C51-Ball B	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35B	C51-Shear B	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	NA	
X-35C	C51-Ball C	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35C	C51-Shear C	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	NA	
X-35D	C51-Ball D	A	Ball Solenoid	C-3	H-16070	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35D	C51-Shear D	D	Expl. Shear	C-3	H-16070	TIP Outboard Cont. Iso.	0	NA	
X-35E	C51-F3012	A	Solenoid	C-8	H-16561	TIP N2 Purge CIV	0	CIV	RR-V-32
X-35E	C51-F3017	AC	Check	C-8	H-16561	TIP N2 Purge	0	CIV	RR-V-36

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-37A-D	C11-HCU-120	B	1/2" Solenoid	B-5	H-16064	CRD Drive Water Insert	C	NA		
X-37A-D	C11-HCU-123	B	1/2" Solenoid	B-5	H-16064	CRD Drive Water Insert	C	NA		
X-37A-D	C11-HCU-126	A	1" AO Globe	B-4	H-16064	Scram insert HCU Control Valve	C	NA	RR-V-27	
X-37A-D	C11-HCU-138	AC	1/2" Check	C-4	H-16064	Cooling Water Header HCU Check Valve	C	NA		
X-38A-D	C11-HCU-121	B	1/2" Solenoid	B-5	H-16064	CRD Drive Water Withdraw	C	NA		
X-38A-D	C11-HCU-122	B	1/2" Solenoid	B-5	H-16064	CRD Drive Water Withdraw	C	NA		
X-38A-D	C11-HCU-127	A	3/4" AO Globe	A-4	H-16064	Scram Disch. HCU Control Valve	C	NA	RR-V-27	
X-39A	E11-F016A	A	16" MO Gate	B-9	H-16330	Cont. Spray Outbrd.Iso.	C	CIV		
X-39B	E11-F016B	A	16" MO Gate	B-4	H-16329	Cont. Spray Outbrd.Iso.	C	CIV		
X-40A	B31-F055B	AC	1" Excess Flow Ck	A-3	H-16066	Instrument Excess Flow Check Valve	O	NA	RR-V-15	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	P&ID	Function	Norm Pos	Leakage	Notes	
								Relief CS	Just.
X-40A	B31-F055D	AC	1" Excess Flow Ck	B-3	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40A	B31-F055E	AC	1" Excess Flow Ck	C-3	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40A	B31-F055G	AC	1" Excess Flow Ck	C-3	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40A	E21-F018A	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	E51-F044B	AC	1" Excess Flow Ck	D-5	H-16334	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	E51-F044D	AC	1" Excess Flow Ck	D-5	H-16334	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40C(F)	P70-F002	A	1" AO Control	F-8	H-16286	DW Pneumatic Cont. Iso.	0	CIV	
X-40C(F)	P70-F003	A	1" AO Control	F-8	H-16286	DW Pneumatic Cont. Iso.	0	CIV	
X-40D	B31-F055C	AC	1" Excess Flow Ck	B-3	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes
							Pos	Leakage	Relief CS Just.
X-40D	B31-F055F	AC	1" Excess Flow Ck	C-3	H-16066	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-40D	B31-F055H	AC	1" Excess Flow Ck	C-3	H-16006	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-40D	E21-F018B	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-42	C41-F006	AC	1-1/2" Check	E-2	H-16061	SLC Outbrd Cont. Iso.	C	CIV	RR-V-6
X-42	C41-F007	AC	1-1/2" Check	E-2	H-16061	SLC Inbrd. Cont. Iso.	C	CIV	RR-V-6
X-44	P41-F050	A	8" MO Gate	D-2	H-16011	Drywell Air Cooler Iso	O	CIV	CS-3
X-45A	E41-F024A	AC	1" Excess Flow Ck	C-4	H-16332	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-45B	E41-F024C	AC	1" Excess Flow Ck	C-4	H-16332	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-45F	T23-F004	A	3/4" Man. Globe	D-3	H-16060	Passive Cont. Iso.	C	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-45F	T23-F005	A	3/4" Man. Globe	D-3	H-16060	Passive Cont. Iso.	C	CIV		
X-46	P21-F353	A	2" Manual Gate	F-7	H-16015	Passive Cont. Iso.	LC	CIV		
X-46	P21-F420	A	1-1/2" Man Gate	F-8	H-16015	Passive Cont. Iso.	LC	CIV		
X-49A	B21-F053A	AC	1" Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49B	B21-F059G	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49C	B21-F059E	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49D	B21-F059A	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49E	B21-F059C	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49F	B21-F051A	AC	1" Excess Flow Ck	H-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-50A	B21-F053B	AC	1" Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-50B	B21-F059H	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-50C	B21-F059F	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-50D	B21-F059B	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-50E	B21-F059D	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-50F	B21-F051B	AC	1" Excess Flow Ck	H-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-51A	B21-F059M	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-51B	B21-F053D	AC	1" Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-51C	B21-F059U	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-51D	B21-F059P	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-51E	B21-F059S	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-51F	B21-F051D	AC	1* Excess Flow Ck	H-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52A	B21-F059L	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	PR-V-15
X-52B	B21-F053C	AC	1* Excess Flow Ck	J-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52C	B21-F059T	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52D	B21-F059N	AC	1* Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes
							PCB	Leakage	Relief CS Just.
X-52E	B21-F039R	AC	1" Excess Flow Ck	H-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52F	B21-F051C	AC	1" Excess Flow Ck	H-5	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52F	B21-F111	A	1" AO Gate	E-2	H-26384	Pass Sample Valves	C	CIV	
X-52F	B21-F112	A	1" AO Gate	E-2	H-26384	Pass Sample Valves	C	CIV	
X-54A	B21-F061	AC	1" Excess Flow Ck	J-9	H-16063	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-54B	E21-F018C	AC	1" Excess Flow Ck	A-4	H-16331	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-54C	B21-F015K	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-54D	B21-F015J	AC	1" Excess Flow Ck	D-5	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-54E	E51-F044A	AC	1" Excess Flow Ck	B-5	H-16334	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes
							Pos	Leakage	Relief CS Just.
X-54F	E51-F044C	AC	1" Excess Flow Ck	B-5	H-16334	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59A	B31-F013B	AC	3/4" Check	F-3	H-16066	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-59A	B31-F017B	AC	3/4" Check	F-2	H-16066	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-59B	B31-F009B	AC	1" Excess Flow Ck	E-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59B	B31-F009C	AC	1" Excess Flow Ck	D-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59C	B31-F010B	AC	1" Excess Flow Ck	E-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59C	B31-F010C	AC	1" Excess Flow Ck	D-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59E	B31-F012B	AC	1" Excess Flow Ck	F-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59E	B31-F012C	AC	1" Excess Flow Ck	E-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
 Containment Penetration - Valve List
 Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord	P&ID	Function	Norm		Notes
							Pos	Leakage	Relief CS Just.
X-59F	B31-F011B	AC	1" Excess Flow Ck	E-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59F	B31-F011C	AC	1" Excess Flow Ck	E-10	H-16066	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015C	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015D	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015L	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015H	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015R	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-100F	B21-F015S	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-103B	B21-F015A	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-103B	B21-F015B	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-103B	B21-F015E	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-103B	B21-F015F	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-103B	B21-F015N	AC	1" Excess Flow Ck	D-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-103B	B21-F015P	AC	1" Excess Flow Ck	C-8	H-16062	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-203	E51-F003	A	6" AO Bfly	J-6	H-16334	RCIC Containment Iso. Valve	0	CIV	
X-203	E51-F031	A	6" MO Gate	J-6	H-16334	RCIC Containment Iso. Valve	0	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-204A	E11-F004A	A	24" MO Gate	F-10	H-16330	RHR Pump Suction Torus Iso.	O	CIV	
X-204A	E11-F030A	AC	1" Relief	F-9	H-16330	RHR Pump Suc Cont. Iso.	C	CIV	
X-204B	E11-F004B	A	24" MO Gate	F-3	H-16329	RHR Pump Suction Torus Iso.	O	CIV	
X-204B	E11-F030B	AC	1" Relief	F-4	H-16329	RHR Pump Suc Cont. Iso.	C	CIV	
X-204C	E11-F004C	A	24" MO Gate	F-10	H-16330	RHR Pump Suction Torus Iso.	O	CIV	
X-204C	E11-F030C	AC	1" Relief	F-11	H-16330	RHR Pump Suc Cont. Iso.	C	CIV	
X-204D	E11-F004D	A	24" MO Gate	F-3	H-16329	RHR Pump Suction Torus Iso.	O	CIV	
X-204D	E11-F030D	AC	1" Relief	F-1	H-16329	RHR Pump Suc Cont. Iso.	C	CIV	
X-205	T48-F115	A	2" AO Control	G-7	H-16000	DW Inerting Outbrd. Iso.	C	CIV	
X-205	T48-F116	A	2" AO Control	G-8	H-16000	DW Inerting Outbrd. Iso.	C	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 5-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-205	T48-F118B	A	1" Solenoid	G-5	H-16000	Torus Makeup Inbrd. Iso.	C	CIV	RR-V-3
X-205	T48-F309	A	18" AO Bfly	E-10	H-16024	Torus Purge Inlet Inbrd. Iso.	C	CIV	
X-205	T48-F310	A	20" AO Bfly	F-10	H-16024	Torus Purge Vac. Brker. Iso.	C	CIV	
X-205	T48-F311	A	20" AO Bfly	F-9	H-16024	Torus Purge Vac. Brker. Iso.	C	CIV	
X-205	T48-F324	A	18" AO Bfly	D-10	H-16024	Torus Purge Inlet Outbrd. Iso.	C	CIV	
X-205	T48-F325	A	2" AO Control	H-7	H-16000	Torus Inerting Outbrd. Iso.	C	CIV	
X-205	T48-F327	A	2" AO Control	H-8	H-16000	Torus Inerting Inbrd. Iso.	C	CIV	
X-205	T48-F328A	AC	20" AO Check	G-10	H-16024	Reactor Bldg to Supp. Cham. Vac. Brker.	C	CIV	
X-205	T48-F328B	AC	20" AO Check	G-9	H-16024	Reactor Bldg to Supp. Cham. Vac. Brker.	C	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes
							Pos	Leakage	Relief CS Just.
X-206A-B	E41-F121	A	3/8" Solenoid	H-3	H-26384	Pass Sample Return	C	CIV	RR-V-3
X-206A-B	E41-F122	A	3/8" Solenoid	H-3	H-26384	Pass Sample Return	C	CIV	RR-V-3
X-207	E41-F042	A	16" MO Gate	J-5	H-16332	HPCI Pump Suc. Torus Outbrd. Iso.	C	CIV	
X-207	E41-F051	A	16" AO Bfly	J-4	H-16332	HPCI Pump Suc. Torus Inbrd. Iso.	O	CIV	
X-208A	E21-F001A	A	16" MO Gate	H-8	H-16331	CS Pump Suction Out	O	CIV	
X-208B	E21-F001B	A	16" MO Gate	J-8	H-16331	CS Pump Suction Out	O	CIV	
X-210A	E11-F007A	A	4" MO Gate	E-7	H-16330	RHR Pump Min Flow Torus Iso.	O	CIV	RR-V-2
X-210A	E11-F011A	A	4" MO Gate	D-3	H-16330	RHR Cond. Disch. to Torus	C	CIV	RR-V-2
X-210A	E11-F025A	AC	1" Relief	B-8	H-16330	LPCI Inj. Cont. Iso.	C	CIV	
X-210A	E11-F026A	A	4" MO Gate	D-3	H-16330	Cond. Disch to RCIC Cont. Iso.	C	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-210A	E11-F029	AC	1" Relief	E-2	H-16329	RHR Pump Suc Cont. Iso.	C	CIV		
X-210A	E11-F055A	AC	4" Relief	D-6	H-16330	RHR Hx Shell Relief Cont. Iso.	C	CIV		
X-210A	E11-F097	AC	3" Relief	D-11	H-16329	Steam Line Relief Cont. Iso.	C	CIV		
X-210A	E11-F103A	A	1" MO Globe	E-5	H-16330	RHR Hx Vent Cont. Iso.	C	CIV		
X-210A	E11-F3078A	AC	3/4" Relief	F-4	H-16330	RHR Hx A Thermal Relief Valve	C	CIV		
X-210A	E21-F015A	A	10" MO Globe	D-8	H-16331	Core Spray Test Bypass Cont. Iso.	C	CIV		
X-210A	E21-F031A	B	3" MO Gate	F-9	H-16331	CS Pump Min. Flow	O	CIV		
X-210A	E21-F044A	AC	2" Stop Check	F-5	H-16328	Jockey Pump Bypass Cont. Iso.	O	CIV	RR-V-30	
X-210A	E51-F019	A	2" MO Globe	F-7	H-16334	RCIC Containment Iso. Valve	C	CIV	RR-V-2	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-210A	E51-F021	AC	2" Check	F-8	H-16334	RCIC Containment Iso. Valve	C	CIV	RP-V-9
X-210A&211A	E11-F028A	A	16" MO Gate	B-8	H-16330	Suppression Pool Spray Outbrd Iso.	C	CIV	
X-210B	E11-F007B	A	4" MO Gate	D-5	H-16329	RHR Pump Min Flow Torus Iso.	O	CIV	RR-V-2
X-210B	E11-F011B	A	4" MO Gate	C-9	H-16329	RHR Cond. Disch. to Torus	C	CIV	RR-V-2
X-210B	E11-F025B	AC	1" Relief	C-5	H-16329	LPCI Inj. Cont. Iso.	C	CIV	
X-210B	E11-F026B	A	4" MO Gate	D-11	H-16329	Cond. Disch to RCIC Cont. Iso.	C	CIV	
X-210B	E11-F055B	AC	4" Relief	D-7	H-16329	RHR Hx Shell Relief Cont. Iso.	C	CIV	
X-210B	E11-F103B	A	1" MO Globe	E-8	H-16329	RHR Hx Vent Cont. Iso.	C	CIV	
X-210B	E11-F3078B	AC	3/4" Relief	F-9	H-16329	RHR Hx B Thermal Relief Valve	C	CIV	
X-210B	E21-F015B	A	10" MO Globe	C-8	H-16331	Core Spray Test Bypass Cont. Iso.	C	CIV	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Valve Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-210B	E21-F031B	B	3" MO Gate	F-10	H-16331	CS Pump Min. Flow	O	CIV		
X-210B	E21-F044B	AC	2" Stop Check	F-5	H-16328	Jockey Pump Bypass Cont. Iso.	O	CIV	RR-V-30	
X-210B	E41-F012	A	4" MO Globe	F-7	H-16332	HPCI Pump Min. Flow Inbrd. Iso.	C	CIV	RR-V-2	
X-210B	E41-F046	AC	4" Check	F-8	H-16332	HPCI Pump Min Flow Outbrd. Iso.	C	CIV	Note 2	
X-210B&211B	E11-F028B	A	16" MO Gate	B-5	H-16329	Suppression Pool Spray Outbrd Iso.	C	CIV		
X-212	E51-F001	AC	10" Stop Check	G-5	H-16334	RCIC Containment Iso. Valve	C	CIV	RR-V-8 RR-V-9	
X-212	E51-F040	AC	10" Check	G-5	H-16334	RCIC Containment Iso. Valve	C	CIV	RR-V-9	
X-212&221C	E51-F104	A	1-1/2" MO Gate	G-5	H-16334	RCIC Containment Iso. Valve	O	CIV		
X-212&221C	E51-F105	A	1-1/2" MO Gate	G-5	H-16334	RCIC Containment Iso. Valve	O	CIV	RR-V-2	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-213	E51-F002	AC	2* Stop Check	G-6	H-16334	RCIC Containment Iso. Valve	C	CIV	RR-V-8 RR-V-9	
X-213	E51-F028	AC	2* Check	G-7	H-16334	RCIC Containment Iso. Valve	C	CIV	RR-V-9	
X-214	E41-F021	AC	12* Stop Check	G-3	H-16332	HPCI Turb. Exh. Inbrd. Iso.	C	CIV	RR-V-8	
X-214	E41-F049	AC	20* Check	G-4	H-16332	HPCI Turb. Exh. Outbrd. Iso.	C	CIV		
X-214&221A	E41-F104	A	2* MO Gate	G-3	H-16332	HPCI Vac. Relief Outbrd. Torus Iso.	0	CIV		
X-215	E41-F022	AC	2* Stop Check	G-4	H-16332	HPCI Turb. Exh. Drn. Torus Iso.	C	CIV	RR-V-8	
X-215	E41-F040	AC	2* Check	G-5	H-16332	HPCI Turb. Exh. Drn. Torus Iso.	C	CIV		
X-217	P33-F007	A	1* AO Control	H-4	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV		
X-217	P33-F015	A	1* AO Control	H-5	H-16276	H2 & O2 Analy. Cont. Iso.	0	CIV		
X-218A	G51-F002	A	8* Man Gate	D-4	H-16135	Passive Cont. Iso.	LC	CIV		

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakag	Notes	
									CS	Just.
X-218A	G51-F011	A	3" AO Control	C-5	H-16135	Torus Drain and Purif. Cont. Iso.	C	CIV		
X-218A	G51-F012	A	3" AO Control	C-5	H-16135	Torus Drain and Purif. Cont. Iso.	C	CIV		
X-220	P33-F006	A	1" AO Control	G-4	H-16276	H2 & O2 Analy. Cont. Iso.	C	CIV		
X-220	P33-F014	A	1" AO Control	G-5	H-16276	H2 & O2 Analy. Cont. Iso.	C	CIV		
X-220	T48-F318	A	18" AO Bfly	G-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	CIV		
X-220	T48-F326	A	18" AO Bfly	G-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	CIV		
X-220	T48-F332A	A	2" AO Control	E-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	CIV		
X-220	T48-F332B	A	2" AO Control	F-3	H-16024	Torus Purge Outlet Outbrd. Iso.	C	CIV		
X-220	T48-F333A	A	2" AO Control	E-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	CIV		

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-220	T48-F333B	A	2" AO Control	F-4	H-16024	Torus Purge Outlet Inbrd. Iso.	C	CIV		
X-220	T48-F338	A	2" Solenoid	H-2	H-16024	Bypass-Outbrd. Iso.	C	CIV	RR-V-3	
X-220	T48-F339	A	2" Solenoid	H-3	H-16024	Bypass-Inbrd. Iso.	C	CIV	RR-V-3	
X-221A	E41-F111	A	2" MO Gate	G-2	H-16332	HPCI Vac. Relief Inbrd. Torus Iso.	O	CIV		
X-223A	T48-F342G	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223A	T48-F342H	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223A	T48-F342I	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223A	T48-F342J	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223A	T48-F342K	A	1/2" Solenoid	H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	

Hatch Unit 1
Containment Penetration - Valve List
Table 6-3

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-223A	T48-F342L	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342A	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342B	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342C	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342D	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342E	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-223B	T48-F342F	A	1/2" Solenoid H-8	H-16024	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes Relief CS Just.
X-3	2P33-F002	A	1" A0 Control	B-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-3	2P33-F010	A	1" A0 Control	B-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-7A	2B21-F022A	A	24" A0 Globe	D-8	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7A	2B21-F028A	A	24" A0 Globe	D-9	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7B	2B21-F022B	A	24" A0 Globe	D-8	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7B	2B21-F028B	A	24" A0 Globe	D-9	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7B	2E32-F001F	A	1-1/2" M0 Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	CIV	
X-7C	2B21-F022C	A	24" A0 Globe	D-8	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7C	2B21-F028C	A	24" A0 Globe	D-9	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7C	2E32-F001K	A	1-1/2" M0 Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	CIV	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes Relief CS Just.
X-7D	2B21-F022D	A	24" AO Globe	D-8	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7D	2B21-F028D	A	24" AO Globe	D-9	H-26000	MSIV	0	CIV	RR-V-10 CS-9
X-7D	2E32-F001P	A	1-1/2" MO Globe	E-8	H-26022	MSIV Leakage Control Cont. Iso.	C	CIV	
X-8	2B21-F016	A	3" MO Gate	E-8	H-26000	Main Steam Line C DRN. Inbrd. Iso.	C	CIV	RR-V-2
X-8	2B21-F019	A	3" MO Gate	E-9	H-26000	Main Steam Line C DRN. Outbrd. Iso.	C	CIV	
X-9A	2B21-F010A	AC	18" Check	E-3	H-26000	FW Inbrd. Cont. Iso.	0	CIV	RR-V-1
X-9A	2B21-F077A	AC	18" Check	E-3	H-26000	FW Outbrd Iso.	0	CIV	CS-10
X-9B	2B21-F010B	AC	18" Check	F-3	H-26000	FW Inbrd. Cont. Iso.	0	CIV	RR-V-1
X-9B	2B21-F077B	AC	18" Check	E-3	H-26000	FW Outbrd Iso.	0	CIV	CS-10
X-10	2E51-F007	A	4" MO Gate	C-5	H-26023	RCIC Steam Suppy Inbrd. Iso.	0	CIV	RR-V-2

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-10	2E51-F008	A	4" MO Gate	C-6	H-26023	RCIC Steam Suppy Outbrd. Iso.	0	CIV		
X-11	2E41-F002	A	10" MO Gate	C-3	H-26020	HPCI Steam Supply Inbrd. Iso.	0	CIV	RR-V-2 CS-7	
X-11	2E41-F003	A	10" MO Gate	C-4	H-26020	HPCI Steam Supply Outbrd. Iso.	0	CIV		
X-12	2E11-F008	A	20" MO Gate	D-10	H-26015	RHR Shutdown Cooling Outbrd. Iso.	C	PIV/CIV	CS-2	
X-13A	2E11-F015A	A	24" MO Gate	D-7	H-26015	LPCI Outbrd. Cont. Iso.	C	PIV/CIV		
X-13B	2E11-F015B	A	24" MO Gate	D-4	H-26014	LPCI Outbrd. Cont. Iso.	C	PIV/CIV		
X-14	2G31-F001	A	6" MO Gate	C-2	H-26036	RWCU Pump Suc. Inbrd. Iso.	0	CIV		
X-14	2G31-F004	A	6" MO Gate	C-3	H-26036	RWCU Pump Suc. Outbrd. Iso.	0	CIV		
X-15	2T49-F002B	A	4" MO Gate	C-4	H-26068	Hydrogen Recom. DW Iso.	C	CIV		
X-16A	2E21-F005A	A	10" MO Gate	E-5	H-26018	CS Outbrd. Cont. Iso.	C	PIV/CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-16B	2E21-F005B	A	10" MO Gate	C-5	H-26018	CS Outbrd. Cont. Iso.	C	PIV/CIV		
X-17	2E11-F023	A	4" MO Globe	B-3	H-26014	Passive Cont. Iso.	C	CIV		
X-18	2G11-F019	A	4" AO Gate	E-4	H-26026	DW Equip. Drns. Cont. Iso.	O	CIV		
X-18	2G11-F020	A	4" AO Gate	E-4	H-26026	DW Equip. Drns. Cont. Iso.	O	CIV		
X-19	2G11-F003	A	4" AO Gate	B-3	H-26026	DW Flr. Drns. Cont. Iso.	O	CIV		
X-19	2G11-F004	A	4" AO Gate	B-4	H-26026	DW Flr. Drns. Cont. Iso.	O	CIV		
X-21	2P51-F513	A	2" Man. Globe	F-3	H-26058	Ser. Air Cont. Iso.	LC	CIV		
X-21	2P51-F651	A	2" Man. Globe	F-3	H-26058	Ser. Air Cont. Iso.	LC	CIV		
X-22	2P70-F004	A	2" Solenoid	B-9	H-26066	DW Pneumatic Cont. Iso.	O	CIV	RR-V-3	
X-22	2P70-F005	A	2" Solenoid	B-9	H-26066	DW Pneumatic Cont. Iso.	O	CIV	RR-V-3	
X-23	2P42-F051	A	6" MO Gate	B-5	H-26055	RECCW to Recir. Cont. Iso.	O	CIV	CS-5	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-24	2P42-F052	A	6" MO Gate	C-5	H-26055	RBCCW to Recir. Cont. Iso.	O	CIV	CS-5
X-25	2T48-F103	A	6" AO Bfly	D-10	H-26083	DW & Torus Supply Iso.	C	CIV	
X-25	2T48-F118A	A	1" AO Control	J-4	H-26083	DW Makeup Inbrd. Iso.	C	CIV	RR-V-3
X-25	2T48-F307	A	18" AO Bfly	C-9	H-26084	DW Purge Inlet Inbrd. Iso.	C	CIV	
X-25	2T48-F308	A	18" AO Bfly	C-10	H-26084	DW Purge Inlet Inbrd. Iso.	C	CIV	
X-26	2T48-F319	A	18" AO Bfly	C-4	H-26084	DW Purge Outlet Inbrd. Iso.	C	CIV	
X-26	2T48-F320	A	18" AO Bfly	C-3	H-26084	DW Purge Outlet Outbrd. Iso.	C	CIV	
X-26	2T48-F340	A	2" AO Control	D-2	H-26084	Bypass-Outbrd. Iso.	C	CIV	RR-V-3
X-26	2T48-F341	A	2" AO Control	E-4	H-26084	Bypass-Inbrd. Iso.	C	CIV	RR-V-3
X-27A	2B31-F009B	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-27A	2B31-F009C	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	O	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes Relief CS Just.
X-27B	2B31-F010B	AC	1" Excess Flow Ck	F-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-27B	2B31-F010C	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-27C	2B31-F013A	AC	3/4" Check	G-3	H-26003	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-27C	2B31-F017A	AC	3/4" Check	G-2	H-26003	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-28	2P33-F004	A	1" AO Control	D-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-28	2P33-F012	A	1" AO Control	D-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV	
X-29A	2B31-F011A	AC	1" Excess Flow Ck	D-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-29A	2B31-F011D	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-29B	2B31-F012A	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-29B	2B31-F012D	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30A	2B31-F057B	AC	1" Excess Flow Ck	F-2	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30B	2B31-F040B	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30C	2B31-F040D	AC	1" Excess Flow Ck	H-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30D	2B31-F003B	AC	1" Excess Flow Ck	G-2	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-30E	2B31-F004B	AC	1" Excess Flow Ck	G-2	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31A	2B31-F057A	AC	1" Excess Flow Ck	F-2	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-31B	2B31-F040A	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-31C	2B31-F040C	AC	1" Excess Flow Ck	G-9	H-26003	Instrument Excess Flow Check Valve	C	NA	RR-V-15	
X-31D	2B31-F003A	AC	1" Excess Flow Ck	G-2	H-26003	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-31E	2B31-F004A	AC	1" Excess Flow Ck	G-2	H-26003	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-32A	2E11-F041D	A	1" AO Control	C-2	H-26014	RHR Inst. Iso.	O	CIV		
X-32C	2E11-F041B	A	1" AO Control	D-2	H-26014	RHR Inst. Iso.	O	CIV		
X-33A	2B21-F072A	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-33B	2B21-F072B	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-33C	2B21-F071B	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-33D	2B21-F071A	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	O	NA	RR-V-15	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-33E	2B21-F071C	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-33F	2B21-F072C	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34A	2B21-F072D	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34B	2B21-F071D	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34C	2T23-F004	A	1" Man. Globe	D-3	H-26057	ILRT Cont. Iso.	C	CIV	
X-34C	2T23-F005	A	1" Man. Globe	D-3	H-26057	ILRT Cont. Iso.	C	CIV	
X-34D	2T48-F363A	A	1" AO Control	E-8	H-26084	Press. Transmitter Iso.	0	CIV	
X-34E	2E51-F044C	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-34F	2E51-F044A	AC	1" Excess Flow Ck	A-5	H-26023	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-35A	2C51-Ball A	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35A	2C51-Shear A	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	NA	
X-35B	2C51-Ball B	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35B	2C51-Shear B	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	NA	
X-35C	2C51-Ball C	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35C	2C51-Shear C	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	NA	
X-35D	2C51-Ball D	A	Ball Solenoid	C-3	H-26993	TIP Inboard Cont. Iso.	0	CIV	RR-V-3
X-35D	2C51-Shear D	D	Expl Shear	C-3	H-26993	TIP Outboard Cont. Iso.	0	NA	
X-35E	2C51-F3012	A	Solenoid	F-13	H-26993	TIP N2 Purge	0	CIV	RR-V-32
X-35E	2C51-F3017	AC	Check	E-13	H-26993	TIP N2 Purge	C	CIV	RR-V-36
X-37A-D	2C11-HCU-120	B	1/2* Solenoid	B-6	H-26006	CRD Drive Water Insert	C	NA	
X-37A-D	2C11-HCU-123	B	1/2* Solenoid	B-5	H-26006	CRD Drive Water Withdraw	C	NA	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-37A-D	2C11-HCU-126	B	1" AO Globe	C-5	H-26006	Scram Insert HCU Control Valve	C	NA	RR-V-27
X-37A-D	2C11-HCU-138	C	1/2" Check	C-4	H-26006	Cooling Water Header HCU Check Valve	C	NA	
X-38A-D	2C11-HCU-121	B	1/2" Solenoid	B-6	H-26006	CRD Drive Water Withdraw	C	NA	
X-38A-D	2C11-HCU-122	B	1/2" Solenoid	B-5	H-26006	CRD Drive Water Insert	C	NA	
X-38A-D	2C11-HCU-127	B	3/4" AO Globe	B-5	H-26006	Scram Disch. HCU Control Valve	C	NA	RR-V-27
X-39A	2E11-F016A	A	16" MO Globe	B-7	H-26015	Cont. Spray Outbrd. Isc.	C	CIV	
X-39B	2E11-F016B	A	16" MO Globe	B-4	H-26014	Cont. Spray Outbrd. Iso.	C	CIV	
X-40A	2B21-F061	AC	1" Excess Flow Ck	J-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-40A	2E21-F018C	AC	1" Excess Flow Ck	B-4	H-26018	Instrument Excess Flow Check Valve	O	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-40B	2B21-F051A	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	2B21-F053A	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	2B21-F059A	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	2B21-F059C	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	2B21-F059E	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40B	2B21-F059G	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-40C	2B21-F055	AC	1" Excess Flow Ck	J-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR -15
X-40C	2B21-F057	AC	1" Excess Flow Ck	J-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-40D	2E21-F018B	AC	1" Excess Flow Ck	B-3	H-26018	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-40D	2E41-F024B	AC	1" Excess Flow Ck	D-4	H-26020	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-40D	2E41-F024D	AC	1" Excess Flow Ck	E-4	H-26020	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-41	2B31-F019	A	1" A0 Globe	E-4	H-26003	Reac. Sample Sys. Inbrd. Iso.	O	CIV	
X-41	2B31-F020	A	1" A0 Globe	E-2	H-26003	Reac. Sample Sys. Outbrd. Iso.	O	CIV	
X-42	2C41-F006	AC	1-1/2" Check	E-2	H-26009	SLC Outbrd Cont. Iso.	C	CIV	RR-V-6
X-42	2C41-F007	AC	1-1/2" Check	E-2	H-26009	SLC Inbrd. Cont. Iso.	C	CIV	RR-V-6
X-44	2T48-F321	A	2" A0 Control	G-7	H-26083	DW Inerting Outbrd. Iso.	C	CIV	
X-44	2T48-F322	A	2" A0 Control	H-7	H-26083	DW Inerting Inbrd. Iso.	C	CIV	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes	
							Pos	Leakage	Relief CS	Just.
X-45A	2B21-F053C	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-45B	2B21-F059L	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-45C	2B21-F059R	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-45D	2B21-F051C	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-45D	2B21-F111	A	1" A0 Gate	E-10	H-26384	Pass Sample Valves	C	CIV		
X-45D	2B21-F112	A	1" A0 Gate	E-10	H-26384	Pass Sample Valves	C	CIV		
X-45E	2B21-F059T	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-45F	2B21-F059N	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-46	2P21-F032	A	2" Manual Gate	F-2	H-26047	Demin. Water Cont. Iso.	LC	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-46	2P21-F034	A	2" Manual Gate	F-2	H-26047	Demin. Water Cont. Iso.	LC	CIV		
X-47	2P64-F045	A	6" MO Globe	G-11	H-26081	Chilled Water Cont. Iso.	0	CIV	CS-3	
X-48	2P64-F047	A	6" MO Globe	G-8	H-26081	Chilled Water Cont. Iso.	0	CIV	CS-3	
X-49A	2B21-F053B	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49B	2B21-F059D	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49C	2B21-F051B	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49D	2B21-F059F	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49E	2B21-F059H	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-49F	2B21-F059B	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-50A	2B21-F053D	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-50B	2B21-F059M	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-50C	2B21-F059S	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-50D	2B21-F051D	AC	1" Excess Flow Ck	H-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-50E	2B21-F059U	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-50F	2B21-F059P	AC	1" Excess Flow Ck	H-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-51A	2E51-F044D	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-51E	2E51-F044B	AC	1" Excess Flow Ck	B-5	H-26023	Instrument Excess Flow Check Valve	0	NA	RR-V-15	

Match Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Nore Pos	Leakage	Notes	
									Relief CS	Just.
X-51C	2P70-F066	A	2" Solenoid	D-9	H-26066	DW Pneumatic Cont. Iso.	0	CIV	FR-V-3	
X-51C	2P70-F067	A	2" Solenoid	D-9	H-26066	DW Pneumatic Cont. Iso.	0	CIV	RR-V-3	
X-51D	2T48-F363B	A	1" AO Control	D-6	H-26084	Press Transmitter Iso.	0	CIV		
X-51E	2B21-F070D	AC	1" Excess Flow Ck	D-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-51F	2B21-F073D	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-52A	2B21-F073A	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-52B	2B21-F073C	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-52C	2B21-F070C	AC	1" Excess Flow Ck	D-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-52D	2B21-F070A	AC	1" Excess Flow Ck	D-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes
							Pos	Leakage	Relief CS Just.
X-52E	2B21-F070B	AC	1" Excess Flow Ck	D-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-52F	2B21-F073B	AC	1" Excess Flow Ck	B-9	H-26000	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-54A	2E11-F041C	A	1" AO Control	C-8	H-26015	RHR Inst. Iso.	0	CIV	
X-54C	2E11-F041A	A	1" AO Control	C-8	H-26015	RHR Inst. Iso.	0	CIV	
X-55	2G11-F852	A	1-1/2" Man Gate	E-11	H-26026	Chem. drains Cont. Iso.	LC	CIV	
X-55	2G11-F853	A	1-1/2" Man Gate	D-11	H-26026	Chem. drains Cont. Iso.	LC	CIV	
X-56B	2B21-F047A	AC	1" Excess Flow Ck	F-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-56C	2B21-F045A	AC	1" Excess Flow Ck	C-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-56D	2B21-F049A	AC	1" Excess Flow Ck	F-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-56E	2B21-F043A	AC	1" Excess Flow Ck	C-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-56F	2B21-F041	AC	1" Excess Flow Ck	B-5	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-57A	2B31-F011B	AC	1" Excess Flow Ck	F-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-57A	2E31-F011C	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-57B	2B31-F012B	AC	1" Excess Flow Ck	F-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-57B	2B31-F012C	AC	1" Excess Flow Ck	E-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-57C	2B31-F013B	AC	3/4" Check	G-3	H-26003	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-57C	2B31-F017B	AC	3/4" Check	G-2	H-26003	Recir. Pump Seal Wtr.	0	CIV	RR-V-5
X-59B	2B21-F047B	AC	1" Excess Flow Ck	F-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15
X-59C	2B21-F045B	AC	1" Excess Flow Ck	C-9	H-26001	Instrument Excess Flow Check Valve	0	NA	RR-V-15

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes Relief CS Just.
X-59D	2B21-F049B	AC	1" Excess Flow Ck	F-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-59E	2B21-F043B	AC	1" Excess Flow Ck	C-9	H-26001	Instrument Excess Flow Check Valve	O	NA	RR-V-15
X-60A	2P33-F003	A	1" AO Control	C-4	H-26048	H2 & O2 Analy. Cont. Iso.	C	CIV	
X-60A	2P33-F011	A	1" AO Control	C-5	H-26048	H2 & O2 Analy. Cont. Iso.	C	CIV	
X-60B	2D11-F050	A	1" AO Control	D-5	H-26016	Fission Prcd. Mon. Cont. Iso.	O	CIV	RR-V-3
X-60B	2D11-F052	A	1" AO Control	D-6	H-26016	Fission Prod. Mon. Cont. Iso.	O	CIV	RR-V-3
X-61A	2T49-F002A	A	4" MO Gate	C-4	H-26068	Hydrogen Recom. DW Iso.	C	CIV	
X-62	2D11-F051	A	1" AO Control	F-5	H-26016	Fission Prod. Mon. Cont. Iso.	O	CIV	RR-V-3
X-62	2D11-F053	A	1" AO Control	F-6	H-26016	Fission Prod. Mon. Cont. Iso.	O	CIV	RR-V-3
X-63	2P70-F002	A	1" AO Control	F-8	H-26066	DW Pneumatic Cont. Iso.	O	CIV	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									CS	Relief Just.
X-63	2P70-F003	A	1" AO Control	F-8	H-26066	DW Pneumatic Cont. Iso.	0	CIV		
X-64	2P33-F005	A	1" AO Control	E-4	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV		
X-64	2P33-F013	A	1" AO Control	E-5	H-26048	H2 & O2 Analy. Cont. Iso.	0	CIV		
X-66A	2B31-F009A	AC	1" Excess Flow Ck	D-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-66A	2B31-F009D	AC	1" Excess Flow Ck	F-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-66B	2B31-F010A	AC	1" Excess Flow Ck	D-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-66B	2B31-F010D	AC	1" Excess Flow Ck	F-9	H-26003	Instrument Excess Flow Check Valve	0	NA	RR-V-15	
X-67	2T48-F334B	A	2" AO Control	C-3	H-26084	DW Purge Outlet Outbrd. Iso.		CIV		
X-67	2T48-F335B	A	2" AO Control	C-4	H-26084	DW Purge Outlet Inbrd. Iso.		CIV		
X-69	2T48-F209	A	4" AO Gate	C-9	H-26079	Inboard Isolation	C	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-69	2T48-F210	A	4" AO Gate	C-9	H-26079	Outboard Isolation	C	CIV		
X-79A	2E21-F018A	AC	1" Excess Flow Ck	B-3	H-26018	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-79E	2E41-F024C	AC	1" Excess Flow Ck	C-4	H-26020	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-79F	2E41-F024A	AC	1" Excess Flow Ck	C-4	H-26020	Instrument Excess Flow Check Valve	O	NA	RR-V-15	
X-80	2T48-F334A	A	2" AO Control	B-3	H-26084	DW Purge Outlet Outbrd. Iso.	C	CIV		
X-80	2T48-F335A	A	2" AO Control	B-4	H-26084	DW Purge Outlet Inbrd. Iso.	C	CIV		
X-81	2T48-F113	A	2" AO Control	G-9	H-26083	DW Inerting Outbrd. Iso.	C	CIV		
X-81	2T48-F114	A	2" AO Control	H-9	H-26083	DW Inerting Inbrd. Iso.	C	CIV		
X-203	2E51-F003	A	6" AO Bfly	H-6	H-26023	RCIC Pump Suction Torus Iso.	O	CIV		
X-203	2E51-F031	A	6" MO Gate	H-6	P-26023	RCIC Pump Suction Torus Iso.	O	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-204A	2E11-F004A	A	24" MO Gate	E-8	H-26015	RHR Pump Suction Torus Iso.	O	CIV		
X-204A	2E11-F030A	AC	1" Relief	F-8	H-26014	RHR Pump Suc Cont. Iso.	C	CIV		
X-204B	2E11-F004B	A	24" MO Gate	F-3	H-26014	RHR Pump Suction Torus Iso.	O	CIV		
X-204B	2E11-F030B	AC	1" Relief	F-4	H-26015	RHR Pump Suc Cont. Iso.	C	CIV		
X-204C	2E11-F004C	A	24" MO Gate	E-9	H-26015	RHR Pump Suction Torus Iso.	O	CIV		
X-204C	2E11-F030C	AC	1" Relief	F-10	H-26014	RHR Pump Suc Cont. Iso.	C	CIV		
X-204D	2E11-F004D	A	24" MO Gate	F-2	H-26014	RHR Pump Suction Torus Iso.	O	CIV		
X-204D	2E11-F030D	AC	1" Relief	F-2	H-26015	RHR Pump Suc Cont. Iso.	C	CIV		
X-205	2T48-F104	A	2" AO Control	G-4	H-26083	DW & Torus Outbrd. Iso.	C	CIV		
X-205	2T48-F118B	A	1" AO Control	J-5	H-26083	Torus Makeup Inbrd. Iso.	C	CIV	RR-V-3	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-205	2T48-F309	A	1R" AO Bfly	E-10	H-26084	Torus Purge Inlet Inbrd. Iso.	C	CIV		
X-205	2T48-F310	A	20" AO Bfly	F-10	H-26084	Torus Purge Vac. Brker. Iso.	C	CIV		
X-205	2T48-F311	A	20" AO Bfly	F-9	H-26084	Torus Purge Vac. Brker. Iso.	C	CIV		
X-205	2T48-F324	A	18" AO Bfly	D-10	H-26084	Torus Purge Inlet Outbrd. Iso.	C	CIV		
X-205	2T48-F328A	AC	20" AO Check	G-10	H-26084	Reactor Bldg to C Supp. Cham. Vac. Brker.		CIV		
X-205	2T48-F328B	AC	20" AO Check	G-10	H-26084	Reactor Bldg to C Supp. Cham. Vac. Brker.		CIV		
X-205	2T48-F364B	A	1" AO Control	G-5	H-26084	Pres. Transmitter Iso.	O	CIV		
X-206A	2T48-F361B	A	1" AO Control	G-5	H-26084	Torus Water Level Iso.	O	CIV		
X-206C	2E41-F121	A	3/8" Solenoid	H-9	H-26384	Pass Sample Return	C	CIV	RR-V-3	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-206C	2E41-F122	A	3/8" Solenoid	H-9	H-26384	Pass Sample Return	C	CIV	RR-V-3
X-206C	2T48-F361A	A	1" AO Control	G-9	H-26084	Torus Water Level Iso.	O	CIV	
X-206F	2T48-F362A	A	1" AO Control	H-9	H-26084	Torus Water Level Iso.	O	CIV	
X-206H	2T48-F362B	A	1" AO Control	H-5	H-26084	Torus Water Level Iso.	O	CIV	
X-207	2E41-F042	A	16" MO Gate	H-4	H-26020	HPCI Pump Suc. Torus Outbrd. Iso.	C	CIV	
X-207	2E41-F051	A	16" AO Bfly	H-4	H-26020	HPCI Pump Suc. Torus Inbrd. Iso.	O	CIV	
X-208A	2E21-F001A	A	20" MO Gate	G-7	H-26018	CS Pump Suction Out	O	CIV	
X-208B	2E21-F001B	A	20" MO Gate	H-7	H-26018	CS Pump Suction Out	O	CIV	
X-210A	2E11-F024A	B	16" MO Globe	C-6	H-26015	Suppression Pool Cooling	C	NA	
X-210A	2E11-F025A	AC	1" Relief	C-7	H-26015	LPCI Inj. Cont. Iso.	C	CIV	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm		Notes	
							Pos	Leakage	Relief CS	Just.
X-210A	2E11-F029	AC	1" Relief	E-9	H-26015	RHR Pump Suc Cont. Iso.	C	CIV		
X-210A	2E11-F097	AC	3" Relief	E-9	H-26015	Steam Line Relief Cont. Iso.	C	CIV		
X-210A	2E51-F019	A	2" MO Globe	E-7	H-26023	RCIC Pump Min. Flow Torus Iso.	C	CIV	RR-V-2	
X-210A	2E51-F021	AC	2" Check	E-7	H-26023	RCIC Pump Min. Flow Torus Iso.	C	CIV	RR-V-9	
X-210A&211A	2E11-F028A	A	16" MO Gate	C-6	H-26015	Suppression Pool Spray Outbrd Iso.	C	CIV		
X-210B	2E11-F024B	B	16" MO Globe	D-6	H-26014	Suppression Pool Cooling	C	NA		
X-210B	2E11-F025B	AC	1" Relief	C-4	H-26014	LPCI Inj. Cont. Iso.	C	CIV		
X-210B	2E41-F012	A	4" MO Globe	F-6	H-26020	HPCI Pump Min. Flow Inbrd. Iso.	C	CIV	RR-V-2	
X-210B	2E41-F046	AC	4" Check	F-6	H-26020	HPCI Pump Min Flow Outbrd. Iso.	C	CIV	Note 2	
X-210B&211B	2E11-F028B	A	16" MO Gate	C-7	H-26014	Suppression Pool Spray Outbrd Iso.	C	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Valve Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-211A	2E11-F027A	B	6" MO Globe	C-7	H-26015	Suppression Pool Spray	C	NA		
X-211B	2E11-F027B	B	6" MO Globe	D-5	H-26014	Suppression Pool Spray	C	NA		
X-212	2E51-F001	AC	10" Stop Check	G-5	H-26023	RCIC Turb. Exh. to Torus Iso.	C	CIV	RR-V-8 RR-V-9	
X-212	2E51-F040	AC	10" Check	F-5	H-26023	RCIC Turb. Exh. Torus Iso.	C	CIV	RR-V-9	
X-212&221C	2E51-F104	A	1-1/2" MO Gate	F-5	H-26023	RCIC Vac. Brker. Torus Iso.	O	CIV		
X-213	2E51-F002	AC	2" Stop Check	G-5	H-26023	RCIC Vac Pump Disch. to Torus Iso.	C	CIV	RR-V-8 RR-V-9	
X-213	2E51-F028	AC	2" Check	F-7	H-26023	RCIC Vac. Pump Disch. Torus Iso.	C	CIV	RR-V-9	
X-214	2E41-F021	AC	12" Stop Check	G-3	H-26020	HPCI Turb. Exh. Inbrd. Iso.	C	CIV	RR-V-8	
X-214	2E41-F049	AC	20" Check	G-4	H-26020	HPCI Turb. Exh. Outbrd. Iso.	C	CIV		
X-214&221B	2E41-F104	A	2" MO Gate	F-2	H-26020	HPCI Vac. Relief Outbrd. Torus Iso.	O	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-215	2E41-F022	AC	2" Stop Check	G-3	H-26020	HPCI Turb. Exh. Drn. Torus Iso.	C	CIV	RR-V-8	
X-215	2E41-F040	AC	2" Check	G-4	H-26020	HPCI Turb. Exh. Drn. Torus Iso.	C	CIV		
X-217A	2P33-F006	A	1" AO Control	F-4	H-26048	H2 & O2 Analy. Cont. Iso.	C	CIV		
X-217A	2P33-F014	A	1" AO Control	F-5	H-26048	H2 & O2 Analy. Cont. Iso.	C	CIV		
X-217B	2P33-F007	A	1" AO Control	H-4	H-26048	H2 & O2 Analy. Cont. Iso.	O	CIV		
X-217B	2P33-F015	A	1" AO Control	H-5	H-26048	H2 & O2 Analy. Cont. Iso.	O	CIV		
X-217C	2D11-F058	A	1" Manual Globe	G-3	H-26016	Fission Prod. Mon. Cont. Iso.	LC	CIV		
X-217C	2D11-F065	A	1" Manual Globe	F-8	H-26016	Fission Prod. Mon. Cont. Iso.	LC	CIV		
X-218A	2G51-F002	A	8" Man Gate	D-4	H-26042	Passive Cont. Iso.	LC	CIV		
X-220	2T48-F318	A	18" AO Bfly	G-4	H-26084	Torus Purge Outlet Inbrd. Iso.	C	CIV		
X-220	2T48-F326	A	18" AO Bfly	G-3	H-26084	Torus Purge Outlet Outbrd. Iso.	C	CIV		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-220	2T48-F338	A	2" AO Control	H-2	H-26084	Bypass-Outbrd. Iso.	C	CIV	RR-V-3	
X-220	2T48-F339	A	2" AO Control	H-3	H-26084	Bypass-Inbrd. Iso.	C	CIV	RR-V-3	
X-220	2T48-F364A	A	1" AO Control	G-8	H-26084	Press. Transmitter iso.	O	CIV		
X-221A	2T49-F004A	A	4" MO Gate	F-5	H-26068	Hydrogen Recom. Gas & Water Iso.	C	CIV		
X-221A	2T49-F005A	B	4" MO Gate	F-4	H-26068	Gas & Water Return	C	NA		
X-221B	2E41-F111	A	2" MO Gate	G-1	H-26020	HPCI Vac. Relief Inbrd. Torus Iso.	O	CIV		
X-221C	2E51-F105	A	1-1/2" MO Gate	F-4	H-26023	RCIC Vac. Brker. Torus Iso.	O	CIV	RR-V-2	
X-222B	2T49-F004B	A	4" MO Gate	F-5	H-26068	Hydrogen Recom. Gas & Water Iso.	C	CIV		
X-222B	2T49-F005B	B	4" MO Gate	F-4	H-26068	Gas & Water Return	C	NA		

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes	
									Relief CS	Just.
X-224A	2E11-F055A	AC	4" Relief	F-4	H-26015	RHR Hx Shell Relief Cont. Iso.	C	CIV		
X-224A	2E11-F103A	A	1" MO Globe	E-4	H-26015	RHR Hx Vent Cont. Iso.	C	CIV		
X-224A	2E11-F3078A	AC	3/4" Relief	F-4	H-26015	RHR Hx A Thermal Relief Valve	C	CIV		
X-224A	2T49-F009A	AC	1" Relief	F-4	H-26068	Relief/Cont. Iso. Valve	C	CIV		
X-224B	2E11-F055B	AC	4" Relief	F-7	H-26014	RHR Hx Shell Relief Cont. Iso.	C	CIV		
X-224B	2E11-F103B	A	1" MO Globe	E-7	H-26014	RHR Hx Vent Cont. Iso.	C	CIV		
X-224B	2E11-F3078B	AC	3/4" Relief	F-7	H-26014	RHR Hx B Thermal Relief Valve	C	CIV		
X-224B	2T49-F009B	AC	1" Relief	F-4	H-26068	Relief/Cont. Iso. Valve	C	CIV		
X-225A	2T48-F342L	A	1/2" Solenoid	H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-225B	2T48-F342K	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225C	2T48-F342J	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225D	2T48-F342I	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225E	2T48-F342H	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225F	2T48-F342G	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225G	2T48-F342F	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225H	2T48-F342E	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	
X-225J	2T48-F342D	A	1/2" Solenoid H-8	H-26084	Torus to DW Vac. Breaker Iso.	C	CIV	RR-V-31	

Hatch Unit 2
Containment Penetration - Valve List
Table 6-4

Penetration Number	Valve Number	Code Cat.	Description	Coord.	P&ID	Function	Norm Pos	Leakage	Notes
									Relief CS Just.
X-233	2T48-F211	A	4" AO Gate	E-8	H-26079	Inboard Isolation	C	CIV	
X-233	2T48-F212	A	4" AO Gate	E-8	H-26079	Outboard Isolation	C	CIV	
X-234A	2G51-F011	A	3" AO Control	C-5	H-26042	Torus Drain and Purif. Cont. Iso.	C	CIV	
X-234A	2G51-F012	A	3" AO Control	C-5	H-26042	Torus Drain and Purif. Cont. Iso.	C	CIV	
X-235A	2T48-F332B	A	2" AO Control	G-3	H-26084	Torus Purge Outlet Outbrd. Iso.	C	CIV	
X-235A	2T48-F333B	A	2" AO Control	G-4	H-26084	Torus Purge Outlet Inbrd. Iso.	C	CIV	
X-235B	2T48-F115	A	2" AO Control	G-10	H-26083	DW Inerting Outbrd. Iso.	C	CIV	
X-235B	2T48-F116	A	2" AO Control	H-10	H-26083	DW Inerting Outbrd. Iso.	C	CIV	

RELIEF REQUEST

RR-V-1

SYSTEM: Feedwater

VALVE(S): B21-F010A&B, B21-F032A&B, 2B21-F010A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Feedwater Line Containment Isolation

TEST REQUIREMENT: Verify reverse flow closure quarterly per IWV-3520

BASIS FOR RELIEF: Introducing reverse flow in the main feedwater lines during power operation would introduce main feedwater flow transients into the reactor and safety systems and potentially trip the reactor. Also, entry into the area to perform testing during power operation is not allowed. To attempt to perform this test during a cold shutdown could delay the startup of the unit.

ALTERNATE TESTING: Closure of these valves will be proven each refueling outage during Local Leak Rate Testing.

RELIEF REQUEST

RR-V-2

SYSTEM: NA

VALVE(S):	B21-F016	E41-F002	2B21-F016	2E41-F002
	E11-F007A&B	E41-F012	2E11-F007A&B	2E41-F012
	E11-F009	E51-F007	2E11-F009	2E51-F007
	E11-F011A&B	E51-F019	2E11-F011A&B	2E51-F019
	E51-F105		2E51-F105	

CATEGORY: A

CLASS: 1 and 2

FUNCTION: NA

TEST REQUIREMENT: IWV-343(d) requires that gate valves that have a functional differential pressure greater than 15 psi be tested for leakage in the same direction as when the valve is performing its function.

BASIS FOR RELIEF: The correct direction is to pressurize from the inboard side of the valve; however, the piping on the inboard side runs directly from the valve to the torus (or reactor vessel) and cannot be pressurized for testing.

ALTERNATE TESTING: These containment isolation valves will be leak rate tested in a nonconservative reverse direction as addressed in the containment leak rate test program for Type C leakage tests.

RELIEF REQUEST

RR-V-3

SYSTEM: NA

VALVE(S): Valves with stroke times of 2 seconds and less

CATEGORY: A and B

CLASS: 1, 2, and 3

FUNCTION: NA

TEST REQUIREMENT: IWV-3413(b) requires that the stroke time of all power-operated valves shall be measured to the nearest second for stroke times of 10 seconds or less. IWV-3417 requires that on any one test of power-operated valves, if an increase in stroke time of 50 percent or more from the previous test for valves with stroke times of 10 seconds or less occurs, the test frequency shall be increased to once each month until corrective action is taken.

BASIS FOR RELIEF: Accurate measurement of stroke times which are 2 seconds or less is not practical.

ALTERNATE TESTING: These valves will be full-stroke tested. A full-stroke time of 2 seconds will be allowed for these valves. Acceptance of the test will be based only on the stroke time limit and not on the "50 percent" criterion in IWV-3417.

RELIEF REQUEST

RR-V-4

SYSTEM: NA

VALVE(S): Valves exercised only during cold shutdown or refueling

CATEGORY: A, B, C, and AC

CLASS: 1, 2, and 3

FUNCTION: NA

TEST REQUIREMENT: IWV-3417(b) and IWV-3523 indicate that when corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup.

BASIS FOR RELIEF: The plant Technical Specifications provide the requirements and plant conditions necessary for plant startup.

ALTERNATE TESTING: Under such conditions startup shall be permitted as provided by the Technical Specifications.

RELIEF REQUEST

RR-V-5

SYSTEM: Reactor Recirculation

VALVE(S): B31-F013A&B, B31-F017A&B, 2B31-F013A&B, 2B31-F017A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Recirculation Pump Seal Water

TEST REQUIREMENT: Verify reverse flow closure quarterly per IWV-3520

BASIS FOR RELIEF: These valves are located in the Recirculation Pump Seal Water injection lines which require continuous flow during power operation in accordance with the pump manufacturer's recommendations. Quarterly testing could damage the seals. Also, to attempt to perform this test during a cold shutdown could delay the startup of the unit.

ALTERNATE TESTING: Closure of these valves will be proven each refueling outage during Local Leak Rate Testing.

RELIEF REQUEST

RR-V-6

SYSTEM: Standby Liquid Control (SBLC)

VALVE(S): C41-F006, C41-F007, 2C41-F006, 2C41-F007

CATEGORY: AC

CLASS: 1

FUNCTION: SBLC Injection Line Isolation

TEST REQUIREMENT: Verify forward flow operability and closure quarterly per IWV-3520

BASIS FOR RELIEF: Testing of these normally closed valves quarterly or during cold shutdown would require: (1) actuation and restoration of the explosive valves (2) entry into the containment to operate manual valves and (3) disablement of the SBLC system

ALTERNATE TESTING: Required flow through these valves is achieved once per 18 months during Technical Specifications testing. Closure is verified during Local Leak Rate Testing each refueling outage because to attempt to perform the closure test during cold shutdown could delay in the startup of the unit.

RELIEF REQUEST

RR-V-7

SYSTEM: HPCI

VALVE(S): E41-F045

CATEGORY: C

CLASS: 2

FUNCTION: HPCI Pump Suction

TEST REQUIREMENT: Forward flow operability quarterly per IWV-3520

BASIS FOR RELIEF: This normally closed check valve is located on the HPCI pump suction line and cannot be stroked. The valve does not experience flow during any normal mode of reactor operation or shutdown conditions. Testing of this valve would require pumping water from the torus to the condensate storage tank, thereby lowering the water quality in the tank.

ALTERNATE TESTING: Every second refueling outage the valve will be disassembled to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered adequate to detect degradation which would prevent the valve from meeting its safety function. The valve remains in the closed position in a torus water environment and does not experience flow which could cause wear. Also, all past inspections of this valve have shown little, if any, degradation other than the expected corrosion.

RELIEF REQUEST

RR-V-3

SYSTEM: NA

VALVE(S): E41-F021, E41-F022, E51-F001, E51-F002, 2E41-F021, 2E41-F022,
2E51-F001, 2E51-F002

CATEGORY: AC

CLASS: 2

FUNCTION: Containment Isolation

TEST REQUIREMENT: IWV-3423 requires that valves be leak tested with the pressure differential in the same direction as when the valve is performing its function.

BASIS FOR RELIEF: This turbine exhaust containment isolation valve is a normally closed stop check valve with the closure mechanism in the "locked open" position. The valve then functions as a simple check valve. The piping on the inboard side of the valve runs directly from the valve to the torus and cannot be pressurized for testing.

ALTERNATE TESTING: As an alternative, the valve is closed with the closure mechanism and leak tested from the reverse side. The leak test, as defined in the containment leak rate test program, is conservative since the test pressure tends to lift the disc from the seat much in the same manner as reverse testing a globe valve.

RELIEF REQUEST

RR-V-9

SYSTEM: RCIC

VALVE(S): E51-F001, E51-F002, E51-F021, E51-F028, E51-F040, 2E51-F001,
2E51-F002, 2E51-F021, 2E51-F028, 2E51-F040

CATEGORY: AC

CLASS: 2

FUNCTION: Containment Isolation

TEST REQUIREMENT: Verify reverse flow closure quarterly per IWV-3520

BASIS FOR RELIEF: These valves are in the normally closed position except when the RCIC pump is run. The only positive means to verify closure is to pressurize and introduce reverse flow which is done during the Local Leak Rate Test. To perform this test quarterly would require that the RCIC system be made inoperable during the test. Also, to attempt to perform these tests during cold shutdown could delay the startup of the unit.

ALTERNATE TESTING: These valves will have their closure verified each refueling outage during the Local Leak Rate Tests.

RELIEF REQUEST

RR-V-10

SYSTEM: Main Steam

VALVE(S): B21-F022A, B, C, D B21-F028A, B, C, D 2B21-F022A, B, C, D
2B21-F028A, B, C, D

CATEGORY: A

CLASS: 1

FUNCTION: Main Steam Isolation Valves

TEST REQUIREMENT: Relief is requested from applying the requirements of IWV-3427(b) to the main steam isolation valves.

BASIS FOR RELIEF: ASME Section XI requires that the valves be tested once per 24 months unless a test shows that the margin between the measured leakage rate and the maximum permissible rate has been reduced by 50 percent or greater. In this case the frequency of testing should be doubled (or approximately every 12 months) to coincide with a cold shutdown. Also, trending of the leakage rates is required.

The Technical Specifications require that these valves be tested on a much more frequent basis or once per refueling outage. These 24-inch globe valves are tested by applying 28 psig between the inboard and outboard valves with a maximum allowable leakage of 11.5 SCFH. This allowable leakage is small when compared to other Category A valves. Some leakage may occur through mechanically sound valves because the inboard valve is reverse tested, which tends to lift the globe from the seat, thereby allowing leakage that would not occur during a normal pressurization.

Since the normal testing frequency applied by the Technical Specifications is similar to those required by IWV-3427(b), the provisions of IWV-3427(b) need not be applied. Using the conservative test, with low allowable leakages at a frequency of once per refueling outage, any significant degradation of the valve will be detected.

ALTERNATE TESTING: Testing will be conducted per the Technical Specifications as described above.

RELIEF REQUEST

RR-V-11

SYSTEM: Main Steam

VALVE(S): B21-F037A-H, J-L 2B21-F037A-H, K-M B21-F110A,C,G,H
2B21-F110B, D, F, G

CATEGORY: C

CLASS: 3

FUNCTION: Main Steam Relief Valve Discharge Vacuum Breaker

TEST REQUIREMENT: Verify opening quarterly per IWV-3521

BASIS FOR RELIEF: These normally closed check valves are located in containment and therefore are inaccessible during power operation and cold shutdowns when the containment is inerted. To attempt to perform these tests during an unscheduled cold shutdown could delay the startup of the unit.

ALTERNATE TESTING: These valves are tested each refueling outage by visually inspecting each disc, ensuring that the disc moves freely, and by determining the opening force required to unseat the disc.

RELIEF REQUEST

RR-V-12

SYSTEM: HPCI

VALVE(S): 2E41-F045

CATEGORY: C

CLASS: 2

FUNCTION: HPCI Pump Suction

TEST REQUIREMENT: Forward flow operability quarterly per IWV-3520

BASIC FOR RELIEF: This normally closed check valve is located on the HPCI pump suction line and cannot be stroked. The valve does not experience flow during any normal mode of reactor operation or shutdown conditions. Testing of this valve would require pumping water from the torus to the condensate storage tank, thereby lowering the water quality in the tank.

ALTERNATE TESTING: Every second refueling outage the valve will be disassembled to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered adequate to detect degradation which would prevent the valve from meeting its safety function. The valve remains in the closed position in a torus water environment and does not experience flow which could cause wear. Also, all past inspections of this valve have shown little, if any, degradation other than the expected corrosion.

RELIEF REQUEST

RR-V-13

SYSTEM: Core Spray

VALVE(S): E21-F006A,B

CATEGORY: AC

CLASS: 1

FUNCTION: Core Spray Injection and Pressure Isolation

TEST REQUIREMENT: Verify forward flow capability quarterly per IWV-3520.

BASIS FOR RELIEF: These valves do not see flow during any normal mode of operation or shutdown conditions.

ALTERNATE TESTING: Every second refueling outage one of the two normally closed check valves will be disassembled (on a rotating basis) to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered adequate to detect degradation which would prevent the valve from meeting its safety function. Valve integrity (misalignments, etc.) of each valve will be proven each refueling outage during leak rate tests because these valves are pressure isolation valves and must pass the leakage tests. If the valve is determined to be inoperable during the inspection, the other valve will be disassembled during that outage.

RELIEF REQUEST

RR V-14

SYSTEM: RHR

VALVE(S): E11-F050A,B

CATEGORY: AC

CLASS: 1

FUNCTION: LPCI and Pressure Isolation

TEST REQUIREMENT: Verify forward flow operability quarterly per IWV-3520.

BASIS FOR RELIEF: These valves do not receive sufficient flow to assure that the valve fully opens during any normal mode of operation or shutdown condition.

ALTERNATE TESTING: At least one of the RHR system check valves will receive shutdown cooling flow through it during cold shutdown conditions; however, the flow is not sufficient to fully open the valve. Therefore, every second refueling outage one of the two check valves will be disassembled (on a rotating basis) to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered adequate to detect degradation which would prevent the valve from meeting its safety function. Valve integrity (misalignment, etc.) of each valve will be proven each refueling outage during leak rate tests and must pass the leakage tests. If the valve is determined to be inoperable during the inspection, the other valve will then be disassembled.

RELIEF REQUEST

RR-V-15

SYSTEM: Nuclear Boiler, Reactor Recirculation, CS, HPCI, and RCIC

VALVE(S): B21-F015A-H, B21-F015J-N, B21-F015P, B21-F015R&S, B21-F041,
B21-F043A&B, B21-F045A&B, B21-F047A&B, B21-F049A&B, B21-F051A-D,
B21-F053A-D, B21-F055, B21-F057, B21-F059A-H, B21-F059L-N,
B21-F059P, B21-F059R-U, B21-F061, B21-F065A&B, B31-F003A&B,
B31-F004A&B, B31-F009A-D, B31-F010A-D, B31-F011A-D, B31-F012A-D,
B31-F040A-D, B31-F055B-H, B31-F057A&B, E21-F018A-C, E41-F024A-D,
E51-F044A-D,

2B21-F041, 2B21-F043A&B, 2B21-F045A&B, 2B21-F047A&B, 2B21-F049A&B,
2B21-F051A-D, 2B21-F053A-D, 2B21-F055, 2B21-F057, 2B21-F059A-H,
2B21-F059L-N, 2B21-F059P, 2B21-F059R-U, 2B21-F061, 2B21-F070A-D,
2B21-F071A-D, 2B21-F072A-D, 2B21-F073A-D, 2B31-F003A&B,
2B31-F004A&B, 2B31-F009A-D, 2B31-F010A-D, 2B31-F011A-D,
2B31-F012A-D, 2B31-F040A-D, 2B31-F057A&B, 2E21-F018A-C,
2E41-F024A-D, 2E51-F044A-D

CATEGORY: AC

CLASS: 1

FUNCTION: Active containment isolation valves

TEST REQUIREMENT: IWV-3521 requires operability test of check valves and
IWV-3522 describes the required testing procedure.

BASIS FOR RELIEF: The excess flow checks are designed to activate and limit
flow in case of a line break downstream of the valve. The
test requirements for check valves in the ASME Code are
intended for testing simple check valves. Quarterly
testing is not practical since these instrument line
valves are in use during plant operation and cold
shutdown. The check valve test requirements of IWV-3411
and IWV-3520 are not applicable to these valves.

ALTERNATE TESTING: Section 4.7.D.1.b (Unit 1) and Section 4.6.3.4 (Unit 2) of
the Plant Technical Specification specifies the frequency
(Unit 1 - at least once per operating cycle and Unit 2 -
at least once per 18 months) of testing to verify
operability and flow limiting capability of excess flow
check valves.

RELIEF REQUEST

RR-V-16

SYSTEM: Core Spray

VALVE(S): 2E21-F006A,B

CATEGORY: AC

CLASS: 1

FUNCTION: Core Spray Injection and Pressure Isolation

TEST REQUIREMENT: Verify forward flow operability quarterly per IWV-3520.

BASIS FOR RELIEF: These valves do not see flow during any normal mode of operation or shutdown conditions.

ALTERNATE TESTING: Every second refueling outage one of the two normally closed check valves will be disassembled (on a rotating basis) to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered adequate to detect degradation which would prevent the valve from meeting its safety function. Valve integrity (misalignments, etc.) of each valve will be proven each refueling outage during leak rate tests because these valves are pressure isolation valves and must pass the leakage tests. If the valve is determined to be inoperable during the inspection, the other valve will then be disassembled during the outage.

RELIEF REQUEST

RR-V-17

SYSTEM: RHR

VALVE(S): 2E11-F050A,B

CATEGORY: AC

CLASS: 1

FUNCTION: LPCI and Pressure Isolation

TEST REQUIREMENT: Verify forward flow operability quarterly per IWV-3520.

BASIS FOR RELIEF: These valves do not receive sufficient flow to assure that the valve fully opens during any normal mode of operation or shutdown condition.

ALTERNATE TESTING: At least one of the RHR system check valves will receive shutdown cooling flow through it during cold shutdown conditions; however, the flow is not sufficient to fully open the valve. Therefore, every second refueling outage one of the two check valves will be disassembled (on a rotating basis) to prove that the valve is capable of full stroking and that its internals are structurally sound (no loose or excessively corroded parts). This frequency is considered to be adequate to detect degradation which would prevent the valve from meeting its safety function. Valve integrity (misalignment, etc.) of each valve will be proven each refueling outage during leak rate tests and must pass the leakage tests. If the valve is determined to be inoperable during the inspection the other valve will also be disassembled.

RELIEF REQUEST

RR-V-18

SYSTEM: Reactor Water Cleanup

VALVE(S): G31-F039, G31-F203

CATEGORY: AC

CLASS: 1

FUNCTION: RWCU Discharge Line Containment Isolation

TEST REQUIREMENT: Prove reverse flow closure

BASIS FOR RELIEF: This normally open check valve is located in the RWCU main flow path. Securing RWCU to perform this test during power operation may cause a fluctuation in reactor water chemistry. Also, flow in one of the feedwater lines would have to be shutoff during this test (See RR-V-1). To attempt to perform this test during cold shutdowns could potentially delay the restart of the unit.

ALTERNATE TESTING: The check valve will be proven to close each refueling outage during the local leak rate tests.

RELIEF REQUEST

RR-V-19

SYSTEM: Plant Service Water

VALVE(S): P41-F024A&B, P41-F025A&B, P41-F026A&B
2P41-F024A&B, 2P41-F025A&B, 2P41-F026A&B

CATEGORY: C

CLASS: 3

FUNCTION: Provide cooling water flow to RHR, HPCI, and CS pump and pump room coolers

TEST REQUIREMENT: Verify forward flow operability

BASIS FOR RELIEF: During quarterly testing of the HPCI, RHR, and Core Spray Pumps the coolers are placed in operation, thereby stroking these valves. However, the design of the system does not provide for positive verification of the flow rate through each valve.

ALTERNATE TESTING: One valve will be disassembled each refueling outage on a rotating basis to ensure that the design function of the valve can be achieved. If the valve is determined to be nonfunctional, an additional valve will be disassembled. Failure of this valve will require the disassembly of the remaining valves for that unit.

RELIEF REQUEST

RR-V-20

SYSTEM: Plant Service Water

VALVE(S): P41-F035A&B, P41-F036A&B, P41-F037A-D, P41-F039A&B, P41-F340,
2P41-F035A&B, 2P41-F036A&B, 2P41-F037A-D, 2P41-F039A&B, 2P41-F339A&B

CATEGORY: C

CLASS: 3

FUNCTION: Cooling Water

TEST REQUIREMENT: IWV-3413(b) requires stroke times shall be measured to the nearest second, for stroke times 10 seconds or less, or 10 percent of the specified limiting stroke time for full-stroke times longer than 10 seconds.

IWV-3417 requires that if the stroke time increases by 25 percent from the previous test for valves with full-stroke times greater than 10 seconds or 50 percent for valves with full-stroke times less than 10 seconds, the test frequency shall be increased to once each month until corrective action is taken.

BASIS FOR RELIEF: These valves are air operated valves without indicating light or control switches. Measurement of stroke times can be performed only by observation of the stem movement when the associated room cooler is placed into operation. This type of testing does not provide the accuracy required by IWV-3413(b) and IWV-3417.

ALTERNATE TESTING: A maximum stroke time which will be as short as practical will be assigned to each valve. If the measured stroke time exceeds this value, the valve will be declared inoperable.

RELIEF REQUEST

RR-V-21

SYSTEM: Core Spray

• VALVE(S): E21-F036A,B 2E21-F036A,B,

CATEGORY: AC

CLASS: 2

FUNCTION: Core Spray Test Line Containment Isolation

TEST REQUIREMENT: IWV-3520 requires that check valves be exercised at least once per 3 months and IWV-3421 requires that Category A valves be leak tested.

BASIS FOR RELIEF: Since there is no valve between the check valve and the torus the line cannot be pressurized to ensure closure of the valve. This valve is the inboard containment isolation valve for the core spray test line. The outboard isolation is a closed system as defined in the Appendix J program. This valve is sealed from the primary containment atmosphere because the test line terminates below the water level of the torus and the leakage is not included in the local leak rate testing.

ALTERNATE TESTING: The integrated leak rate test will prove that leakage through the valve and closed system does not occur. There are no other practical means of testing this check valve for closure.

RELIEF REQUEST

RR-V-22

SYSTEM: RHR Service Water

VALVE(S): E11-F068A&B, 2E11-F068A&B

CATEGORY: B

CLASS: 3

FUNCTION: RHR Service Water Flow/Pressure Regulation

TEST REQUIREMENT: Exercise and Stroke Time

BASIS FOR RELIEF: This valve cannot be opened unless the associated RHR service water pump is running. However, if the valve is fully opened with the pump operating, the pump would then run out and cause potential damage to the pump.

ALTERNATE TESTING: The quarterly pump test demonstrates that the valve is operating correctly. If the valve did not function it would be determined by improper test results.

RELIEF REQUEST

RR-V-23

SYSTEM: HPCI

VALVE(S): E41-F102, E41-F103, 2E41-102, 2E41-103

CATEGORY: C

CLASS: 2

FUNCTION: Provide vacuum relief for the HPCI turbine exhaust line.

TEST REQUIREMENT: Forward flow operability and reverse flow closure quarterly per IWV-3520.

BASIS FOR RELIEF: Operability of these check valves cannot be proven by normal process flow since they are acting simply as vacuum relief valves. If a vacuum forms in the turbine exhaust line due to steam condensation, the disc will lift from the seat sufficiently to allow air into the line. Otherwise, there is no movement of the disc.

ALTERNATE TESTING: During the local leak rate test each refueling outage on Unit 1 the piping is pressurized between valves E41-F111 and E41-F104. Valve E41-F104 will then be vented as part of the test to ensure that flow passes through the check valves. (Note: Same test will be performed on Unit 2 valves). This flow rate will be greater than that required for vacuum relief. Closure of the valves is proven by HPCI pump operation. If the valve did not close steam would bypass the torus into the torus bay and cause a resultant temperature increase.

RELIEF REQUEST

RR-V-24

SYSTEM: RHR Service Water

VALVE(S): E11-F200A-D, 2E11-F207A-D

CATEGORY: B

CLASS: 3

FUNCTION: RHR SW Pump minimum flow line open/close

TEST REQUIREMENT: Stroke timing and corrective action requirements in IWV-3413 and IWV-3417, respectively.

BASIS FOR RELIEF: These valves do not have remote indicating lights which would allow for accurate measurement of the stroke times or total application of the required corrective action.

ALTERNATE TESTING: These valves will be stroke timed by observing the stem movement and then timing that movement. Acceptance of the test will be based only on the stroke time limit and not on the other criterion in IWV-3417.

RELIEF REQUEST

RR-V-25

SYSTEM: Plant Service Water

VALVE(S): P41-F311A-D, 2P41-F311A-D

CATEGORY: C

CLASS: 3

FUNCTION: Pump discharge check valve

TEST REQUIREMENT: Prove that these normally open check valves close by IWV-3522(b).

BASIS FOR RELIEF: There are no direct means to verify closure of these valves.

ALTERNATE TESTING: Closure must be verified to ensure that flow from an operating pump on the train is not diverted back through a non-operating pump and thereby degrading the performance of the operating pump.

Closure of the valve is confirmed whenever the pump is shutoff since performance of the other pump does not degrade.

Note: Opening is verified by required flow.

RELIEF REQUEST

RR-V-26

SYSTEM: CRD

VALVE(S): C11-HCU-115, 2C11-HCU-115

CATEGORY: B

CLASS: 2

FUNCTION: Charging Water Header Check Valves

TEST REQUIREMENT: IWW-3522 requires that check valves which cannot be stroke exercised during plant operation shall be full stroked during cold shutdowns.

BASIS FOR RELIEF: This type of testing would not be practical during cold shutdowns because it would involve scrambling the control rods and then dropping the charging water header pressure below that of the accumulators. This type of testing during cold shutdowns could put the plant in an unsafe condition.

ALTERNATE TESTING: Check valve operability is proven each refueling outage by the scram testing required by Technical Specifications which opens the valve and by a leakage test which proves closure.

RELIEF REQUEST

RR-V-27

SYSTEM: CRD

VALVE(S): C11-HCU-126, C11-HCU-127, 2C11-HCU-126, 2C11-HCU-127

CATEGORY: B

CLASS: 2

FUNCTION: Scram Inlet and Outlet Valves

TEST REQUIREMENT: IWV-3400 requires that these valves be tested quarterly.

BASIS FOR RELIEF: The Hydraulic Control Units (HCU) are integrally designed systems for controlling rod drive movements. Individual valve testing is not possible without causing a control rod scram with a resulting change in core reactivity. Quarterly testing of these valves increases the potential to violate plant Technical Specifications which govern the methods and frequency of reactivity changes. In addition, there are no direct means to measure the stroke time of these valves.

ALTERNATE TESTING: Technical Specification Control Rod Scram Insertion Time testing serves to verify proper operation of each of these valves. As a minimum, 10% of the CRDs on Unit 1 are scram timed on a rotating basis every 16 weeks and 10% of the CRDs on Unit 2 are tested every 120 days. After each major refueling outage and prior to power operation all operable control rods on Unit 1 shall be scram tested from the fully withdrawn position. Following any reactor shutdown (Units 1 and 2) that is greater than 120 days all control rods shall be scram tested.

RELIEF REQUEST

RR-V-28

SYSTEM: 1B21 and 2B21

VALVE(S): 1B21-F036A, B, C, D, E, F, G, H, J, K, L
2B21-F036A, B, C, D, E, F, G, H, K, L, M

CATEGORY: AC

CLASS: 2

FUNCTION: MSRV Accumulator Check valves

TEST REQUIREMENT: Reverse flow closure quarterly per IWV-3520

BASIS FOR RELIEF: These valves cannot be tested during power operation since entry into the drywell is required. To attempt to perform these tests during cold shutdowns would potentially delay the startup of the unit.

ALTERNATE TESTING: These valves are leak rate tested during refueling outages.

RELIEF REQUEST

RR-V-29

SYSTEM: Nuclear Boiler System

VALVE(S): 1B21-F013A-H, J, K, and L
2B21-F013A-H, K, L, and M

CATEGORY: BC

CLASS: 1

FUNCTION: Nuclear Boiler System over-pressure protection

TEST REQUIREMENT: IWV-3410 requires that Category B valves which cannot be stroke exercised during plant operation be exercised at cold shutdown and it requires that power operated valves be stroke timed.

BASIS FOR RELIEF: Failure of these valves to close while being stroke tested during power operation would cause a loss of the primary reactor coolant. These valves cannot be exercised at pressure below 100 psig and the position of the main stage of this 2 stage relief valve can only be determined by indirect means.

ALTERNATE TESTING: At least once per 18 months for Unit 2, when the reactor steam dome pressure is greater than 100 psig these valves shall be manually opened and observed, to ensure that either;

1. The control valve or bypass position responds accordingly, or
2. There is a corresponding change in measured steam flow.

Once during the operating cycle for Unit 1, at a reactor pressure greater than 100 psig, each relief valve shall be manually opened until thermocouples downstream of the valve indicate steam flow.

RELIEF REQUEST

RR-V-30

SYSTEM: Core Spray

VALVE(S): E21-F044A, B 2E21-F044A, B

CATEGORY: AC

CLASS: 2

FUNCTION: Containment Isolation for the Jockey Pump Minimum Flow Line

TEST REQUIREMENT: Reverse flow closure quarterly per IWV-3520

BASIS FOR RELIEF: The only safety related function of this normally open check valve is containment isolation. The only viable means of proving closure is by introducing reverse flow during the Local Leak Rate Tests. To perform this test quarterly would require removing the associated pump from operation. Also, to perform this test during cold shutdowns could delay the startup of the unit.

ALTERNATE TESTING: Reverse flow closure each refueling outage during the Local Leak Rate Tests.

RELIEF REQUEST

RR-V-31

SYSTEM: Containment Purge and Inerting

VALVE(S): T48-F342A-L, 2T48-F342A-L

CATEGORY: A

CLASS: 2

FUNCTION: Torus to Drywell Vacuum Breaker Test Valve and Air Line Containment Isolation

TEST REQUIREMENT: Exercise to prove closure and stroke time quarterly.

BASIS FOR RELIEF: Energization of this normally closed solenoid valve by the test switch allows air flow to the test cylinder, which then moves the disc of the vacuum breaker check valve to the open position. When the test switch is released, the solenoid valve closes the air supply, the air cylinder depressurizes through the exhaust port, and the check valve disc closes. The open/closure of the check valve is verified by indicating lights; however, there are no positive means of verifying the closure of the solenoid valve or of performing stroke time measurement.

ALTERNATE TESTING: Closure of the air supply by the solenoid valve is verified by closure of the check valve. If the solenoid did not block the air supply when de-energized the vacuum breaker check valve would remain open. However the closure time of the solenoid valve is independent of the closure time of the check valve and therefore cannot be measured.

In addition, closure of the solenoid valve is verified each refueling outage during Local Leak Rate Testing.

RELIEF REQUEST

RR-V-32

SYSTEM: TIP System

VALVE(S): C51-F3012 and 2C51-F3012

CATEGORY: A

CLASS: 2

FUNCTION: Containment Isolation

TEST REQUIREMENT: IWV-3413 requires that power operated valves be stroke timed.

BASIS FOR RELIEF: There is no way to determine the position of the valve other than indirect means, i.e., flow measurement.

ALTERNATE TESTING: These valves will be exercised quarterly and the flow will be observed as an indirect means of determining stem position.

RELIEF REQUEST

RR-V-33

SYSTEM: Diesel Generator Air Start
VALVE: R43-F015A, B & C, R43-F016A, B, & C
CATEGORY: B
CLASS: -
FUNCTION: Diesel Generator air start solenoids
TEST REQUIREMENTS: Measure Stroke Time

BASIS FOR RELIEF: These are three-way solenoid valves mounted on the diesel generator (DG) skid mounted package. They are in the DG air start line between the air receiver tanks and the air start manifolds. Since each generator has two tanks and two manifolds, the DG may start on air supplied by either or both tanks. The diesel generator test procedure verifies operability of each of these valves independently, on an alternating basis by isolating one air start header and starting the DG from one header at a time. Stroke time cannot be measured because there are no position indicators and visual observation is not possible due to valve design. The total time from initiation to DG operation is measured such that each valve's stroke time is verified as acceptable. The DG start test is performed more frequently than required by Section XI so that actual valve testing criteria is more limiting than Section XI requirements.

ALTERNATE TESTING: These valves will be tested as part of the diesel generator air start test. Acceptable diesel generator start time will be used to verify valve operability and acceptable stroke time.

RELIEF REQUEST

RR-V-34

SYSTEM: Diesel Generator Air Start

VALVE: 2R43-F042A & C, and 2R43-F044A & C

CATEGORY: B

CLASS: -

FUNCTION: Diesel Generator air start solenoids

TEST REQUIREMENTS: Measure stroke time

BASIS FOR RELIEF: These are three-way solenoid valves mounted on the diesel generator (DG) skid mounted package. They are in the DG air start line between the air receiver tanks and the air start manifolds. Since each generator has two tanks and two manifolds, the DG may start on air supplied by either or both tanks. The diesel generator test procedure verifies operability of each of these valves independently, on an alternating basis, by isolating one air start header and starting the DG from one header at a time. Stroke time cannot be measured because there are no position indicators and visual observation is not possible due to valve design. The total time from initiation to DG operation is measured such that each valve's stroke time is verified as acceptable. The DG start test is performed more frequently than required by Section XI so that actual valve testing criteria is more limiting than Section XI requirements.

ALTERNATE TESTING: These valves will be tested as part of the diesel generator air start test. Acceptable diesel generator start time will be used to verify valve operability and acceptable stroke time.

RELIEF REQUEST

RR-V-35

SYSTEM: HPCI System

VALVE(S): E41-F048, E41-F057, 2E41-F048, 2E41-F057

CATEGORY: C

CLASS: 2

FUNCTION: Lube Oil Cooler Check Valves

TEST REQUIREMENT: IWV-3520 requires that check valves be exercised quarterly and disk movement verified by positive means.

BASIS FOR RELIEF: These valves are exercised quarterly during pump testing, but a positive means of disk movement can only be verified during annual testing when the turbine bearing temperatures are allowed to stabilize.

ALTERNATE TESTING: These valves will be verified to open annually during pump testing based on the turbine bearing temperature being within the acceptable limits.

RELIEF REQUEST

RR-V-36

SYSTEM: TIP System

VALVE(S): C51-F3017, 2C51-F3017

CATEGORY: AC

CLASS: 2

FUNCTION: Containment Isolation

TEST REQUIREMENT: Verify reverse closure quarterly per IWV-3520

BASIS FOR RELIEF: These normally open valves are located in the containment and therefore are inaccessible during power operation. To attempt to perform these tests during an unscheduled cold shutdown could delay the startup of the unit.

ALTERNATE TESTING: Closure of these valves will be proven each refueling outage during Local Leak Rate Testing.

RELIEF REQUEST

RR-V-37

SYSTEM: A11

VALVE(S): All Category A and AC valves 6 in. nominal diameter and larger

CATEGORY: A, AC

CLASS: 1 and 2

FUNCTION: Containment and Pressure Isolation

TEST REQUIREMENT: IWV-3427(b) requires that for valves 6 in. nominal pipe size and larger, if a leakage rate exceeds the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate by 50% or greater, the test frequency shall be doubled; the tests shall be scheduled to coincide with a cold shutdown until corrective action is taken, at which time the original test frequency shall be resumed. If tests show a leakage rate increasing with time, and a projection based on three or more tests indicates that the leakage rate of the next scheduled test will exceed the maximum permissible leakage rate by greater than 10%, the valve shall be replaced or repaired.

BASIS FOR RELIEF: IWV-3427(b) is apparently attempting to predict the failure of a valve based on gradual degradation that is of a trendable nature. This would apply to a valve where the seat, internals, etc. are wearing at a measurable rate, and the eventual failure of the valve could be predicted from successive leakage tests.

However, historical data at Plant Hatch has demonstrated that, in general, valves do not exhibit gradually increasing leakage rates as implied by IWV-3427(b). The two general patterns of behavior for valves are: (1) essentially constant leakage rates followed by sudden failure or (2) erratic test results which do not trend. Therefore, trending as required by IWV-3427(b) does not serve any useful function.

ALTERNATE TESTING: Valves with leakage limits exceeding the allowable limits will be repaired or replaced per IWV-3427(a).

RELIEF REQUEST

RR-V-38

SYSTEM: CRD

VALVE(S): C11-HCU-114, 2C11-HCU-114

CATEGORY: C

CLASS: 2

FUNCTION: Scram Discharge Checks

TEST REQUIREMENT: Verify forward flow operability quarterly per IWV-3520.

BASIS FOR RELIEF: These valves are located on the scram discharge line of each CRD. Flow through each check valve is experienced only during the scram of the associated CRD unit.

ALTERNATE TESTING: Required flow is achieved through the valves during the Technical Specification Control Rod Scram Insertion tests. As a minimum, 10% of the CRDs on Unit 1 are scram timed on a rotating basis every 16 weeks and 10% of the CRDs on Unit 2 are tested every 120 days. After each major refueling outage and prior to power operation all operable control rods on Unit 1 shall be scram tested from the fully withdrawn position. Following any reactor shutdown (Units 1 and 2) that is greater than 120 days all control rods shall be scram tested.

COLD SHUTDOWN JUSTIFICATION

CS-1

SYSTEM: Reactor Recirculation System

VALVE(S): B31-F031A,B 2B31-F031A,B

CATEGORY: B

CLASS: 1

FUNCTION: Valves close to provide loop isolation

QUARTERLY TEST REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN TEST JUSTIFICATION: Closure during normal operation requires a reduction in power to trip the associated recirculation pump. Closure also creates a potential for exceeding the permissible temperature differential between the loops. In addition, the area is inaccessible during normal operation, which precludes an operator from manually opening the valve in case of actuator failure.

QUARTERLY PARTIAL STROKE TESTING: None. The valve circuitry does not allow partial closure of the valve.

COLD SHUTDOWN TESTING: Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CS-2

SYSTEM: Residual Heat Removal

VALVE(S): E11-F008, E11-F009, 2E11-F008, 2E11-F009

CATEGORY: A

CLASS: 1

FUNCTION: RHR Shutdown Cooling Pressure Isolation

QUARTERLY TEST
REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN
TEST JUSTIFICATION: These pressure isolation valves are interlocked to prevent valve opening during power operation. Therefore, they must be tested during cold shutdown conditions.

QUARTERLY PARTIAL
STROKE TESTING: None

COLD SHUTDOWN
TESTING: Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-3

SYSTEM: Plant Service Water and Chilled Water System

VALVE(S): P41-F049, P41-F050, 2P64-F045, 2P64-F047

CATEGORY: A

CLASS: 2

FUNCTION: Drywell Air Cooler Containment Isolation

QUARTERLY TEST

REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN

TEST JUSTIFICATION: Closure of this valve would totally interrupt flow to the drywell coolers. This interruption may cause an increase in drywell temperatures which would require removing the unit from operation.

QUARTERLY PARTIAL
STROKE TESTING:

None. The valve circuitry does not allow partial closure of this valve.

COLD SHUTDOWN
TESTING:

Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-4

SYSTEM: Plant Service Water

VALVE(S): P41-F310A-D, 2P41-F316A-D

CATEGORY: B

CLASS: 3

FUNCTION: Turbine Building Supply Shutoff

QUARTERLY TEST
REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN
TEST JUSTIFICATION: Closure of these normally open valves during power operation would interrupt flow to the turbine building equipment normally cooled by service water.

QUARTERLY PARTIAL
STROKE TESTING: None. The valve circuitry does not allow partial closure of this valve.

COLD SHUTDOWN
TESTING: Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-5

SYSTEM: Reactor Building Closed Cooling Water (RBCCW)

VALVE(S): P42-F051, P42-F052, 2P42-F051, 42-F052

CATEGORY: A

CLASS: 2

FUNCTION: RBCCW to Recirculation Pumps Containment Isolation

QUARTERLY TEST
REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN
TEST JUSTIFICATION: Closure of these normally open valves would shut off the cooling water flow to the reactor recirculation pumps which could result in possible damage to the pumps.

QUARTERLY PARTIAL
STROKE TESTING: None

COLD SHUTDOWN
TESTING: Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-6

SYSTEM: MSIV Leakage Control System

VALVE(S): 2E32-F006, 2E32-F007, 2E32-F008, 2E32-F009

CATEGORY: B

CLASS: 2

FUNCTION: MSIV Leakage Control

QUARTERLY TEST
REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN
TEST JUSTIFICATION: These valves cannot be operated with steam line pressure greater than 5 psig.

QUARTERLY PARTIAL
STROKE TESTING: None

COLD SHUTDOWN
TESTING: Exercise and Stroke Time if not constrained by the 5 psig limit

COLD SHUTDOWN JUSTIFICATION

CS-7

SYSTEM: HPCI

VALVE(S): E41-F002, 2E41-F002

CATEGORY: A

CLASS: 1

FUNCTION: HPCI Steam Supply Containment Isolation

QUARTERLY TEST

REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN

TEST JUSTIFICATION: Failure in the close position during testing would render the entire HPCI system inoperable with entry into the containment required for repair.

QUARTERLY PARTIAL

STROKE TESTING: None

COLD SHUTDOWN

TESTING: Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-8

SYSTEM: Core Spray

VALVE(S): E11-F122A&B, E21-F037A&B, 2E11-F122A&B, 2E21-F037A&B

CATEGORY: A

CLASS: 1

FUNCTION: Valve (2)E21-F006A&B Bypass

QUARTERLY TEST

REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN

TEST JUSTIFICATION: This valve is a pressure isolation valve and cannot be opened during normal operation since the low pressure piping could become over pressurized.

QUARTERLY PARTIAL

STROKE TESTING: None

COLD SHUTDOWN

TESTING: Exercise and Stroke Time

COLD SHUTDOWN JUSTIFICATION

CS-9

SYSTEM: Main Steam

VALVE(S): B21-F022A-D, B21-F028A-D, 2B21-F022A-D, 2B21-F028A-D

CATEGORY: A

CLASS: 1

FUNCTION: Main Steam Isolation Valves

QUARTERLY TEST

REQUIREMENT: Exercise and Stroke Time

COLD SHUTDOWN

TEST JUSTIFICATION: Full stroke testing these valves during normal reactor operation requires isolating one of the four main steam lines. Isolation of these lines results in primary system pressure spikes, reactor power fluctuations, and increased flow in the unisolated steam lines. This unstable operation can lead to a reactor scram, and as discussed in NUREG-0626, pressure transients resulting from full stroke testing MSIVs increase the chances of actuating primary system safety/relief valves. Also, stroking these valves during power operation requires decreasing the unit to 75% power, therefore, resulting in a substantial capacity factor loss prior to, during, and after the test.

QUARTERLY PARTIAL

STROKE TESTING: Yes

COLD SHUTDOWN

TESTING: Exercise and stroke time

COLD SHUTDOWN JUSTIFICATION

CS-10

SYSTEM: Nuclear Boiler (Feedwater)

VALVE(S): 2B21-F077A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Feedwater Containment Isolation

QUARTERLY TEST
REQUIREMENT: Closure

COLD SHUTDOWN
TEST JUSTIFICATION: These check valves cannot be closed against feedwater flow during normal operation. To test these valves during power operation would require removing 50% of feedwater flow to the reactor.

QUARTERLY PARTIAL
STROKE TESTING: None

COLD SHUTDOWN
TESTING: These normally-open feedwater check valves have an air assist for tight closure and position indicating lights. Closure will be proven each cold shutdown, but not more frequently than once per 3 months, by observing the indicating lights.

COLD SHUTDOWN JUSTIFICATION

CS-11

SYSTEM: Nuclear Boiler (Feedwater)

VALVE(S): 2B21-F076A&B

CATEGORY: C

CLASS: 2

FUNCTION: Feedwater Isolation

QUARTERLY TEST
REQUIREMENT: Closure

COLD SHUTDOWN
TEST JUSTIFICATION: These check valves cannot be closed against feedwater flow during normal operation. To test these valves during power operation would require removing 50% of feedwater flow to the reactor.

QUARTERLY PARTIAL
STROKE TESTING: None

COLD SHUTDOWN
TESTING: These normally-open feedwater check valves have an air assist for tight closure and position indicating lights. Closure will be proven each cold shutdown, but not more frequently than once per 3 months, by observing the indicating lights.

7.0 INSERVICE TESTING OF PUMPS

The 1980 ASME Section XI Code with Addenda through Winter 1981 requires inservice testing of pumps in accordance with Section IWP. The inservice testing program for Class 1, 2, and 3 pumps is described in the following tables. Where full compliance with the Code is not practical, relief has been requested. Several features of the program are described below.

SPENT FUEL POOL COOLING PUMPS

The spent fuel pool cooling pumps have not been included in IST program for the following reasons:

- a. The pumps are not safety-related.
- b. Credit is taken in the FSAR for plant service water as a safety-grade makeup service.
- c. The RHR system is a backup cooling source for the spent fuel pool.

CORE SPRAY JOCKEY PUMPS

The jockey pumps are not safety-related and therefore are excluded from the IST program.

REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) PUMPS

Credit is not taken for the use of the RCIC pumps in the FSAR, therefore, they are excluded from the IST program.

INSTRUMENT ACCURACIES AND RANGES

Relief has been requested to allow the use of installed instrumentation at Plant Hatch in cases where the total loop accuracy or the instrument ranges fall outside the Code limits. See RR-P-7.

FLOW, PRESSURE, AND VIBRATION MEASUREMENT

Relief has been requested to allow the use of the flow, pressure, and vibration parameters of OM-6, Inservice Testing of Pumps, Draft 8, Table 6100-1 in lieu of Table IWP-3100-2 of ASME Section XI.

Hatch Nuclear Plant - Units 1 and 2
Pump Testing Program

NOTES

1. IWP-4310 requires that the temperature of bearings outside of the main flow path be measured. The bearings (or bearing surfaces) of this pump is cooled by the process fluid being pumped; therefore, temperature measurement is not required.

Plant Hatch - Unit No. 1
Inservice Inspection Program for
ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
C41-C001A	Standby Liquid Control	2	1. Inlet pressure	NA	RR-P-5
C41-C001B			2. Differential pressure	NA	RR-P-5
			3. Flow rate	Every 3 mo.	RR-P-2
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	Annually	No
			6. Lubricant level or pressure	Every 3 mo.	No
E11-C002A	Residual Heat Removal	2	1. Inlet pressure	Every 3 mo.	No
E11-C002B			2. Differential pressure	Every 3 mo.	No
E11-C002C			3. Flow rate	Every 3 mo.	No
E11-C002D			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 1
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
E11-C001A	RHR Service Water	3	1. Inlet pressure	Every 3 mo.	RR-P-3
E11-C001B			2. Differential pressure	Every 3 mo.	RR-P-3
E11-C001C			3. Flow rate	Every 3 mo.	No
E11-C001D			4. Vibration amplitude	Every 3 mo.	RR-P-1
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4
E21-C001A	Core Spray	2	1. Inlet pressure	Every 3 mo.	No
E21-C001B			2. Differential pressure	Every 3 mo.	No
			3. Flow rate	Every 3 mo.	No
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 1
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
E41-C001	High Pressure Coolant Injection	2	1. Inlet pressure	Every 3 mo.	No
			2. Differential pressure	Every 3 mo.	No
			3. Flow rate	Every 3 mo.	No
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	Annually	No
			6. Lubricant level or pressure	Every 3 mo.	No
			7. Pump speed	Every 3 mo.	No

Plant Hatch - Unit No. 1
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
P41-C001A	Plant Service Water	3	1. Inlet pressure	Every 3 mo.	RR-P-3
P41-C001B			2. Differential pressure	Every 3 mo.	RR-P-3
P41-C001C			3. Flow rate	Every 3 mo.	No
P41-C001D			4. Vibration amplitude	Every 3 mo.	RR-P-1
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 1
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
1Y52-1A1	Diesel Fuel Oil Transfer		1. Inlet pressure	NA	RR-P-8
1Y52-1B1			2. Differential pressure	NA	RR-P-8
1Y52-1C1			3. Flow rate	every 3 mos.	RR-P-8
			4. Vibration amplitude	every 3 mos.	RR-P-9
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 2
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
2C41-C001A	Standby Liquid Control	2	1. Inlet pressure	NA	RR-P-5
2C41-C001B			2. Differential pressure	NA	RR-P-5
			3. Flow rate	Every 3 mo.	RR-P-2
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	Annually	No
			6. Lubricant level or pressure	Every 3 mo.	No
2E11-C002A	Residual Heat Removal	2	1. Inlet pressure	Every 3 mo.	No
2E11-C002B			2. Differential pressure	Every 3 mo.	No
2E11-C002C			3. Flow rate	Every 3 mo.	No
2E11-C002D			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 2
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
2E11-C001A	RHR Service Water	3	1. Inlet pressure	Every 3 mo.	RR-P-3
2E11-C001B			2. Differential pressure	Every 3 mo.	RR-P-3
2E11-C001C			3. Flow rate	Every 3 mo.	No
2E11-C001D			4. Vibration amplitude	Every 3 mo.	RR-P-1
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4
2E21-C001A	Core Spray	2	1. Inlet pressure	Every 3 mo.	No
2E21-C001B			2. Differential pressure	Every 3 mo.	No
			3. Flow rate	Every 3 mo.	No
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 2
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
2P41-C001A	Plant Service Water	3	1. Inlet pressure	Every 3 mo.	RR-P-3
2P41-C001B			2. Differential pressure	Every 3 mo.	RR-P-3
2P41-C001C			3. Flow rate	Every 3 mo.	No
2P41-C001D			4. Vibration amplitude	Every 3 mo.	RR-P-1
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

Plant Hatch - Unit No. 2
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Reliability Requested</u>
2P41-C002	Standby Diesel Gen. Service Water	3	1. Inlet pressure	Every 3 mo.	RR-P-3
			2. Differential pressure	Every 3 mo.	RR-P-3
			3. Flow rate	Every 3 mo.	No
			4. Vibration amplitude	Every 3 mo.	RR-P-1
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4
2E41-C001	High Pressure Coolant Injection	2	1. Inlet pressure	Every 3 mo.	No
			2. Differential pressure	Every 3 mo.	No
			3. Flow rate	Every 3 mo.	No
			4. Vibration amplitude	Every 3 mo.	No
			5. Bearing temperature	Annually	No
			6. Lubricant level or pressure	Every 3 mo.	No
			7. Pump speed	Every 3 mo.	No

Plant Hatch - Unit No. 2
 Inservice Inspection Program for
 ASME Code Class 1, 2, and 3 Pumps

<u>Pump Identification</u>	<u>Pump Description</u>	<u>ASME Code Class</u>	<u>Measured Parameters</u>	<u>Actual Test Interval</u>	<u>Section XI Code Relief Requested</u>
2Y52-C001A	Diesel Fuel Oil		1. Inlet pressure	NA	RR-P-11
2Y52-C001C	Transfer		2. Differential pressure	NA	RR-P-11
			3. Flow rate	every 3 mos.	RR-P-11
			4. Vibration amplitude	every 3 mos.	RR-P-10
			5. Bearing temperature	NA	Note 1
			6. Lubricant level or pressure	NA	RR-P-4

PUMP RELIEF REQUEST

RR-P-1

SYSTEM: RHR Service Water and Plant Service Water

PUMP(S): E11-C001A-D, P41-C001A-D, 2E11-C001A-D, 2P41-C001A-D, 2P41-C002

CLASS: 2

TEST REQUIREMENT: Use vibration parameters of Table IWP-3100-2.

BASIS FOR RELIEF: There are 17 deep draft pumps located in the intake structure building. Units and trains are separated; however, vibration is transmitted throughout the structure in varying degrees depending upon which combination of pumps are operating. Therefore, measurement of low amplitude vibration is not feasible.

ALTERNATE TESTING: Vr is procedurally set to be a minimum of 1.5 mils. If the reference measurement indicates a vibration level less than 1.5 mils, Vr will be set at 1.5 mils. If the measurement indicates greater than 1.5 mils the actual reading will be used. Using this technique, significant degradation detectable through vibration measurements will still be monitored. Per manufacturers recommendations, these service water pumps will operate satisfactorily with vibrations in excess of 4 mils.

PUMP RELIEF REQUEST

RR-P-2

SYSTEM: Standby Liquid Control

PUMP(S): C41-C001A&B, 2C41-C001A&B

CLASS: 2

TEST REQUIREMENT: Table IWP-4110-1 requires that flow be measured within +2 percent of full scale and IWP-3500 requires that the pump run a minimum of 5 minutes prior to the test.

BASIS FOR RELIEF: Instrumentation was not provided during construction to measure the required flowrate. Also, due to the size of the test tank the flowrate test is limited to a 2 minute test instead of the required 5 minutes.

ALTERNATE TESTING: Flowrate is measured by the change in the standby liquid control test tank level during a two minute test period. The standby liquid control (SBLC) is aligned so that each pump takes suction from a demineralized water source and discharges through a throttle valve adjusted to obtain a reference discharge pressure. The level of the test tank is then measured and the pump is run for two minutes. After the two minute run, the tank level is again measured. Flowrate is then determined by the following equation.

$$\text{Flow (gpm)} = \frac{\Delta \text{Tank level (in.)} \times 4.81 \text{ gal/in.}}{2 \text{ min.}}$$

For a situation in which the flowrate is measured by instrument, a 0-100 gpm instrument would normally be used for the SBLC pump flowrate of approximately 43 gpm. The required accuracy of this instrument would be +2 percent or +2 gpm. This corresponds to a +0.83-inch water level in the test tank. Therefore, the accuracy of the measured flowrate should be well within Code allowance.

To perform the vibration measurements and the yearly bearing temperature measurements the system is realigned so that it forms a closed loop through the test tank. Flow is then recirculated through the pump and tank until conditions stabilize.

PUMP RELIEF REQUEST

RR-P-3

SYSTEM: RHR Service Water, Plant Service Water, Standby Diesel Generator Service Water

PUMPS: E11-C001A-D, P41-C001A-D, 2E11-C001A-D, 2P41-C001A-D, 2P41-C002

CLASS: 2 and 3

TEST REQUIREMENT: Table IWP-4110-1 requires that pressure be measured within +2 percent of full scale.

BASIS FOR RELIEF: No inlet pressure instrumentation is provided.

ALTERNATE TESTING: Inlet pressure is determined for this group by measuring the river level at the intake structure. The differential pressure is then:

$$\Delta P = P_0 + (114.5 \text{ ft} - \text{River Water Level}) \times 0.433$$

where ΔP is the differential pressure and P_0 the outlet pressure. This method of measurement is well within the code requirements for the determination of the differential pressure.

PUMP RELIEF REQUEST

RR-P-4

SYSTEM: Residual Heat Removal (RHR), RHR Service Water, Core Spray Plant
Service Water, Standby Diesel Generator

PUMP(S): E11-C001A-D, E11-C002A-D, E21-C001A&B, P41-C001A-D, 2E11-C001A-D,
2E11-C002A-D, 2E51-C001A&B; 2P41-C001A-D, 2P41-C002

CLASS: 2 and 3

TEST REQUIREMENT: Table IWP-3100-1 requires that the proper lubricant level
or pressure be observed.

BASIS FOR RELIEF: This pump is lubricated by the process fluid that is
being pumped.

ALTERNATE TESTING: The applicable parameters in Table IWP-3100-1 will be
measured.

PUMP RELIEF REQUEST

RR-P-5

SYSTEM: Standby Liquid Control

PUMP(S): C41-C001A&B, 2C41-C001A&B

CLASS: 2

TEST REQUIREMENT: Table IWP-3100-1 requires that inlet pressure, differential pressure, and flowrate be measured.

BASIS FOR RELIEF: The standby liquid control pumps are positive displacement pumps for which the differential pressure is constant regardless of inlet pressure. No ΔP or inlet pressure measurements will be made.

ALTERNATE TESTING: The outlet pressure and the flowrate is measured.

PUMP RELIEF REQUEST

RR-P-6

SYSTEM: A11

PUMP(S): A11

CLASS: 2 and 3

TEST REQUIREMENT: Requirements of Table IWP-3100-2 for flow, pressure, and vibration measurements.

BASIS FOR RELIEF: The proposed alternate method will provide an acceptable level of quality and safety at Plant Hatch Units 1 and 2.

ALTERNATE TESTING: Use the flow, pressure, and vibration parameters of OM-6, Inservice Testing of Pumps, Draft 8, Table 6100-1.

PUMP RELIEF REQUEST

BR-P-7

SYSTEM: A11

PUMP(S): A11

CLASS: 2 and 3

TEST REQUIREMENT: IWP-4100 defines the required accuracy and full-scale range for each instrument used to measure the test parameters.

BASIS FOR RELIEF: Instrumentation is used which meets the acceptable instrument accuracies defined in Table IWP-4110-1. However, the total loop accuracy is not easily determined (there are several calculational techniques) and the total loop accuracy may fall outside the Code limits. Also, in some cases the installed instruments have a range greater than 3 times the reference value.

ALTERNATE TESTING: The installed instrumentation used by Georgia Power Company to measure pump operability parameters should provide data that is sufficiently accurate to allow assessment of pump condition and to detect pump degradation. In cases where it is determined by engineering that the installed instruments do not provide sufficient accuracy to assess pump degradation, test instrumentation will be used.

PUMP RELIEF REQUEST

KR-P-8

SYSTEM: Diesel Generators Fuel Oil Transfer

PUMP: 1Y52-1A1, 1B1, 1C1

CLASS: -

FUNCTION: Transfer diesel generator fuel oil from the storage tanks to the diesel generator day tanks.

TEST REQUIREMENT: Measure pump test inlet pressure, differential pressure and flow rate in accordance with the requirements of IWP-3100 and pump test duration requirements of IWP-3500.

BASIS FOR RELIEF: The diesel generator fuel oil transfer pumps are located inside the storage tank with the pump discharge plenum and motor bolted to a flange on top of the tank. None of the pumps have installed instrumentation to measure either flow or discharge pressure. The only possible flow measurement is by measuring change in day tank level over time. Plant procedures require that day tank level be maintained greater than 50 percent full. To comply with the Code requirement to run the pumps for five minutes prior to taking test measurements would require draining the day tanks below a safe operating level.

ALTERNATE TESTING: Pump test flow rate will be obtained by measuring a change in day tank level over time. A day tank level change of approximately 10 percent shall be timed and the flow rate determined from tank curves. The limits of IWP-3100 shall be applied to determine alert and required action ranges.

PUMP RELIEF REQUEST

RR-P-9

SYSTEM: Diesel Generators Fuel Oil Transfer

PUMP(S)): 1Y52-1A1, 1B1, 1C1

CLASS: -

FUNCTION: Transfer diesel generator fuel oil from the storage tanks to the diesel generator day tanks.

TEST REQUIREMENT: Measure pump vibration in accordance with IWP-3100.

BASIS FOR RELIEF: The diesel generator fuel oil pumps are located inside the storage tanks with the pump discharge plenum and motor bolted to a flange on top of the tank. The pumps are inaccessible for pump bearing vibration measurements.

ALTERNATE TESTING: Motor vibration measurements will be performed quarterly in lieu of Code required pump vibration measurements.

PUMP RELIEF REQUEST

RR-P-10

SYSTEM: Diesel Generators Fuel Oil Transfer

PUMP(S): 2Y52-C001A,C

CLASS: -

FUNCTION: Transfer diesel generator fuel oil from the storage tanks to the diesel generator day tanks.

TEST REQUIREMENT: Measure pump vibration in accordance with IWP-3100.

BASIS FOR RELIEF: The diesel generator fuel oil pumps are located inside the storage tanks with the pump discharge plenum and motor bolted to a flange on top of the tanks. The pumps are inaccessible for pump bearing vibration measurements.

ALTERNATE TESTING: Motor vibration measurements will be performed quarterly in lieu of Code required pump vibration measurements.

PUMP RELIEF REQUEST

RR-P-11

SYSTEM: Diesel Generators Fuel Oil Transfer

PUMP(S): 2Y52-C001A,C

CLASS: -

FUNCTION: Transfer diesel generator fuel oil from the storage tanks to the diesel generator day tanks.

TEST REQUIREMENT: Measure pump test inlet pressure, differential pressure and flow rate in accordance with the requirements of IWP-3100 and pump test duration requirements of IWP-3500.

BASIS FOR RELIEF: The diesel generator fuel oil transfer pumps are located inside the storage tank with the pump discharge plenum and motor bolted to a flange on top of the tank. None of the pumps have installed instrumentation to measure either flow or discharge pressure. The only possible flow measurement is by measuring change in day tank level over time. Plant procedures require that day tank level be maintained greater than 50 percent full. To comply with the Code requirement to run the pump for five minutes prior to taking test measurements would require draining the day tanks below a safe operating level.

ALTERNATE TESTING: Pump test flow rate will be obtained by measuring a change in day tank level over time. A day tank level change of approximately 10 percent shall be timed and the flow rate determined from tank curves. The limits of IWP-3100 shall be applied to determine alert and required action ranges.

8.0 GENERAL RELIEF REQUESTS

Georgia Power Company also has several relief requests which do not apply directly to any individual section but are general in nature.

8.1 REQUESTS FOR RELIEF FROM ASME SECTION XI REQUIREMENTS

8.1.1 BASIC CALIBRATION BLOCKS FOR PIPE WELD EXAMINATIONS

8.1.1.1 Requirement From Which Relief is Requested

Appendix III of Section XI delineates the requirements for the design and fabrication of basic calibration blocks for pipe weld examinations. It specifies that the basic calibration block shall be fabricated with notches and that the basic calibration block nominal diameter and thickness be equivalent to the component to be examined. Relief is requested so that existing basic calibration blocks may be used for pipe weld examinations.

8.1.1.2 Justification

The majority of existing Hatch basic calibration blocks used for pipe weld examinations were fabricated with diameters, thicknesses, and side-drilled holes in accordance with the 1974 Edition of ASME Section V. For the two primary reasons listed below, these same basic calibration blocks will be used to provide the most meaningful and thorough examinations possible:

1. Side-drilled holes as calibration reflectors result in a more sensitive ultrasonic examination than one using notches.
2. Correlation of ultrasonic data with previous examinations as required by Subarticle IWA-1400 of Section XI makes it necessary that these basic calibration blocks be used so future examination results can be correlated with past results.

8.1.1.3 Testing in Lieu of Section XI Requirements

The basic calibration blocks using side-drilled holes as calibration reflectors will be used for the majority of the pipe weld examinations.

8.1.2 ALLOW HATCH 2 TO START ITS SECOND 10-YEAR INSPECTION INTERVAL ON JANUARY 1, 1986

8.1.2.1 Requirement from Which Relief is Requested

According to 10 CFR Part 50.55a(g)4(ii), inservice examination of components during successive 120-month inspection intervals shall comply with the requirements of the latest edition and addenda of the approved ASME Section XI Code 12 months prior to the start of the 120-month inspection interval.

Permission is requested to start the Hatch 2 second 10-Year inspection interval ahead of schedule such that the two Hatch units would be under the same edition and addenda of the Code. The second 40-month inspection period for Hatch 2 ended on May 5, 1986. Hatch 2 would normally update for the second 10-year inspection interval in September 1989.

8.1.2.2 Justification

The Inservice Inspection requirements for Hatch 1 are presently in compliance with ASME Section XI, Winter 1981 Addenda, effective January 1, 1986. A move to start the second 10-year interval for Hatch 2 on January 1, 1986, would require compliance with ASME Code Section XI, Winter 1981 Addenda, which is more stringent. A more comprehensive inspection would be achieved. In addition, compliance with the same Code for both units will enhance the possibility of detecting a generic problem and would also reduce cost involved in maintaining two separate programs. The RPV welds will also be examined at the same point in time as was planned in the earlier program (i.e., those welds that were scheduled during the third 40-month period will be examined during the first 40-month period of the new 10-year interval). In discussions with the NRC HNP licensing project manager and appropriate NRC staff personnel, they have indicated that this is a reasonable approach. The proposed change will not endanger public health and safety.

8.1.2.3 Testing in Lieu of Section XI Requirements

None.

8.1.3 INCORPORATION OF CHANGES IN DESIGN, TESTING, AND PROCEDURES WITHOUT ANY UNREVIEWED SAFETY QUESTIONS INTO THE INSERVICE INSPECTION PROGRAM/PLAN

8.1.3.1 Requirement From Which Relief is Requested

10 CFR Part 50.59 allows changes to a nuclear facility and procedural changes in accordance with Plant Technical Specifications and the safety analysis report, without prior approval from the NRC, provided there are no unreviewed safety questions. The facility's Inservice Inspection Program/Plan should be revised to include these changes.

Changes such as valve operator, stroke time, pump performance, welds, etc., made in compliance with 10 CFR 50.59, which affects the ASME Section XI requirements may not be shown on the existing revision of the ISI program plan document. A relief is requested from this inconsistency.

8.1.3.2 Justification

Records of these changes will be maintained and changes in ASME Section XI requirements pertaining to these changes will be complied with. However, a revision to the ISI Program Plan(s) for every minor change is an unrealistic, costly, and time consuming task. Any delay in revising the ISI program plan(s) will not endanger public health and safety.

8.1.3.3 Testing in Lieu of Section XI Requirements

Records of all changes will be maintained. Changes affecting ASME Section XI requirements shall be incorporated into the ISI Program Plan(s) whenever a need for their update is warranted.

8.1.4 EXEMPTING SUBSECTION IWE, AND THE REFERENCES TO IWE IN OTHER SUBSECTIONS

8.1.4.1 Requirement from Which Relief is Requested

Table IWE-2500-1, Code categories E-A, E-A-1, E-B, E-C, E-D, E-E, E-F, E-G, and E-P of ASME Section XI, Winter 1981 Addenda delineates examination requirements of containment.

8.1.4.2 Justification

Federal Register, Vol. 48, No. 28/Monday, February 7, 1983, Page 5532 relative to 10 CFR Part 50 Codes and Standards for Nuclear Power Plants; Item No. 4, indicates that Subsection IWE "Requirements for Class MC Components of Light Water Cooled Power Plants" was added to Section XI by the Winter 1981 Addenda. However, 10 CFR Paragraph 50.55a presently only incorporates those portions of Section XI that address the ISI requirements for Class 1, 2, and 3 components and their supports. The regulations do not currently address the ISI of containments. Since this amendment is only intended to update current regulatory requirements to include the latest Code addenda, the requirements of Subsection IWE are not imposed upon Licensees by the NRC as a result of this amendment.

8.1.4.3 Testing in Lieu of Section XI Requirements

None.

8.1.5 DUE DATE FOR OWNER'S DATA REPORT FOR INSERVICE INSPECTION, FORM NIS-1

(Relief Request 8.1.5 has been withdrawn)

8.1.6 REFERENCE SYSTEM FOR ALL WELDS AND AREAS SUBJECT TO SURFACE OR VOLUMETRIC EXAMINATION

8.1.6.1 Requirement From Which Relief is Requested

Section IWA-2600 of ASME Section XI, with Addenda through Winter 1981, requires the establishment of a reference system for all welds and areas

subject to surface or volumetric examination. This system shall permit identification of each weld, the location of each weld centerline, and marking at regular intervals along the length of each weld. Relief from this requirement is requested.

8.1.6.2 Justification

At Hatch Units 1 and 2, physical and radiological limitations prevent the actual marking of the majority of the RPV welds, nozzle welds, and piping welds. In many instances, these limitations actually prohibit complete examination of the welds. Relief requests have already been submitted herein for the welds which cannot be completely examined and thus will be examined to the extent possible. Many of the welds which could be accessed are covered by insulation. It would be inappropriate to require the manhours of exposure involved to remove and replace the insulation to facilitate marking.

Each weld that has been or will be examined is referenced to permanently located fixtures in the immediate area of the subject weld. These references include such items as nozzles, plant azimuth and floor identifications, welded attachments, and concrete embedments. Each weld is described in the inspection plan and on the examination reports in such a manner as to make it unique.

For each weld that is examined, the starting point is identified and the direction of travel is noted on the examination report in order that any indications can be accurately located. The configuration of the welds at Hatch permits the inspectors to locate the weld edges which are used to locate the weld centerline.

8.1.6.3 Testing in Lieu of Section XI Requirements

None.