

**WATTS BAR NUCLEAR PLANT
UNIT 2 PREOPERATIONAL TEST**

TITLE: Pressurizer Relief Tank

Instruction No: 2-PTI-068-04

Revision No: 0000

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DATE: 8-20-12

INSTRUCTION APPROVAL

JTG MEETING No: 2-13-001

JTG CHAIRMAN: *David A. Wehler*
APPROVED BY: *David A. Wehler*
PREOPERATIONAL STARTUP MANAGER

DATE: 1-31-13

DATE: 1-31-13

TEST RESULTS APPROVAL

JTG MEETING No: _____

JTG CHAIRMAN: _____

DATE: _____

APPROVED BY: _____
PREOPERATIONAL STARTUP MANAGER

DATE: _____

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|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 2 of 98 |
|-----------------------|--------------------------------|--|

Revision Log

| Revision or Change Number | Effective Date | Affected Page Numbers | Description of Revision/Change |
|--|---------------------------|--------------------------------------|---------------------------------------|
| 0000 | 2/1/13 | ALL | Initial Issue |
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|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 3 of 98 |
|-----------------------|--------------------------------|--|

Table of Contents

| | | |
|--------------------|--|-----------|
| 1.0 | INTRODUCTION | 5 |
| 1.1 | Test Objectives | 5 |
| 1.2 | Scope..... | 5 |
| 2.0 | REFERENCES | 7 |
| 2.1 | Performance References | 7 |
| 2.2 | Developmental References..... | 7 |
| 3.0 | PRECAUTIONS AND LIMITATIONS | 12 |
| 4.0 | PREREQUISITE ACTIONS | 14 |
| 4.1 | Preliminary Actions | 14 |
| 4.2 | Special Tools, Measuring and Test Equipment, Parts, and Supplies..... | 19 |
| 4.3 | Field Preparations | 19 |
| 4.4 | Approvals and Notifications | 25 |
| 5.0 | ACCEPTANCE CRITERIA | 26 |
| 6.0 | PERFORMANCE..... | 29 |
| 6.1 | 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test..... | 29 |
| 6.2 | 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test..... | 40 |
| 6.3 | 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test..... | 50 |
| 6.4 | 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test | 59 |
| 6.5 | 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test | 66 |
| 6.6 | 2-FCV-68-310, PRT to RCDT, Valve Operability Test | 71 |
| 6.7 | PRT Spray Header Flow Rate and Annunciators Functional Test | 77 |
| 6.8 | PRT High Temperature Alarm Functional Test | 85 |
| 7.0 | POST PERFORMANCE ACTIVITY | 86 |
| 8.0 | RECORDS | 89 |
| Appendix A: | TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW | 90 |

| | | |
|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 4 of 98 |
|-----------------------|--------------------------------|--|

Table of Contents (continued)

| | | |
|--------------------|---|-----------|
| Appendix B: | TEMPORARY CONDITION LOG | 91 |
| Appendix C: | PERMANENT PLANT INSTRUMENTATION LOG..... | 92 |
| Appendix D: | SWITCH LINEUP | 93 |
| Appendix E: | VALVE LINEUP..... | 94 |

| | | |
|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 5 of 98 |
|-----------------------|--------------------------------|--|

Date _____

1.0 INTRODUCTION

1.1 Test Objectives

This test will demonstrate the following:

- A. Proper operation of controls and interlocks of valves in the Reactor Coolant System associated with the Pressurizer Relief Tank (PRT).
- B. System Containment Isolation Valve stroke times are within acceptable limits and fail to accident position upon loss of air/power and remain after reset of signal.
- C. The ability of the Primary Makeup Water System to deliver the required flow, at design conditions, to the Pressurizer Relief Tank.
- D. The proper cover gas pressure can be maintained in the PRT and the Gas Analyzer.
- E. Proper operation of PRT alarms.

1.2 Scope

- A. **VERIFY** the following valves properly respond to a simulated Phase A Containment Isolation Signal:
 - 1. 2-FCV-68-307, RCS FLOW CNTL VLV WDS GA TO PRT, CLOSES on a simulated Phase A Containment Isolation Signal, and remains CLOSED after the signal is reset.
 - 2. 2-FCV-68-308, RCS FLOW CNTL VLV WDS GA TO PRT, CLOSES on a simulated Phase A Containment Isolation Signal, and remains CLOSED after the signal is reset.
 - 3. 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, CLOSES on a simulated Phase A Containment Isolation Signal, and remains CLOSED after the signal is reset.

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|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 6 of 98 |
|-----------------------|--------------------------------|--|

Date _____

1.2 Scope (continued)

- B. **VERIFY** the following valves CLOSE in less than or equal to 10 (ten) seconds.
 - 1. 2-FCV-68-307, RCS FLOW CONT VLV WDS TO PRT.
 - 2. 2-FCV-68-308, RCS FLOW CONT VLV WDS GA TO PRT.
 - 3. 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT.
- C. **VERIFY** the Primary Water System supplies greater than or equal to 150 gpm to the PRT when tank pressure is greater than or equal to 50 psig.
- D. **VERIFY** the Nitrogen System maintains 1 to 3 psig cover gas pressure in the PRT and will alarm at 8 psig.

| | | |
|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 7 of 98 |
|-----------------------|--------------------------------|--|

Date _____

2.0 REFERENCES

2.1 Performance References

- A. SMP-9.0, Test Conduct
- B. SMP-15.0, STATUS AND CONTROL OF ISOLATION DEVICES
- C. 2-TOP-68-01, REACTOR COOLANT SYSTEM PRESSURIZER RELIEF TANK OPERATION, DRAFT
- D. 2-TOP-77-01, LIQUID WASTE SYSTEM (PRUGING RCDT), DRAFT
- E. 2-TOP-81-01, PRIMARY MAKEUP WATER SYSTEM

2.2 Developmental References

- A. Unit 2 Final Safety Analysis Report, Amendment 109
 - 1. Section 5.5.2, Over Pressurization Protection
 - 2. Section 5.5.11, Pressurizer Relief Tank
 - 3. Section 5.2, Table 5.2-6, Relief Valve Discharge To The Pressurizer Relief Tank
 - 4. Chapter 14-Table 14.2-1 Sheet 83 of 89, Containment Isolation Test Summary
 - 5. Chapter 14-Table 14.2-1 Sheet 88 of 89, Pressurizer Safety and Relief Valves Test Summary
- B. Drawings
 - 1. Flow Diagrams
 - a. 2-47W625-8, Rev 3, Electrical Radiation Sampling System Aux & Reactor Building
 - b. 2-47W809-1, Rev 9, Mechanical Flow Diagram Chemical & Volume Control System
 - c. 2-47W810-1, Rev 9, Mechanical Flow Diagram Residual Heat Removal System

| | | |
|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 8 of 98 |
|-----------------------|--------------------------------|--|

Date _____

2.2 Developmental References (continued)

- d. 2-47W811-1, Rev 12, Mechanical Flow Diagram Safety Injection System
- e. 2-47W813-1, Rev 10, Flow Diagram Reactor Coolant System
- f. 2-47W819-1, Rev 9, Flow Diagram Primary Water
- g. 1-47W830-6, Rev 38, Mechanical Flow Diagram Waste Disposal System
- h. 2-47W830-6, Rev 9, Mechanical Flow Diagram Waste Disposal System
- i. 2-47W848-5, Rev 6, Mechanical Flow Diagram Control Air
- j. 2-47W848-9, Rev 6, Mechanical Flow Diagram Control Air

2. Electrical

- a. 2-45B640-7A, Rev 0, Contact Development of Selector Switches and Pushbuttons, DRA 57938-06, -018, -020
- b. 2-45B640-26, Rev 0, Contact Development of Selector Switches and Pushbuttons
- c. 2-45B640-28, Rev 0, Contact Development of Selector Switches and Pushbuttons, DRA 52362-25 Rev 0
- d. 2-45B640-35, Rev 0, Contact Development of Selector Switches and Pushbuttons, DRA 52362-29
- e. 2-45B640-55, Rev 0, Contact Development of Selector Switches and Pushbuttons, DRA 52355-28 Rev 0
- f. 2-45B640-316, Rev 0, Contact Development of Selector Switches and Pushbuttons, DRA 52361-59
- g. 45N1635-47, Rev 3, Wiring Diagrams Local Instrument Panels Connection Diagram
- h. 45N2637-1, Rev 7, Aux Control Board Panel 2-L-10 Connection Diagrams Sh. 1
- i. 45N2666-3, Rev 5, Process Instr Cntrl Grp2 C/D-Sh 2, DRA 52378-309

| | | |
|-----------------------|--------------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 9 of 98 |
|-----------------------|--------------------------------|--|

Date _____

2.2 Developmental References (continued)

- j. 45N2676-4, Rev 16, Wiring Diagrams Solid State Protection Sys Train A Connection Diagram Sheet 4 (Panel 2-R-48), DCA 56336-114 Rev 2
- k. 45N2677-4, Rev 18, Wiring Diagrams Solid State Protection Sys Train B Connection Diagram SH-4 (Panel 2-R-51), DCA 56336-116 Rev 2
- l. 45N2680-1, Rev 10, Wiring Diagrams NSSS Aux Relay Panel 2-R-54 Connection Diagrams, DRA 53760-024, 53580-473
- m. 2-45W2665-3B, Rev 0, DRA 52378-324, EDCR 52378-Foxboro I/A TA PNL 2-R-16
- n. 2-45W600-57-16, Rev 1, Wiring Diagram Separation & Misc Aux Relays Schematic Diagrams, DRA 52378-250 Rev 0
- o. 2-45W600-68-1, Rev 5, Wiring Diagram Reactor Coolant System Schematic Diagrams
- p. 2-47B601-55-3, Rev 0, Electrical Instrument Tabulation, DRA 52453-06 Rev 0
- q. 2-47B601-55-4, Rev 0, Electrical Instrument Tabulation, DRA 52453-07 Rev 0
- r. 47B601-55-65, Rev 3, Electrical Instrument Tabulation, DRA 52355-40 Rev 0

3. Schematic Diagrams

- a. 2-45N2666-3, Rev 0, Wiring Diagram Process Instr Control Group 2 Connection Diagrams (Panel 2-R-19), DRA 52378-309
- b. 2-45W760-77-4, Rev 2, Wiring Diagram Waste Disposal System Schematic Diagrams, DRA 53296-061

4. Mechanical

None

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 10 of 98 |
|-----------------------|--------------------------------|---|

Date _____

2.2 Developmental References (continued)

5. Logic/Control

- a. 2-47W610-68-6, Rev 2, Electrical Control Diagram Reactor Coolant System
- b. 2-47W611-68-1, Rev 2, Electrical Logic Diagram Reactor Coolant System
- c. 2-47W611-77-1, Rev 2, Electrical Logic Diagram Waste Disposal System

6. Vendor Drawings

- a. 08F802403-FD-2705 Sh. 1, Rev 3, Misc NSSS RCS Pressurizer Temperature and Pressure
- b. 08F802403-FD-2712 Sh. 1, Rev 3, Misc NSSS RCS Pressurizer Relief Temperatures
- c. 08F802403-FD-2705-1, Rev 3, Electrical Misc NSSS RCS Pressurizer Temperature and Pressurizer
- d. 2-45B655-5A, Rev 0, Main Control Room Annunciator Inputs Window Box XA-55-5A, DRA 52378-224
- e. 2-45B655-E5A, Rev 0, Electrical Annunciator Window Box XA-55-5A Engraving
- f. 2-45B655-6F, Rev 0, Main Control Room Annunciator Inputs Window Box XA-55-6F
- g. 2-45B655-E6F, Rev 0, Electrical Annunciator Window Box XA-55-6F Engraving

C. Vendor Manuals

None

D. Documents

1. 2-TSD-68-4, Pressurizer Relief Tank (PRT), Rev 1
2. 2-TSD-88-5, Containment Isolation System, Rev 2

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 11 of 98 |
|-----------------------|--------------------------------|---|

Date _____

2.2 Developmental References (continued)

3. WBN2-68-4001, System Description for Reactor Coolant System, Rev 2
4. WBT-D-2988, Final Precautions, Limitations, and Setpoints
 - a. LTR-PCSA-11-21, Watts Bar Unit 2 Precautions, Limitations, and Setpoints

5. SSD-2-LPL-68-300, RCS PRT Level, Rev 2

6. SSD-1-LPP-68-301, RCS PRT Press, Rev 4

To be verified against SSD-2-LPP-68-301, RCS PRT Press in Appendix A

7. SSD-2-LPT-68-309, RCS PRT Temp, Rev 1

8. SSD-1-LPP-68-311C, RCS PRT Pressure, Rev 3

To be verified against SSD-2-LPP-68-311C, RCS PRT Pressure in Appendix A

9. SSD-1-LPL-68-312C, RCS PRT Level, Rev 2

To be verified against SSD-2-LPL-68-312C, RCS PRT Level in Appendix A

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 12 of 98 |
|-----------------------|--------------------------------|---|

Date _____

3.0 PRECAUTIONS AND LIMITATIONS

- A. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Manual Procedure 1021.
- B. Steps may be repeated if all components cannot be tested in a step. However, if the test has been exited, prerequisite steps must be re-verified and a Chronological Test Log (CTL) entry made.
- C. Discrepancies between component ID tags and the description in a procedure/instruction do not require a Test Deficiency Notice, TDN, in accordance with SMP-14.0, if the UNIDs match, exclusive of place-keeping zeros and train designators (e.g. 2-HS-31-468 vs. 2-HS-031-0468) and the noun description is sufficient to identify the component. If the component label needs to be changed, a Tag Request Form (TR Card) should be processed in accordance with TI-12.14. Make an entry in the CTL and continue testing.
- D. All wires removed/lifted from a terminal shall be identified and taped or covered with an insulator to prevent personnel or equipment hazard and possible spurious initiations. The wires should be grouped together and labeled with the work implementing document number that required them to be lifted if left unattended.
- E. All open problems are to be tracked by a corrective action document and entered on the appropriate system punchlist.
- F. Problems identified during the test shall be annotated on the Chronological Test Log (CTL) from SMP-9.0 including a description of the problem, the procedure step when/where the problem was identified, corrective action steps taken to resolve the problem, and the number of the corrective action document, if one was required.
- G. Observe all Radiation Protection (RP) requirements when working in or near radiological areas.
- H. While conducting this test, do **NOT** allow the PRT pressure to exceed 68 psig.
- I. Exercise caution to prevent overfilling the PRT while performing this test.
- J. Safety-related valves will be stroke timed locally at the valve and remotely at the control switch in both the open and close directions. Local timing begins with the initiating signal and is concluded with the completion of valve stem movement. Remote timing begins with the initiating signal and is concluded with the position indication lights status change. Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 13 of 98 |
|-----------------------|--------------------------------|---|

Date _____

3.0 PRECAUTIONS AND LIMITATIONS (continued)

- K. When draining the PRT, ensure that a minimum positive pressure is maintained in the PRT. This pressure should be maintained from 1-3 psig. Do not vent the PRT to the Waste Disposal System vent header if the tank pressure is above 10 psig. (Westinghouse Precautions, Limitations and Setpoints for NSSS) WBT-D-2988.
- L. During the performance of this procedure visual observation of piping and components is required. This includes steady state and transient operations with visual confirmation that vibration is not excessive.
- M. Steady State conditions include verification that flow control valves and orifices do not produce excessive cavitation induced vibration. Verification that excessive vibration from other flow induced phenomena does not occur is also required.
- N. If the vibration is determined to be excessive the Test Engineer shall initiate a Test Deficiency Notice (TDN).
- O. When pressurizing the PRT above 7 psig during Subsection 6.7, the area around the PRT and the PRT rupture Discs should be roped off and cleared of non-essential personnel.

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 14 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.0 PREREQUISITE ACTIONS

NOTE

Prerequisite steps may be performed in any order unless otherwise stated and should be completed as close in time as practicable to the start of the instruction subsection to which they apply.

4.1 Preliminary Actions

[1] **VERIFY** the test/performance copy of this Preoperational Test Instruction (PTI) is the current revision including any change notices and as needed, each test person assisting in this test has the current revision including any change notices. _____

[2] **OBTAIN** copies of the applicable forms from the latest revision of SMP-9.0, and _____

ATTACH to this PTI for use during the performance of this PTI. _____

[3] **ENSURE** changes to the references listed on Appendix A, have been reviewed, and determined NOT to adversely affect the test performance. _____

[4] **VERIFY** current revisions and change paper for referenced drawings has been reviewed and determined NOT to adversely affect the test performance, and _____

ATTACH documentation of current drawing revision numbers and change paper that were reviewed to the data package. _____

[5] **EVALUATE** open items in Watts Bar Integrated Task Equipment List (WITEL), and _____

ENSURE they will NOT adversely affect the test performance and results.

A. Subsection 6.1 _____

B. Subsection 6.2 _____

C. Subsection 6.3 _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 15 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.1 Preliminary Actions (continued)

D. Subsection 6.4

E. Subsection 6.5

F. Subsection 6.6

G. Subsection 6.7

H. Subsection 6.8

[6] **ENSURE** required Component Testing has been completed prior to start of test.

A. Subsection 6.1

B. Subsection 6.2

C. Subsection 6.3

D. Subsection 6.4

E. Subsection 6.5

F. Subsection 6.6

G. Subsection 6.7

H. Subsection 6.8

[7] **ENSURE** outstanding Design Change Notices (DCN's), Engineering Document Construction Release (EDCR's) or Temporary Alterations (TA's) do NOT adversely impact testing, and

ATTACH documentation of DCN's, EDCR's and TA's that were reviewed to the data package.

A. Subsection 6.1

B. Subsection 6.2

C. Subsection 6.3

D. Subsection 6.4

E. Subsection 6.5

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|---------------|-------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 16 of 98 |
|---------------|-------------------------|--|

Date _____

4.1 Preliminary Actions (continued)

- F. Subsection 6.6 _____
- G. Subsection 6.7 _____
- H. Subsection 6.8 _____
- [8] **ENSURE** a review of outstanding Clearances has been coordinated with Operations for impact to the test performance, and

RECORD in Appendix B, Temporary Condition Log if required. _____
- [9] **VERIFY** System cleanness as required for the performance of this test has been completed in accordance with SMP-7.0.
Subsection 6.7 _____
- [10] **VERIFY** plant instruments, listed on Appendix C, Permanent Plant Instrumentation Log, are placed in service and are within their calibration interval.
Subsection 6.7 _____
- [11] **VERIFY** Measuring and Test Equipment (M&TE) required for test performance has been (as required) filled, vented , placed in service and recorded on Measuring and Test Equipment Log.
 - A. Subsection 6.1 _____
 - B. Subsection 6.2 _____
 - C. Subsection 6.3 _____
 - D. Subsection 6.6 _____
 - E. Subsection 6.7 _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 17 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.1 Preliminary Actions (continued)

- [12] **VERIFY** Measuring and Test Equipment (M&TE) calibration due dates will support the completion of this test performance.

- A. Subsection 6.1 _____
- B. Subsection 6.2 _____
- C. Subsection 6.3 _____
- D. Subsection 6.6 _____
- E. Subsection 6.7 _____

NOTE

Any Annunciator points associated with 2-MUX-55-12 and 2-MUX-55-13 ONLY have master switches at the bottom of each terminal strip.

All points associated with 2-TBK-55-25, 2-TBK-55-26, 2-TBK-55-27, and 2-TBK-55-28 will not have individual switches or a master switch.

- [13] **ENSURE** System 55, Annunciator and Sequential Events Recording System applicable TBK switches are ON, the applicable Master Switches are ON, and window software input (s) are ENABLED for the following Annunciator windows:

- A. 2-XA-55-6F/148-B, ACR PNL 2-L-11A _____
- B. 2-XA-55-6F/148-C, ACR PNL 2-L-11B _____
- C. 2-XA-55-5A/88-B, PRT LEVEL HI/LO _____
- D. 2-XA-55-5A/88-C, PRT PRESS HI _____
- E. 2-XA-55-5A/88-D, PRT TEMP HI _____

- [14] **ENSURE** components contained within the boundaries of this test are under the jurisdictional control of Preoperational Startup Engineering (PSE) and/or Plant Operations. _____

- [15] **PERFORM** a pretest walkdown on equipment to be tested to ensure no conditions exist that will impact test performance.

- A. Subsection 6.1. _____
- B. Subsection 6.2. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 18 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.1 Preliminary Actions (continued)

- C. Subsection 6.3. _____
- D. Subsection 6.4. _____
- E. Subsection 6.5. _____
- F. Subsection 6.6. _____
- G. Subsection 6.7. _____
- [16] **REVIEW** preventive maintenance for system/components covered by this test and

VERIFY no conditions exist that will impact test performance. _____
- [17] **CONDUCT** a pretest briefing with Test and Operations personnel in accordance with SMP-9.0. _____
- [18] **ENSURE** that communications are available for areas where testing is to be conducted. _____
- [19] **VERIFY** Panel 2-R-16, PROCESS INSTR CONTROL GROUP 1 RACK 16, is ENERGIZED and available to support this test. (Foxboro I/A) _____
- [20] **REQUEST** a clearance for 2-ISV-77-593, RCDT VENT HEADER ISOL. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 19 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.2 Special Tools, Measuring and Test Equipment, Parts, and Supplies

- [1] **ENSURE** the following M&TE or equivalent is available and within their calibration due dates, **AND**

RECORD the M&TE data on SMP-9.0, Measuring and Test equipment (M&TE) Log. _____

A. VOM (for continuity checks)

Subsection 6.6 _____

B. Ultrasonic flowmeter, 0-200 gpm, $\pm 3\%$ of range.

Subsection 6.7 _____

- [2] **VERIFY** the following is available:

A. Digital Stopwatches (2), accuracy ± 0.1 sec

• Subsection 6.1. _____

• Subsection 6.2. _____

• Subsection 6.3. _____

4.3 Field Preparations

- [1] **ENSURE** the following systems are operational and have been placed in service to the extent necessary to perform this test:

A. System 236, 125V DC Vital Power System - Supply power to control valves. _____

B. System 237, 120V AC Instrument Power System - Supply power to auxiliary relay.

Subsection 6.1 _____

C. System 32, Control Air - Provide control air to all AOVs. _____

Date _____

4.3 Field Preparations (continued)

D. System 77, Waste Disposal System - To drain and vent the PRT and to supply N₂ to PRT.

Subsection 6.7 _____

E. System 81, Primary Makeup Water System - To provide makeup water to PRT.

Subsection 6.7 _____

[2] **PERFORM** the Valve Lineup listed in Appendix E.

Subsection 6.7 _____

[3] **ENSURE** plastic screws and washers are installed at the following field terminals in SSPS Output Cabinets 2-R-48 and 2-R-51:

| Terminal Board | Terminal Point | SSPS Cabinet | Initial/CV |
|----------------|----------------|--------------|------------|
| TB611 | 7 | 2-R-48 | / |
| TB611 | 8 | 2-R-48 | / |
| TB611 | 11 | 2-R-48 | / |
| TB611 | 12 | 2-R-48 | / |
| TB611 | 7 | 2-R-51 | / |
| TB611 | 8 | 2-R-51 | / |

[4] **ENSURE** the two (2) PRT rupture disks, with a release pressure of 86 - 100 psig are installed.

Subsection 6.7 _____

[5] **INSTALL** an ultrasonic flowmeter upstream of 2-FCV-68-303, RCS FLOW CNTL VLV PRIMARY WATER TO PRT.

Subsection 6.7 _____

[6] **PERFORM** the Switch Lineup listed in Appendix D. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 21 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.3 Field Preparations (continued)

- [7] **ENSURE** the PRT is at normal operating level (67%-80%) with a cover gas pressure of 1 - 3 psig. using 2-TOP-68-01.

Subsection 6.7

- [8] **LIFT** the following leads, **AND**

INSTALL a temporary test switches (TS) in the following locations, **AND**

LABEL Test Switches as indicated:
(Steps 4.3[8]B, 4.3[8]D, 4.3[8]F, and 4.3[8]H)

- A. **LIFT** white field wire RBA6 from terminal TB611-7, in Solid State Protection System (SSPS) Train A output cabinet [2-R-48] (2-45N2676-4).

Subsection 6.1.

1st

CV

- B. **INSTALL CLOSED** Test Switch #1 (TS-1) between terminal TB611-8 and white wire RBA6 lifted in step 4.3[8]A above, SSPS Train A output cabinet [2-R-48] for simulation of Phase A Containment Isolation Signal to 2-FCV-68-307.

Subsection 6.1.

1st

CV

- C. **LIFT** white field wire RBH10 from terminal TB611-12, in SSPS Train A output cabinet [2-R-48] (2-45N2676-4).

Subsection 6.3.

1st

CV

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 22 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.3 Field Preparations (continued)

- D. **INSTALL** CLOSED Test Switch #2 (TS-2) between TB611-11 and white wire RBH10 lifted in step 4.3[8]C above, SSPS Train A output cabinet [2-R-48] for simulation of Phase A Containment Isolation Signal to 2-FCV-68-305.

Subsection 6.3.

1st

CV

- E. **LIFT** white field wire RBB10 from terminal TB611-8, in SSPS Train B output cabinet [2-R-51] (45N2677-4).

Subsection 6.2.

1st

CV

- F. **INSTALL** CLOSED Test Switch #3 (TS-3) between TB611-7 and white wire RBB10 lifted in step 4.3[8]E above, SSPS Train B output cabinet [2-R-51] for simulation of Phase A Containment Isolation Signal to 2-FCV-68-308.

Subsection 6.2.

1st

CV

- G. **LIFT** green wire RBA12 from terminal TB106-2, in NSSS Aux Relay Panel [2-R-54] (45N2680-3).

Subsection 6.1.

1st

CV

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 23 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.3 Field Preparations (continued)

- H. **INSTALL** in series OPEN Test Switch #4 (TS-4) to green wire RBA12 lifted in step 4.3[8]G above, NSSS Aux Relay Panel [2-R-54] for control of 2-8025X relay to 2-FCV-68-307

AND

LAND the other side of Test Switch #4 to terminal TB 106-2 NSSS Aux Relay Panel [2-R-54] in series.

Subsection 6.1.

1st

CV

- [9] **PERFORM** the following valve lineup to isolate the PRT:

- A. **CLOSE** 2-ISV-68-574, PRESSURIZER RELIEF TANK GAS ANALYZER SUP ISOL, (716/AZ089)

Subsection 6.1

Subsection 6.2

- B. **CLOSE** 2-ISV-68-572, PRESSURIZER RELIEF TANK NITROGEN SUPPLY ISOL, (715/AZ089)

Subsection 6.3

- C. **CLOSE** 2-ISV-81-501 CNTM ISOLATION BLOCK VALVE, (730/AZ301)

Subsection 6.5

- [10] **VERIFY** supports required for System 68 testing are in place or an equivalent engineering approved temporary support is installed.

Subsection 6.7

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 24 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.3 Field Preparations (continued)

- [11] **VERIFY** snubbers identified for System 68 testing are installed with no indication of damage.

Subsection 6.7 _____

- [12] **ENSURE** the RCDT is ready to receive water from the PRT and RCDT Pump 2B-B handswitch 2-HS-77-6A is in the Auto Pull Position using 2-TOP-77-01, Liquid Waste System (Purging RCDT).

Subsection 6.7 _____

- [13] **ENSURE** the Primary Makeup Water System is operating with one Primary Makeup Water Pump running and the other Primary Makeup Water Pump in Standby using 2-TOP-81-01, Primary Makeup Water System.

Subsection 6.7 _____

- [14] **VERIFY** the blind flange upstream of 2-VTV-68-573 on the PRT vent line to the containment is removed.

- [15] **CONNECT** temporary instrument air supply to 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT (Upstream Flange) to pressurize the PRT. (This temporary connection shall include a configuration that will facilitate PRT venting.)

Subsection 6.7 _____

CAUTION

Throughout this test, the pressurizer relief tank will not be available to accept discharges from the pressurizer relief valves, pressurizer safety valves, or auxiliary systems relief valves.

- [16] **INSTALL** a Blank in the flange connection at the PRT sparger line inlet **AND**

RECORD WO _____

Subsection 6.7. _____

- [17] **IF** ABSCE has not been restored, **THEN**

ENSURE TI-65 breach permit for 2-FCV-68-305, PRESSURIZER RELIEF TANK NITROGEN SUP FLOW CNTL has been obtained. _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 25 of 98 |
|-----------------------|--------------------------------|---|

Date _____

4.4 Approvals and Notifications

- [1] **OBTAIN** permission of the Preoperational Startup Manager to start the test.

Preoperational Startup Manager
Signature

Date

- [2] **OBTAIN** the Unit 2 Supervisor's (US/SRO) or Shift Manager's (SM) authorization.

U2 US/SRO/SM Signature

Date

- [3] **OBTAIN** the Unit 1 Supervisor's (US/SRO) or Shift Manager's (SM) authorization.

U1 US/SRO/SM Signature

Date

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 26 of 98 |
|-----------------------|--------------------------------|---|

Date _____

5.0 ACCEPTANCE CRITERIA

- [1] Each of the following will operate from applicable control stations:
 - A. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, (Step 6.4[34])
 - B. 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, (Step 6.6[28])
 - C. Alarm is received upon PRT PRESS HI (MCR) (5A-88C), (Step 6.7[16]C)
 - D. PRT level HI-LO (MCR and AUX Control Room) (5A-88B, 2-L-10-300E), (Steps 6.7[8] and 6.7[22])
 - E. PRT Temp HI (MCR) (5A-88D), (Step 6.8[4])
- [2] The following valves close on a simulated Phase A Containment Isolation Signal and remain closed after signal is reset:
 - A. 2-FCV-68-307, RCS FLOW CONT VLV WDS GA TO PRT, (Step 6.1[8]A, 6.1[8]B, 6.1[10])
 - B. 2-FCV-68-308, RCS FLOW CONT VLV WDS GA TO PRT, (Step 6.2[6], 6.2[6]A, 6.2[7])
 - C. 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, (Step 6.3[7], 6.3[7]A, 6.3[8])
- [3] The following valves CLOSE in less than or equal to 10 seconds:
 - A. 2-FCV-68-307, RCS FLOW CONT VLV WDS GA TO PRT (Steps 6.1[12]A and 6.1[12]B)
 - B. 2-FCV-68-308, RCS FLOW CONT VLV WDS GA TO PRT (Step 6.2[10])
 - C. 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT (Step 6.3[11])

| | | |
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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 27 of 98 |
|-----------------------|--------------------------------|---|

Date _____

5.0 ACCEPTANCE CRITERIA (continued)

- [4] The Primary Water System through 2-FCV-68-303, RCS FLOW CNTL VLV PRIMARY WATER TO PRT, supplies greater than or equal to 150 gpm to the PRT when tank pressure is greater than or equal to 50 psig. (Step 6.7[18], 6.7[19])
- [5] The Nitrogen System through 2-PCV-68-304, RCS PRT WDS N2 BACK PRESS, maintains 1 to 3 psig cover gas pressure in the PRT. (Step 6.7[28])
- [6] 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, valve closes in response to a high PRT pressure to protect the waste disposal system vent header from overpressurization. (Steps 6.7[16]C and 6.7[26]B)
- [7] The following valves fail to the accident position upon loss of air or electrical power:
 - A. 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. (Steps 6.1[16], 6.1[25])
 - B. 2-FCV-68-308, RCS FLOW CONT VLV WDS GA TO PRT. (Steps 6.2[13], 6.2[23])
 - C. 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. (Step 6.3[14])
- [8] The following valves will close upon loss of power:
 - A. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL. (Step 6.4[30])
 - B. 2-FCV-68-303, RCS FLOW CNTL VLV PRIMARY WATER TO PRT. (Step 6.5[15])
 - C. 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT. (Step 6.6[19])

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 28 of 98 |
|-----------------------|--------------------------------|---|

Date _____

5.0 ACCEPTANCE CRITERIA (continued)

- [9] The following valve status lights, indicators, control switches, transfer switches and alarm/annunciators as required function properly:
 - A. 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. (Step 6.1[32])
 - B. 2-FCV-68-308, RCS FLOW CONT VLV WDS GA TO PRT. (Step 6.2[30])
 - C. 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. (Step 6.3[31])
 - D. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL. (Step 6.4[34])
 - E. 2-FCV-68-303, RCS FLOW CNTL VLV PRIMARY WATER TO PRT. (Step 6.5[25])
 - F. 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT. (Step 6.6[28])

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 29 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.0 PERFORMANCE

NOTES

- 1) Subsections 6.1 thru 6.6 may be performed in any order but must be performed prior to Subsection 6.7
- 2) Subsection 6.8 may be completed at any time.
- 3) The first time that each valve is tested OPEN or CLOSED all light indications will be VERIFIED locally by actual valve position. From then on light indication will be used unless otherwise stated.

6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test

- [1] **VERIFY** prerequisites listed in Section 4.0 for this Subsection have been completed. _____

- [2] **ENSURE** Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY is CLOSED **AND**:

VERIFY the following:

- A. Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED (locally 724/AZ312) _____
- B. Green Light ON at 2-HS-68-307A, PRT TO GAS ANALYZER, at 2-M-4 _____
- C. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER, at 2-M-4 _____
- D. Green Status Light ON at CISP Monitor Light Box 2-XX-55-6E, Window 91, at 2-M-6 _____
- E. Red Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91, at 2-M-6 _____
- F. Red Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER, at 2-L-10 _____
- G. Green Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 30 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [3] **OPEN** 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, using 2-HS-68-307A, PRT TO GAS ANALYZER, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPEN (locally 724/AZ312) _____
- B. Green Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- C. Red Light ON at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- D. Green Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____
- E. Red Status Light ON at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____
- F. Green Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- G. Red Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____

- [4] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, to CLOSE position, **AND**

VERIFY:

- A. Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSES (locally, 724/AZ312) _____
- B. Green Light ON at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- C. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- D. Green Status Light ON at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 31 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

E. Red Status Light OFF at CISP Monitor Light Box
2-XX-55-6E, Window 91 _____

F. Green Light OFF at 2-HS-68-307C, PRT TO GAS
ANALYZER _____

G. Red Light OFF at 2-HS-68-307C, PRT TO GAS
ANALYZER _____

[5] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS
ANALYZER, to OPEN position, **THEN**

RELEASE to A AUTO, **AND**

VERIFY:

A. Red Light ON at 2-M-4. _____

B. Green Light OFF at 2-M-4. _____

[6] **PLACE** Test Switch #4 in Panel 2-R-54 on Terminal Board TB
106, across Terminals 5 (wire RBA7) and 6 (wire RBA12), to
the OPEN position (simulates control of 2-8025X relay), **AND**

VERIFY the following at 2-HS-68-307A, PRT TO GAS
ANALYZER:

A. Red Light OFF. _____

B. Green Light ON _____

[7] **PLACE** Test Switch #4 in Panel 2-R-54 on Terminal Board TB
106, across Terminals 5 (wire RBA7) and 6 (wire RBA12), to
the CLOSED position, **AND**

VERIFY the following at 2-HS-68-307A, PRT TO GAS
ANALYZER:

A. Red Light ON _____

B. Green Light OFF _____

| | | |
|---------------|-------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 32 of 98 |
|---------------|-------------------------|--|

Date _____

6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)

NOTES

- 1) The following steps require valve stroke timing remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

[8] **PLACE** Test Switch #1 in Panel 2-R-48 on Terminal Board TB 611, across Terminals 7 (wire RBA6) and 8 (wire RBA3), to the OPEN position, to simulate Phase A Containment Isolation signal.

A. **VERIFY** by light indication that Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSSES. (**ACC CRIT**)

B. **RECORD** remote closing time at 2-HS-68-307A, PRT TO GAS ANALYZER. (**ACC CRIT**)

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 33 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[9] **PLACE** Test Switch #1 in Panel 2-R-48 on Terminal Board TB 611, across Terminals 7(wire RBA6) and 8 (wire RBA3), to the CLOSED position. _____

[10] **VERIFY** by light indication at 2-HS-68-307A, PRT TO GAS ANALYZER, that Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains CLOSED.
(ACC CRIT) _____

NOTES

- 1) The following steps require valve stroke timing locally and remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

[11] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, to the OPEN position, **THEN**

RELEASE. _____

A. **RECORD** remote opening time at 2-HS-68-307A, PRT TO GAS ANALYZER. _____

Time in seconds

M&TE _____ Cal Due Date _____

B. **RECORD** local opening time at 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, [724/AZ312]. _____

Time in seconds

M&TE _____ Cal Due Date _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 34 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [12] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, in the CLOSE position. _____

A. **RECORD** remote closing time at 2-HS-68-307A, PRT TO GAS ANALYZER. (**ACC CRIT**). _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

B. **RECORD** local closing time at 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY [724/AZ312]. (**ACC CRIT**). _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

- [13] **PLACE** Handswitch 2-HS-68-307C, PRT TO GAS ANALYZER, to the OPEN position at 2-L-10, **AND**

VERIFY by light indication at 2-M-4 that 2-FCV-68-307 PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains CLOSED. _____

- [14] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, to OPEN **THEN**

RELEASE, AND

VERIFY by light indication that Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPENS. _____

- [15] **PLACE** Handswitch 2-HS-68-307C, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY by light indication at 2-M-4 that Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains OPEN. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 35 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [16] **REMOVE** fuse in Fuse Block 0-FU-236-0003/A10, FCV-68-307, on 125V DC Battery Bd III (0-BD-236-3-F), to simulate loss of power.

1st

CV

- [17] **VERIFY** 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED locally. (**ACC CRIT**)

- [18] **REINSTALL** fuse in Fuse Block 0-FU-236-0003/A10, FCV-68-307.

1st

CV

- [19] **VERIFY** Annunciator Window 148-B, ACR PNL 2-L-11A, at 2-XA-55-6F, is CLEAR.

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 36 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[20] **PLACE** Transfer Switch 2-XS-68-307, PRT TO GAS ANALYZER, at 2-L-11A, to the AUX position, **AND**

VERIFY the following:

- A. Annunciator Window 148-B, ACR PNL 2-L-11A, is in ALARM _____
- B. Green Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- C. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 91 _____
- E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 91 _____
- F. Green Light ON at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- G. Red Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____

[21] **PLACE AND**

HOLD Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, at 2-M-4, to the OPEN position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-307 remains CLOSED, **THEN**

RELEASE. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 37 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [22] **PLACE** Handswitch 2-HS-68-307C, PRT TO GAS ANALYZER, to the OPEN position **AND**

VERIFY the following:

- A. Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPENS (locally, 724/AZ312) _____
- B. Green Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- C. Red Light ON at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- D. Green Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____
- E. Red Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____
- F. Green Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- G. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____

- [23] **PLACE** Handswitch 2-HS-68-307A, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-307 remains OPEN. _____

- [24] **CLOSE** 2-ISV-32-3499 (AZ307,716,ANNULUS), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-307. _____

- [25] **OPEN** Pressure Regulator Drain Valve for 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, **AND**

VERIFY 2-FCV-68-307 CLOSES (locally). **(ACC CRIT)** _____

- [26] **CLOSE** Pressure Regulator Drain Valve for 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 38 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[27] **OPEN** 2-ISV-32-3499, (AZ307,716,ANNULUS), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-307, **AND**

VERIFY 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPENS (locally). _____

[28] **PLACE** Handswitch 2-HS-68-307C, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED (locally) _____

B. Red Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____

C. Green Light ON at 2-HS-68-307C, PRT TO GAS ANALYZER _____

D. Green Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____

E. Red Status Light OFF at CISP Monitor Light Box 2-XX-55-6E, Window 91 _____

F. Green Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____

G. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 39 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.1 2-FCV-68-307, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [29] **PLACE** Transfer Switch 2-XS-68-307, PRT TO GAS ANALYZER, to the NOR position, **AND**

VERIFY the following:

- A. Red Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- B. Green Light OFF at 2-HS-68-307C, PRT TO GAS ANALYZER _____
- C. Red Light OFF at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- D. Green Light ON at 2-HS-68-307A, PRT TO GAS ANALYZER _____
- E. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6E, Window 91 _____
- F. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 91 _____
- G. Annunciator Window 148-B, ACR PNL 2-L-11A, is CLEAR _____

NOTE

Step 6.1[30] may be marked N/A if 2-ISV-68-574, PRT GAS ANAL, is CLOSED and a Hold Order Tag is attached.

- [30] **OPEN** 2-ISV-68-574, PRT GAS ANAL. _____
- [31] **OPEN** 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. _____
- [32] **VERIFY** successful completion of this subsection 6.1.
(**ACC CRIT 5.0[9]A**) _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 40 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test

- [1] **VERIFY** the prerequisites listed in Section 4.0 for this Subsection have been completed. _____
- [2] **ENSURE** Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY is CLOSED **AND**
- VERIFY** the following:
- A. Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED (locally) _____
 - B. Green Light ON at 2-HS-68-308A, PRT TO GAS ANALYZER, at 2-M-4 _____
 - C. Red Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER, at 2-M-4 _____
 - D. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6F, Window 91, at 2-M-6 _____
 - E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91, at 2-M-6 _____
 - F. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER, at 2-L-10 _____
 - G. Green Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 41 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [3] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to the OPEN position until Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, is FULLY OPEN **THEN**

RELEASE to A AUTO **AND**

VERIFY the following:

- A. Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPEN (locally) _____
- B. Green Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____
- C. Red Light ON at 2-HS-68-308A, PRT TO GAS ANALYZER _____
- D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____
- E. Red Status Light ON at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____
- F. Green Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____
- G. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 42 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [4] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSES (locally) _____
- B. Green Light ON at 2-HS-68-308A, PRT TO GAS ANALYZER _____
- C. Red Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____
- D. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____
- E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____
- F. Green Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____
- G. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

- [5] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to the OPEN position until Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, is FULLY OPEN **THEN**

RELEASE to A AUTO **AND**

VERIFY:

- A. Red Light ON at 2-M-4. _____
- B. Green Light OFF at 2-M-4. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 43 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

NOTES

- 1) The following steps require valve stroke timing remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

- [6] **PLACE** Test Switch #3 in Panel 2-R-51 on Terminal Board TB 611, across Terminals 7 (wire RBB5) and 8 (wire RBB10), to the OPEN position to simulate Phase A Containment Isolation, **AND**

VERIFY by light indication that Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSSES. (**ACC CRIT**)

- A. **RECORD** remote closing time at 2-HS-68-308A, PRT TO GAS ANALYZER. (**ACC CRIT**).

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

- [7] **PLACE** Test Switch #3 in Panel 2-R-51 on Terminal Board TB 611, across terminals 7 (wire RBB5) and 8 (wire RBB10), to the CLOSED position, **AND**

VERIFY by light indication at 2-HS-68-308A, PRT TO GAS ANALYZER, that Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains CLOSED. (**ACC CRIT**)

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 44 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

- [8] **PLACE** Handswitch 2-HS-68-308C, PRT TO GAS ANALYZER, at 2-L-10 to the OPEN position, **AND**

VERIFY by light indication at 2-M-4 that Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains CLOSED.

NOTES

- 1) The following steps require valve stroke timing locally and remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

- [9] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to the OPEN position, **THEN**

RELEASE

- A. **RECORD** remote opening time at 2-HS-68-308A, PRT TO GAS ANALYZER.

Time in seconds

M&TE _____ Cal Due Date _____

- B. **RECORD** local opening time at 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY.

Time in seconds

M&TE _____ Cal Due Date _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 45 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[10] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to the CLOSE position. _____

A. **RECORD** remote closing time at 2-HS-68-308A, PRT TO GAS ANALYZER. (**ACC CRIT**). _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

B. **RECORD** local closing time at 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. (**ACC CRIT**). _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

[11] **PLACE** Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER, to OPEN until 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, is FULLY OPEN, **THEN**

RELEASE to A AUTO, **AND**

VERIFY by light indication at 2-M-4 Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, is OPEN. _____

[12] **PLACE** Handswitch 2-HS-68-308C, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY by light indication at 2-M-4 that Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, remains OPEN. _____

[13] **REMOVE** fuse in Fuse Block 0-FU-236-0004/A4, FCV-68-308 on 125V DC Battery Bd IV (0-BD-236-4-G), to simulate loss of power. _____

1st

CV

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 46 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[14] **VERIFY** 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED (locally). (**ACC CRIT**) _____

[15] **REINSTALL** fuse in Fuse Block 0-FU-236-0004/A4, FCV-68-308. _____

1st

CV

[16] **ENSURE** 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY remains CLOSED. _____

[17] **VERIFY** Annunciator Window 148-C, ACR PNL 2-L-11B, at 2-XA-55-6F, is CLEAR. _____

[18] **PLACE** Transfer Switch 2-XS-68-308, PRT TO GAS ANALYZER, at 2-L-11B, to the AUX position, **AND**

VERIFY the following:

A. Annunciator Window 148-C, ACR PNL 2-L-11B, in ALARM _____

B. Green Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____

C. Red Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____

D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

F. Green Light ON at 2-HS-68-308C, PRT TO GAS ANALYZER _____

G. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

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|-----------------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 47 of 98 |
|-----------------------------|--------------------------------|---|

Date _____

6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)

[19] PLACE AND

HOLD Handswitch 2-HS-68-308A, PRT TO GAS ANALYZER,
at 2-M-4 to the OPEN position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-308,
PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY,
remains CLOSED, **THEN**

RELEASE.

[20] PLACE Handswitch 2-HS-68-308C, PRT TO GAS
ANALYZER, to the OPEN position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK
GAS ANALYZER SUPPLY, OPEN (locally)
- B. Green Light OFF at 2-HS-68-308C, PRT TO GAS
ANALYZER
- C. Red Light ON at 2-HS-68-308C, PRT TO GAS
ANALYZER
- D. Green Status Light OFF at CISP Monitor Light Box
2-XX-55-6F, Window 91
- E. Red Status Light OFF at CISP Monitor Light Box
2-XX-55-6F, Window 91
- F. Green Light OFF at 2-HS-68-308A, PRT TO GAS
ANALYZER
- G. Red Light OFF at 2-HS-68-308A, PRT TO GAS
ANALYZER

[21] PLACE Handswitch 2-HS-68-308A, PRT TO GAS
ANALYZER, to CLOSE position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-308,
PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY,
remains OPEN.

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 48 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[22] **CLOSE** 2-ISV-32-3533 (AZ318,716,ACC4), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-308. _____

[23] **OPEN** Pressure Regulator Drain Valve for 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, **AND**

VERIFY 2-FCV-68-308 CLOSES (locally). **(ACC CRIT)** _____

[24] **CLOSE** Pressure Regulator Drain Valve for 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. _____

[25] **OPEN** 2-ISV-32-3533, (AZ318,716,ACC4), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-308, **AND**

VERIFY 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, OPENS (locally). _____

[26] **PLACE** Handswitch 2-HS-68-308C, PRT TO GAS ANALYZER, to the CLOSE position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, CLOSED (locally) _____

B. Green Light ON at 2-HS-68-308C, PRT TO GAS ANALYZER _____

C. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

F. Green Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____

G. Red Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 49 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.2 2-FCV 68-308, PRT Gas Analyzer Supply Valve Operability Test
(continued)**

[27] **PLACE** Transfer Switch 2-XS-68-308, PRT TO GAS ANALYZER, to the NOR position, **AND**

VERIFY the following:

A. Green Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

B. Red Light OFF at 2-HS-68-308C, PRT TO GAS ANALYZER _____

C. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

D. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6F, Window 91 _____

E. Green Light ON at 2-HS-68-308A, PRT TO GAS ANALYZER _____

F. Red Light OFF at 2-HS-68-308A, PRT TO GAS ANALYZER _____

G. Annunciator Window 148-C, ACR PNL 2-L-11B, is CLEAR _____

NOTE

Step 6.2[28] may be marked N/A if 2-ISV-68-574, PRT GAS ANAL, is CLOSED and a Hold Order Tag is attached.

[28] **OPEN** 2-ISV-68-574, PRESSURIZER RELIEF TANK GAS ANALYZER SUP ISOL. _____

[29] **OPEN** 2-FCV-68-308, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY. _____

[30] **VERIFY** successful completion of this subsection 6.2.
(ACC CRIT (5.0[9]B)) _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 50 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test

[1] **VERIFY** the prerequisites listed in Section 4.0 for this Subsection have been completed. _____

[2] **ENSURE** Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT is CLOSED **AND**

VERIFY the following:

A. Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, CLOSED (locally) _____

B. Green Light ON at 2-HS-68-305A, N2 TO PRT CIV-ØA, at 2-M-5 _____

C. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA, at 2-M-5 _____

D. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6E, Window 81, at 2-M-5 _____

E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81, at 2-M-5 _____

F. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT, at 2-L-10 _____

G. Green Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____

[3] **PLACE** and **HOLD** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, in OPEN position **AND**

VERIFY the following:

A. Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, OPEN (locally) _____

B. Green Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____

C. Red Light ON at 2-HS-68-305A, N2 TO PRT CIV-ØA. _____

D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 51 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve
Operability Test (continued)**

E. Red Status Light ON at CISP Monitor Light Box,
2-XX-55-6E, Window 81 _____

F. Green Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____

G. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____

[4] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to A
AUTO position, **AND**

VERIFY Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS
N2 MAN TO PRT, remains OPEN:

A. Green Light OFF at 2-M-4. _____

B. Red Light ON at 2-M-4. _____

[5] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to
the CLOSE position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2
MAN TO PRT, CLOSES (locally) _____

B. Green Light ON at 2-HS-68-305A, N2 TO PRT CIV-ØA _____

C. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____

D. Green Status Light ON at CISP Monitor Light Box,
2-XX-55-6E, Window 81 _____

E. Red Status Light OFF at CISP Monitor Light Box,
2-XX-55-6E, Window 81 _____

F. Green Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____

G. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 52 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

- [6] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to the OPEN position until Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, is FULLY OPEN, **THEN**

RELEASE to A AUTO, **AND**

VERIFY:

A. Red Light ON at 2-M-4. _____

B. Green Light OFF at 2-M-4. _____

NOTES

- 1) The following steps require valve stroke timing remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

- [7] **PLACE** Test Switch #2 in Panel 2-R-48 on Terminal Board TB 611, across Terminals 11 (wire RBH5) and 12 (wire RBH10), to the OPEN position to simulate Phase A Containment Isolation, **AND**

VERIFY by light indication that Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, CLOSES.
(ACC CRIT) _____

A. **RECORD** remote closing time at 2-HS-68-305A, N2 TO PRT CIV-ØA. **(ACC CRIT)**. _____

Time in seconds ≤10 seconds

M&TE _____ Cal Due Date _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 53 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

- [8] **PLACE** Test Switch #2 in Panel 2-R-48 on Terminal Board TB 611, across terminals 11 (wire RBH5) and 12 (wire RBH10), to the CLOSED position **AND**

VERIFY by light indication at 2-HS-68-305A, N2 TO PRT CIV-ØA, that Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, remains CLOSED. (**ACC CRIT**) _____

- [9] **PLACE** Handswitch 2-HS-68-305C, N2 SUPPLY TO PRT, at 2-L-10 to the OPEN position, **AND**

VERIFY by light indication at 2-M-5 that Valve 2-FCV-68-305 RCS FLOW CNTL VLV WDS N2 MAN TO PRT, remains CLOSED. _____

NOTES

- 1) The following steps require valve stroke timing locally and remotely.
- 2) Local timing begins with the initiating signal and is concluded with the completion of valve stem movement.
- 3) Remote timing begins with the initiating signal and is concluded with the position indication lights status change.
- 4) Stroke time acceptance criteria will be based on the movement to the safety function final position of the valve.

- [10] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to the OPEN position until Valve 2-FCV-68-305, RCS FLOW CNTL VLV WDS N2 MAN TO PRT, is FULLY OPEN, **THEN**

RELEASE. _____

- A. **RECORD** remote opening time at 2-HS-68-305A, N2 TO PRT CIV-ØA. _____

Time in seconds

M&TE _____ Cal Due Date _____

| | | |
|---------------|-------------------------|--|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 54 of 98 |
|---------------|-------------------------|--|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

- B. **RECORD** local opening time at 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. _____

Time in seconds

M&TE _____ Cal Due Date _____

- [11] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to the CLOSE position. _____

- A. **RECORD** remote closing time at 2-HS-68-305A, N2 TO PRT CIV-ØA. (**ACC CRIT**) _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

- B. **RECORD** local closing time at 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. (**ACC CRIT**) _____

Time in seconds ≤ 10 seconds

M&TE _____ Cal Due Date _____

- [12] **PLACE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to OPEN until 2-FCV-68-305 is FULLY OPEN, **THEN**

RELEASE to A AUTO **AND**

VERIFY by light indication at 2-M-5 Valve 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT is OPEN. _____

- [13] **PLACE** Handswitch 2-HS-68-305C, N2 SUPPLY TO PRT, to the CLOSE position, **AND**

VERIFY by light indication at 2-M-5 that Valve 2-FCV-68-305 RCS FLOW CONT VLV WDS N2 MAN TO PRT remains OPEN. _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 55 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

- [14] **REMOVE** fuse in Fuse Block 0-FU-236-0003/B37, FCV-68-305 on 125V DC Battery Bd III (0-BD-236-3-F), to simulate loss of power.

1st

CV

- [15] **VERIFY** 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, CLOSED (locally). (**ACC CRIT**).

- [16] **REINSTALL** fuse in Fuse Block 0-FU-236-0003/B37, FCV-68-305.

1st

CV

- [17] **ENSURE** 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT remains CLOSED.

- [18] **VERIFY** Annunciator Window 148-B, ACR PNL 2-L-11A, at 2-XA-55-6F, is CLEAR.

- [19] **PLACE** Transfer Switch 2-XS-68-305, N2 SUPPLY TO PRT, at 2-L-11A, to the AUX position, **AND**

VERIFY the following:

- A. Annunciator Window 148-B, ACR PNL 2-L-11A, in ALARM
- B. Green Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA
- C. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA
- D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81
- E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81
- F. Green Light ON at 2-HS-68-305C, N2 SUPPLY TO PRT
- G. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 56 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

[20] PLACE AND

HOLD Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to the OPEN position at 2-M-5, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, remains CLOSED, **THEN**

RELEASE.

[21] PLACE Handswitch 2-HS-68-305C, N2 SUPPLY TO PRT, to the OPEN position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, OPEN (locally) _____
- B. Green Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- C. Red Light ON at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- F. Green Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____
- G. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____

[22] PLACE Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, to CLOSE position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, remains OPEN. _____

[23] CLOSE 2-ISV-32-3186 (A11W,713), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-305. _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 57 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

- [24] **OPEN** Pressure Regulator Drain Valve for 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, **AND**

VERIFY 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, CLOSES (locally). _____

- [25] **CLOSE** Pressure Regulator Drain Valve for 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. _____

- [26] **OPEN** 2-ISV-32-3186, (A11W,713), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-305, **AND**

VERIFY 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT, OPENS (locally). _____

- [27] **PLACE** Handswitch 2-HS-68-305C, N2 SUPPLY TO PRT, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-305 , RCS FLOW CONT VLV WDS N2 MAN TO PRT, CLOSED (locally) _____
- B. Green Light ON at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- C. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- D. Green Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- E. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- F. Green Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____
- G. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 58 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.3 2-FCV-68-305, RCS Flow Cont Vlv WDS N2 Man to PRT, Valve Operability Test (continued)

[28] **PLACE** Transfer Switch 2-XS-68-305, N2 SUPPLY TO PRT, to the NOR position, **AND**

VERIFY the following:

- A. Green Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- B. Red Light OFF at 2-HS-68-305C, N2 SUPPLY TO PRT _____
- C. Green Status Light ON at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- D. Red Status Light OFF at CISP Monitor Light Box, 2-XX-55-6E, Window 81 _____
- E. Green Light ON at 2-HS-68-305A, N2 TO PRT CIV-ØA _____
- F. Red Light OFF at 2-HS-68-305A, N2 TO PRT CIV-ØA _____
- G. Annunciator Window 148-B, ACR PNL 2-L-11A, is CLEAR. _____

NOTE

Step 6.3[29] may be marked N/A if Operations does not require the N2 supply header aligned to the PRT.

- [29] **OPEN** 2-ISV-68-572, PRESSURIZER RELIEF TANK NITROGEN SUPPLY ISOL. _____
- [30] **OPEN** 2-FCV-68-305, RCS FLOW CONT VLV WDS N2 MAN TO PRT. _____
- [31] **VERIFY** successful completion of this subsection 6.3. (ACC CRIT 5.0[9]C) _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 59 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test

NOTES

- 1) Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL is the vent isolation between the PRT and RCDT. Consequently, it will be necessary to coordinate this effort with any ongoing RCDT startup test to negate any potential interference
- 2) Foxboro I/A workstations will be used to help perform some of the following steps. Ensure Foxboro I/A System Engineer or a qualified individual is available for this portion of the test.

[1] **VERIFY** the prerequisites listed in Section 4.0 for this Subsection have been completed. _____

[2] **ENSURE** 2-DS-98-R16A, POWER DISCONNECT SWITCH, is CLOSED. _____

[3] **ENSURE** Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, is CLOSED **AND**

VERIFY the following:

A. Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, CLOSED (locally, 716/AZ090) _____

B. Green Light ON at 2-HS-68-301A, PRT PRESSURE CONTROL VLV , at 2-M-5 _____

C. Red Light OFF at 2-HS-68-301A, PRT PRESSURE CONTROL VLV, at 2-M-5 _____

D. Green Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK , at 2-L-11A _____

E. Red Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 60 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

- [4] **PLACE** Handswitch 2-HS-68-301A, PRT PRESSURE CONTROL VLV , to the OPEN position, **AND**

VERIFY the following:

- A. Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, OPEN (locally) _____
- B. Green Light OFF at 2-M-5 _____
- C. Red Light ON at 2-M-5 _____
- D. Green Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK. _____
- E. Red Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK. _____

- [5] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, CLOSED (locally) _____
- B. Green Light ON at 2-M-5 _____
- C. Red Light OFF at 2-M-5 _____
- D. Green Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK. _____
- E. Red Light OFF at 2-HS-68-301C, RC PRESSURIZER RELIEF TANK. _____

- [6] **PLACE** 2-HS-68-301C, RC PRESSURIZER RELIEF TANK, at 2-L-11A to the OPEN position, **AND**

VERIFY by light indication at 2-HS-68-301A, PRT VENT TO WDS VENT HDR at 2-M-5 that Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL remains CLOSED. _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 61 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

[7] **VERIFY** Annunciator Window 88-C, PRT PRESS HI, at 2-XA-55-5A, is CLEAR. _____

[8] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to P-AUTO position, **AND**

VERIFY the following:

A. Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, is OPEN (locally). _____

B. Red Light ON at 2-M-5 _____

C. Green Light OFF at 2-M-5 _____

CAUTION

Avoid contact with the energized electrical circuit in Panel 2-R-16.

[9] **PLACE** W2MISC_068:2PS0680301 to MANUAL in FoxSelect using a Foxboro I/A workstation. _____

[10] **TOGGLE** W2MISC_068:2PS0680301 to OFF in FoxSelect using a Foxboro I/A workstation. _____

[11] **VERIFY** the following:

A. Annunciator Window 88-C, PRT PRESS HI, at 2-XA-55-5A on 2-M-5, ALARMS _____

B. Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, CLOSED by light indication at 2-M-5. _____

[12] **TOGGLE** W2MISC_068:2PS0680301 to ON in FoxSelect using a Foxboro I/A workstation. _____

[13] **PLACE** W2MISC_068:2PS0680301 to AUTO in FoxSelect using a Foxboro I/A workstation. _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 62 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

- [14] **VERIFY** by light indication at 2-HS-68-301A, PRT VENT TO WDS VENT HDR, at 2-M-5, that Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, OPENS. _____
- [15] **VERIFY** Annunciator Window 88-C, PRT PRESS HI, CLEARS. _____
- [16] **CLOSE** 2-ISV-32-3627 (AZ90, 716), CONTROL AIR ISOLATION VALVE TO 2-PCV-68-301. _____
- [17] **OPEN** the Pressure Regulator Drain Valve for 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, **AND**

VERIFY 2-PCV-68-301 CLOSSES (locally). _____
- [18] **CLOSE** the Pressure Regulator Drain Valve for 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL. _____
- [19] **OPEN** 2-ISV-32-3627 (AZ90, 716), CONTROL AIR ISOLATION VALVE TO 2-PCV-68-301, **AND**

VERIFY 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, OPENS (locally). _____
- [20] **PLACE** Handswitch 2-HS-68-301C, PRT VENT TO WDS VENT HDR, to the CLOSE position, **AND**

VERIFY by light indication at 2-HS-68-301A, PRT VENT TO WDS VENT HDR, at 2-M-5 that Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, remains OPEN. _____
- [21] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to the CLOSE position, **AND**

VERIFY by light indication that Valve 2-PCV-68-301 CLOSSES. _____
- [22] **VERIFY** Annunciator Window 148-B, ACR PNL 2-L-11A, at 2-XA-55-6F, is CLEAR. _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 63 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

- [23] **PLACE** Transfer Switch 2-XS-68-301, PRT VENT PCV TO WDS VENT HDR on 2-L-11A, to the AUX position, **AND**

VERIFY the following:

- A. Annunciator Window 148-B, ACR PNL 2-L-11A, in ALARM _____
- B. Green Light OFF at 2-HS-68-301A, PRT VENT TO WDS VENT HDR _____
- C. Red Light OFF at 2-HS-68-301A, PRT VENT TO WDS VENT HDR _____
- D. Green Light ON at 2-HS-68-301C, PRT VENT TO WDS VENT HDR _____
- E. Red Light OFF at 2-HS-68-301C, PRT VENT TO WDS VENT HDR _____

- [24] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to the OPEN position, **AND**

VERIFY by light indication at 2-L-11A that Valve 2-PCV-68-301 remains CLOSED. _____

- [25] **PLACE** Handswitch 2-HS-68-301C, PRT VENT TO WDS VENT HDR, to the OPEN position, **AND**

VERIFY the following:

- A. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, OPEN (locally) _____
- B. Green Light OFF at 2-HS-68-301C, PRT VENT TO WDS VENT HDR _____
- C. Red Light ON at 2-HS-68-301C, PRT VENT TO WDS VENT HDR _____
- D. Green Light OFF at 2-HS-68-301A, PRT VENT TO WDS VENT HDR. _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 64 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

E. Red Light OFF at 2-HS-68-301A, PRT VENT TO WDS
VENT HDR. _____

[26] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS
VENT HDR, to the CLOSE position, **AND**

VERIFY by light indication that Valve 2-PCV-68-301,
PRESSURIZER RELIEF TANK VENT HEADER CNTL,
remains OPEN. _____

[27] **PLACE** Handswitch 2-HS-68-301C, PRT VENT TO WDS
VENT HDR, to the CLOSE position, **AND**

VERIFY the following:

A. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT
HEADER CNTL, is CLOSED (locally) _____

B. Green Light ON at 2-HS-68-301C, PRT VENT TO WDS
VENT HDR _____

C. Red Light OFF at 2-HS-68-301C, PRT VENT TO WDS
VENT HDR _____

D. Green Light OFF at 2-HS-68-301A, PRT VENT TO WDS
VENT HDR. _____

E. Red Light OFF at 2-HS-68-301A, PRT VENT TO WDS
VENT HDR. _____

[28] **PLACE** Transfer Switch 2-XS-68-301, PRT VENT PCV TO
WDS VENT HDR, to the NOR position, **AND**

VERIFY the following:

A. Green Light ON at 2-HS-68-301A, PRT VENT TO WDS
VENT HDR _____

B. Red Light OFF at 2-HS-68-301A, PRT VENT TO WDS
VENT HDR _____

C. Green Light OFF at 2-HS-68-301C, PRT VENT TO WDS
VENT HDR _____

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|-----------------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 65 of 98 |
|-----------------------------|--------------------------------|---|

Date _____

**6.4 2-PCV-68-301, PRT Vent Header Cntl, Valve Operability Test
(continued)**

- D. Red Light OFF at 2-HS-68-301C, PRT VENT TO WDS VENT HDR _____
- E. Annunciator Window 148-B, ACR PNL 2-L-11A, is CLEAR. _____
- [29] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to OPEN position **AND**
- VERIFY** by light indication that Valve 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, OPENS. _____
- [30] **REMOVE** fuse in Fuse Block 0-FU-236-3/D20, PRESSURIZER RELIEF TANK VENT VALVE, on 125 VDC Battery Bd III (0-BD-236-3-F), to simulate loss of power. _____
- 1st _____
- CV _____
- [31] **VERIFY** 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, CLOSSES (locally). (**ACC CRIT**) _____
- [32] **REINSTALL** fuse in Fuse Block 0-FU-236-3/D20, PRESSURIZER RELIEF TANK VENT VALVE. _____
- 1st _____
- CV _____
- [33] **PLACE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, to the CLOSE position **AND**
- VERIFY** the following:
- A. Green Light ON at 2-HS-68-301A, PRT VENT TO WDS VENT HDR _____
- B. Red Light OFF at 2-HS-68-301A, PRT VENT TO WDS VENT HDR _____
- [34] **VERIFY** the successful completion of this Subsection 6.4 (**ACC CRIT 5.0[9]D**). _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 66 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.5 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test

[1] **VERIFY** prerequisites listed in Section 4.0 for this Subsection have been completed. _____

[2] **ENSURE** Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, is CLOSED **AND**

VERIFY the following:

A. Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, CLOSED (locally) _____

B. Green Light ON at 2-HS-68-303A, PRI WATER TO PRT, at 2-M-5 _____

C. Red Light OFF at 2-HS-68-303A, PRI WATER TO PRT, at 2-M-5 _____

D. Green Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT , at 2-L-10 _____

E. Red Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT , at 2-L-10 _____

[3] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the OPEN position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, OPEN (locally) _____

B. Green Light OFF, at 2-M-5 _____

C. Red Light ON, at 2-M-5 _____

D. Green Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT. _____

E. Red Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT. _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 67 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.5 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test
(continued)**

- [4] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK
PRIMARY WATER SUPPLY, CLOSED (locally) _____
- B. Green Light ON, at 2-M-5 _____
- C. Red Light OFF, at 2-M-5 _____

- [5] **PLACE** Handswitch 2-HS-68-303C, PRIMARY WATER TO PRT, at 2-L-10 to the OPEN position, **AND**

VERIFY by light indication at 2-M-5 that Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, remains CLOSED. _____

- [6] **PLACE** Handswitch 2-HS-68-303C, PRIMARY WATER TO PRT, to the CLOSE position. _____

- [7] **VERIFY** Annunciator Window 148-C, ACR PNL 2-L-11B, at 2-XA-55-6F is CLEAR. _____

- [8] **PLACE** Transfer Switch 2-XS-68-303, PRIMARY WATER TO PRT at 2-L-11B, to AUX position, **AND**

VERIFY the following:

- A. Annunciator Window 148-C, ACR PNL 2-L-11B, in
ALARM _____
- B. Green Light OFF at 2-HS-68-303A, PRI WATER TO PRT _____
- C. Red Light OFF at 2-HS-68-303A, PRI WATER TO PRT _____
- D. Green Light ON at 2-HS-68-303C, PRIMARY WATER TO
PRT _____
- E. Red Light OFF at 2-HS-68-303C, PRIMARY WATER TO
PRT _____

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|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 68 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.5 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test
(continued)**

- [9] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the OPEN position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, remains CLOSED. _____

- [10] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the CLOSE position. _____

- [11] **PLACE** Handswitch 2-HS-68-303C, PRIMARY WATER TO PRT, to the OPEN position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, OPEN (locally) _____
- B. Green light OFF, at 2-L-10 _____
- C. Red Light ON, at 2-L-10 _____
- D. Green Light OFF at 2-HS-68-303A, at 2-M-5 _____
- E. Red Light OFF at 2-HS-68-303A, at 2-M-5 _____

- [12] **PLACE** Handswitch 2-HS-68-303C, PRIMARY WATER TO PRT, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, CLOSED (locally) _____
- B. Green Light ON, at 2-L-10 _____
- C. Red Light OFF, at 2-L-10 _____
- D. Green Light OFF at 2-HS-68-303A, at 2-M-5 _____
- E. Red Light OFF at 2-HS-68-303A, at 2-M-5 _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 69 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.5 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test
(continued)**

- [13] **PLACE** Transfer Switch 2-XS-68-303, PRIMARY WATER TO PRT, to the NOR position, **AND**

VERIFY the following:

- A. Annunciator Window 148-C, ACR PNL 2-L-11B, is CLEAR. _____
- B. Green Light ON at 2-HS-68-303A, PRI WATER TO PRT _____
- C. Red Light OFF at 2-HS-68-303A, PRI WATER TO PRT _____
- D. Green Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT _____
- E. Red Light OFF at 2-HS-68-303C, PRIMARY WATER TO PRT _____

- [14] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the OPEN position, **AND**

VERIFY by light indication, at 2-M-5, that Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, OPENS. _____

- [15] **REMOVE** fuse in Fuse Block 0-FU-236-4/D6, PRESSURIZER RELIEF TK PRIMARY WATER SUPPLY VLV, on 125V DC Battery Board IV (0-BD-236-4-G), to simulate loss of power. _____

1st

CV

- [16] **VERIFY** 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, CLOSES (locally). (**ACC CRIT**) _____

- [17] **REINSTALL** fuse in Fuse Block 0-FU-236-4/D6, PRESSURIZER RELIEF TK PRIMARY WATER SUPPLY VLV. _____

1st

CV

| | | |
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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 70 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.5 2-FCV-68-303, PRT Primary Water Supply, Valve Operability Test
(continued)**

- [18] **VERIFY** by light indication at 2-M-5 that Valve 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, OPENS. _____
- [19] **CLOSE** 2-ISV-32-3626 (AZ90, 716), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-303. _____
- [20] **OPEN** Pressure Regulator Drain Valve for 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, **AND**

VERIFY 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, CLOSES (locally). _____
- [21] **CLOSE** Pressure Regulator Drain Valve for 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY. _____
- [22] **OPEN** 2-ISV-32-3626 (AZ90, 716), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-303, **AND**

VERIFY 2-FCV-68-303, PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY, OPENS (locally). _____
- [23] **PLACE** 2-HS-68-303A, PRI WATER TO PRT, to the CLOSE position. _____
- [24] **OPEN** 2-ISV-81-501, CNTM ISOLATION BLOCK VALVE, [RB/EL716]. _____
- [25] **VERIFY** successful completion of this subsection 6.5. (ACC CRIT 5.0[9]E) _____

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 71 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test

NOTE

It will **NOT** be necessary to isolate 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, from the RCDT during this test, but this test needs to be coordinated with RCDT startup activities to prevent potential interferences or interruptions

[1] **VERIFY** prerequisites listed in Section 4.0 for this Subsection have been completed. _____

[2] **ENSURE** Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, is CLOSED **AND**

VERIFY the following:

- A. Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, CLOSED (locally) _____
- B. Green Light ON at 2-HS-68-310A, PRT DRAIN TO RCDT, at 2-M-5 _____
- C. Red Light OFF at 2-HS-68-310A, PRT DRAIN TO RCDT _____
- D. Green Light OFF at 2-HS-68-310C, PRT DRAIN TO RCDT, at 2-L-10 _____
- E. Red Light OFF at 2-HS-68-310C, PRT DRAIN TO RCDT _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 72 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test (continued)

- [3] **PLACE** Handswitch 2-HS-77-6A, RCDT PUMP 2B, at Waste Disposal Panel (0-L-2) [692/A8S], to the STOP-PULL-TO-LOCK position to prevent an inadvertent automatic start of RCDT PUMP 2B.

NOTE

The following steps will monitor the start signal for RCDT Pump B checking for continuity using a VOM.

- [4] **VERIFY** no continuity across Terminals 33 (Wire 11D9) and 34 (Wire 11D3), on Terminal Board L6, in Waste Disposal Panel, 0-L-2.

1st

CV

M&TE _____ Cal Due Date _____

- [5] **PLACE** Handswitch 2-HS-68-310A, PRT VENT TO WDS, to the OPEN position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, OPEN (locally)
- B. Green Light OFF, at 2-M-5
- C. Red Light ON, at 2-M-5

- [6] **VERIFY** continuity exists across Terminals 33 (Wire 11D9) and 34 (Wire 11D3) on Terminal Board L6, in Waste Disposal Panel, 0-L-2.

1st

CV

M&TE _____ Cal Due Date _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 73 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test (continued)

- [7] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the CLOSE position, **AND**

VERIFY the following:

- A. Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, CLOSED (locally) _____
- B. Green Light ON, at 2-M-5 _____
- C. Red Light OFF, at 2-M-5 _____

- [8] **VERIFY** no continuity across Terminals 33 (Wire 11D9) and 34 (Wire 11D3) on Terminal Board L6, in Waste Disposal Panel, 0-L-2. _____

1st

CV

M&TE _____ Cal Due Date _____

- [9] **PLACE** Handswitch 2-HS-68-310C, PRT DRAIN TO RCDT, to the OPEN position, **AND**

VERIFY by light indication at 2-M-5 that Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, remains CLOSED. _____

- [10] **PLACE** Handswitch 2-HS-68-310C, PRT DRAIN TO RCDT, to the CLOSE position. _____

- [11] **VERIFY** Annunciator Window 148-B, ACR PNL 2-L-11A, at 2-XA-55-6F, is CLEAR. _____

- [12] **PLACE** Transfer Switch 2-XS-68-310, PRT DRAIN FCV TO RCDT, at 2-L-11A, to the AUX position, **AND**

VERIFY the following:

- A. Annunciator Window 148-B, ACR PNL 2-L-11A, in ALARM _____
- B. Green Light OFF at 2-HS-68-310A, PRT DRAIN TO RCDT _____
- C. Red Light OFF at 2-HS-68-310A, PRT DRAIN TO RCDT _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 74 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test (continued)

D. Green Light ON at 2-HS-68-310C, PRT DRAIN TO RCDT _____

E. Red Light OFF at 2-HS-68-310C, PRT DRAIN TO RCDT _____

[13] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the OPEN position, **AND**

VERIFY by light indication at 2-L-10 that Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, remains CLOSED. _____

[14] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the CLOSE position. _____

[15] **PLACE** Handswitch 2-HS-68-310C, PRT DRAIN TO RCDT, to the OPEN position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, OPEN (locally) _____

B. Green Light OFF, at 2-L-10 _____

C. Red Light ON, at 2-L-10 _____

[16] **PLACE** Handswitch 2-HS-68-310C, PRT DRAIN TO RCDT, to the CLOSE position, **AND**

VERIFY the following:

A. Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, CLOSED (locally) _____

B. Green Light ON, at 2-L-10 _____

C. Red Light OFF, at 2-L-10 _____

[17] **PLACE** Transfer Switch 2-XS-68-310, PRT DRAIN FCV TO RCDT, to the NOR position, **AND**

VERIFY the following:

A. Annunciator Window 148-B, ACR PNL 2-L-11A, is CLEAR. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 75 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test (continued)

- B. Green Light ON at 2-HS-68-310A, PRT DRAIN TO RCDT _____
- C. Red Light OFF at 2-HS-68-310A, PRT DRAIN TO RCDT _____
- D. Green Light OFF at 2-HS-68-310C, PRT DRAIN TO RCDT _____
- E. Red Light OFF at 2-HS-68-310C, PRT DRAIN TO RCDT _____
- [18] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the OPEN position, **AND**
- VERIFY** by light indication that Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, OPENS. _____
- [19] **REMOVE** fuse in Fuse Block 0-FU-236-3/D21, PRESSURIZER RELIEF TANK DRAIN VALVE, on 125V DC Battery Board III (0-BD-236-3-F), to simulate loss of power. _____
- 1st _____
- CV _____
- [20] **VERIFY** 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, CLOSSES (locally). (**ACC CRIT**) _____
- [21] **REINSTALL** fuse in Fuse Block 0-FU-236-3/D21, PRESSURIZER RELIEF TANK DRAIN VALVE. _____
- 1st _____
- CV _____
- [22] **VERIFY** by light indication that Valve 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, OPENS. _____
- [23] **CLOSE** 2-ISV-32-3625 (AZ83,702), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-310. _____
- [24] **OPEN** Pressure Regulator Drain Valve for 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, **AND**
- VERIFY** 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, CLOSSES (locally). _____
- [25] **CLOSE** Pressure Regulator Drain Valve for 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 76 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.6 2-FCV-68-310, PRT to RCDT, Valve Operability Test (continued)

[26] **OPEN** 2-ISV-32-3625 ,(AZ83,702), CONTROL AIR ISOLATION VALVE TO 2-FCV-68-310, **AND**

VERIFY 2-FCV-68-310, PRESSURIZER RELIEF TANK TO RCDT, OPENS (locally). _____

[27] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the CLOSE position **AND**

VERIFY the following:

A. Green Light ON, at 2-M-5 _____

B. Red Light OFF, at 2-M-5 _____

[28] **VERIFY** the successful completion of this Subsection 6.6 (**ACC CRIT 5.0[9]F**). _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 77 of 98 |
|-----------------------|--------------------------------|---|

Date _____

NOTES

- 1) Subsections 6.1 thru 6.6 may be performed in any order but must be performed prior to Subsection 6.7
- 2) Subsection 6.8 may be completed at any time.

6.7 PRT Spray Header Flow Rate and Annunciators Functional Test

- [1] **VERIFY** prerequisites listed in Section 4.0 for this Subsection have been completed. _____
- [2] **ENSURE** Handswitch 2-HS-68-301A, PRT VENT TO WDS VENT HDR, is in P-AUTO position. _____
- [3] **ENSURE** Handswitch 2-HS-68-305A, N2 TO PRT CIV-ØA, is in A-AUTO position. _____
- [4] **OPEN** 2-ISV-77-846, PRESSURIZER TANK N2 HDR ISOL. _____
- [5] **VERIFY/RECORD** the following PRT parameters:
 - A. PRT Level at 2-LI-68-300, PRT LEVEL, on 2-M-4 _____
 _____ % (55.5%-80%)
 - B. PRT Pressure at 2-PI-68-301, PRT PRESS, on 2-M-4 _____
 _____ psig (Approx 3 psig)
 - C. PRT Level at 2-LI-68-312C, PRT LEVEL, on 2-L-10 _____
 _____ % (55.5%-80%)
 - D. PRT Pressure at 2-PI-68-311C, PRT PRESS, on 2-L-10 _____
 _____ psig (Approx 3 psig)

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 78 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.7 PRT Spray Header Flow Rate and Annunciators Functional Test (continued)

[6] **VERIFY** the following PRT alarms are CLEAR:

- A. Annunciator Window 88-B, PRT LEVEL HI/LO, at
2-XA-55-5A on 2-M-5 _____
- B. Annunciator Window 88-C, PRT PRESS HI, at
2-XA-55-5A on 2-M-5 _____
- C. Annunciator Window 300E, PRT LEVEL HI/LO, at
2-XA-55-L10 on 2-L-10 _____

NOTE

During the performance of Step 6.7[7] thru 6.7[27], visual observation of transient and steady state piping vibration is required.

CAUTION

During draining of the PRT, ensure that a minimum positive pressure is maintained in the PRT. This pressure should be maintained from 1-3 psig.

[7] **PLACE** Handswitch 2-HS-68-310A, PRT DRAIN TO RCDT, to the OPEN position, to lower PRT level to between 60%-63% as indicated at 2-LI-68-300, PRT LEVEL, on 2-M-4, **THEN**

PLACE 2-HS-68-310A, PRT DRAIN TO RCDT, to the CLOSE position. _____

[8] **VERIFY** the following (**ACC CRIT**):

- A. Annunciator Window 88-B, PRT LEVEL HI/LO, at
2-XA-55-5A on 2-M-5 is in ALARM. _____
- B. Unit 2 Events Display Legend indicates 88-B PRT LEVEL
LO (LS-68-300B/A), in ALARM _____
- C. Annunciator Window 88-C, PRT PRESS HI, is CLEAR. _____
- D. Annunciator Window 300E, PRT LEVEL HI/LO, at
2-XA-55-L10, in ALARM, at 2-L-10 _____

[9] **VERIFY** PRT pressure at 2-PI-68-301, RCS PRT PRESS, is maintained at approximately 3 psig. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 79 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.7 PRT Spray Header Flow Rate and Annunciators Functional Test (continued)

NOTE

During the subsequent filling of the PRT with Primary Makeup Water, monitor PRT level change on 2-LI-68-300, PRT LEVEL, at 2-M-4 and 2-LI-68-312C, RCS PRT LEVEL, at 2-L-10.

- [10] **ENSURE** 2-FCV-81-12, PW RCS PRT & RCP STANDPIPES, is OPEN using 2-HS-81-12A, PRIMARY WATER TO PRT & STANDPIPES at 2-M-5.

CAUTION

Exercise caution to prevent overfilling of the PRT

- [11] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, at 2-M-5, to the OPEN position to begin filling the PRT with Primary Makeup Water. _____
- [12] **VERIFY** the following when PRT level increases to approximately 68%, as indicated on 2-LI-68-300, PRT LEVEL:
- A. Annunciator Window 88-B, PRT LEVEL HI/LO, at 2-XA-55-5A on 2-M-5, is CLEAR. _____
 - B. Unit 2 Events Display Legend indicates 88-B PRT LEVEL LO (LS-68-300 B/A), is NORMAL _____
 - C. Annunciator Window 300E, PRT LEVEL HI/LO, at 2-XA-55-L10, is CLEAR at 2-L-10. _____
- [13] **VERIFY** PRT pressure at 2-PI-68-301, RCS PRT PRESS, remains at approximately 3 psig after PRT level increases to approximately 70%, as indicated on 2-LI-68-300, PRT LEVEL. _____
- [14] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the CLOSE position to stop filling PRT when PRT level is approximately 75%, as indicated on 2-LI-68-300, PRT LEVEL. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 80 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.7 PRT Spray Header Flow Rate and Annunciators Functional Test
(continued)**

CAUTION

Closely monitor PRT pressure to ensure PRT pressure does NOT exceed 68 psig. Rupture Disc Release Pressure Range is 86-100 psig.

NOTES

- 1) Step 6.7[16]B should be performed slowly as the PRT PRESS HI alarm setpoint of 8 psig is approached allowing for accurate recording of alarm and the CLOSURE of 2-PCV-68-301, PRT VENT TO WDS VENT HDR.
- 2) During performance of the next step, visual observation of transient and steady state piping vibration is required.

[15] **RECORD** actual rupture disc release pressure from nameplate data in WO 110737937. _____

Rupture Disc Release Pressure _____ psig

[16] **PRESSURIZE** the PRT to 52 psig (52 - 54 psig) from temporary source of control air as follows:

- A. **OPEN** 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT. _____
- B. **THROTTLE OPEN** the temporary control air supply valve installed at 2-VTV-68-573 PRESSURIZER RELIEF TANK VENT upstream flange and begin pressurizing the PRT. _____
- C. **VERIFY** Annunciator Window 88-C, PRT PRESS HI, at 2-XA-55-5A, ALARM **AND**

2-PCV-68-301, PRT VENT TO WDS VENT HDR CLOSURE **AND**

RECORD PRT Pressure at 2-PI-68-301, PRT PRESS, on 2-M-4. (**ACC CRIT**) _____

_____ psig

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 81 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.7 PRT Spray Header Flow Rate and Annunciators Functional Test
(continued)**

- D. **CLOSE** the control air supply valve and 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT, when the PRT is pressurized to 52 psig (52 - 54 psig) **AND**

RECORD PRT Pressure at 2-PI-68-301, PRT PRESS, on 2-M-4. _____

_____ psig

CAUTION

Closely monitor PRT pressure to ensure PRT pressure does not exceed 68 psig during performance of Steps 6.7[17], 6.7[18], and 6.7[21].

NOTE

During performance of the next step, visual observation of transient and steady state piping vibration is required.

- [17] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the OPEN position to continue filling PRT to approximately 80% not exceeding 90% level or when Annunciator Window 88-B at 2-XA-55-5A on 2-M-5 is in ALARM. _____

- [18] **RECORD AND VERIFY** indicated flow on the ultrasonic flow meter is ≥ 150 GPM. **(ACC CRIT)** _____

_____ GPM (≥ 150 gpm)

M&TE _____ Cal Due Date _____

- [19] **RECORD AND VERIFY** PRT Pressure at 2-PI-68-301, PRT PRESS, on 2-M-4 is ≥ 50 psig. **(ACC CRIT)** _____

_____ psig (≥ 50 psig)

- [20] **IF** PRT Pressure at 2-PI-68-301, PRT PRESS on 2-M-4 reaches 68 psig **THEN**

OPEN temporary control air supply valve at 2-VTV-68-573 to lower PRT Pressure below 68 psig. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 82 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.7 PRT Spray Header Flow Rate and Annunciators Functional Test
(continued)**

[21] **PLACE** Handswitch 2-HS-68-303A, PRI WATER TO PRT, to the CLOSE position to stop filling PRT when PRT level is approximately 80% not exceeding 90% level as indicated on 2-LI-68-300, PRT LEVEL or when Annunciator Window 88-B at 2-XA-55-6A on 2-M-5 is in ALARM, or when piping vibration and flow data are taken, whichever occurs first. _____

[22] **VERIFY** the following: (**ACC CRIT**)

- A. Annunciator Window 88-B, PRT LEVEL HI/LO, at 2-XA-55-5A on 2-M-5, is in ALARM. _____
- B. Unit 2 Events Display Legend indicates 88-B PRT LEVEL HI (LS-68-300 A/B), in ALARM _____
- C. Annunciator Window 300E, PRT LEVEL HI/LO, in ALARM _____

CAUTION

Adequate Ventilation and Oxygen Monitoring Capabilities must exist in Containment during PRT Venting Operations.

[23] **ESTABLISH** a well ventilated area near 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT. _____

[24] **OPEN** 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT.

[25] **SLOWLY OPEN** the temporary vent valve at 2-VTV-68-573 PRESSURIZER RELIEF TANK VENT upstream flange and begin depressurizing the PRT to 5.0 ± 1 psig, as indicated on 2-PI-68-301, PRT PRESS, **THEN**

CLOSE 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT. _____

[26] **VERIFY** the following:

- A. Annunciator Window 88-C, PRT PRESS HI, is CLEAR _____
- B. 2-PCV-68-301, PRESSURIZER RELIEF TANK VENT HEADER CNTL, is OPEN by light indication at 2-HS-68-301A, PRT VENT TO WDS VENT HDR, at 2-M-5. (**ACC CRIT**) _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 83 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.7 PRT Spray Header Flow Rate and Annunciators Functional Test
(continued)**

CAUTION

During draining of the PRT, ensure that a minimum positive pressure is maintained in the PRT. This pressure should be maintained from 1-3 psig.

- [27] **PLACE** 2-HS-68-310A, PRT DRAIN TO RCDT, to the OPEN position, to lower PRT level to approximately 70% (68% - 72%) as indicated on 2-LI-68-300, PRT LEVEL, **THEN**

PLACE 2-HS-68-310A, PRT DRAIN TO RCDT to the CLOSE position. _____

- [28] **VERIFY** PRT pressure at 2-PI-68-301, RCS PRT PRESS, is maintained between 1 and 3 psig **AND**

RECORD the pressure _____ psig (**ACC CRIT**) _____

- [29] **VERIFY** the following:

- A. Annunciator Window 88-B, PRT LEVEL HI/LO, at 2-XA-55-5A on 2-M-5, is CLEAR. _____
- B. Unit 2 Events Display Legend indicates 88-B PRT LEVEL HI (LS-68-300 A/B), is NORMAL _____
- C. Annunciator Window 300E, PRT LEVEL HI/LO, is CLEAR. _____

- [30] **REMOVE** the ultrasonic flow meter. _____

1st

CV

- [31] **REMOVE** temporary instrument air supply connected to the PRT vent flange at 2-VTV-68-573, PRESSURIZER RELIEF TANK VENT **AND**

REINSTALL blind flange on the PRT vent line at 2-VTV-68-573.

1st

CV

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 84 of 98 |
|-----------------------|--------------------------------|---|

Date _____

**6.7 PRT Spray Header Flow Rate and Annunciators Functional Test
(continued)**

- [32] **VERIFY** no excessive vibration of piping system and components associated with the performance of this Subsection was observed. _____
- [33] **PERFORM** a purge of the Reactor Coolant Drain Tank (RCDT) using 2-TOP-77-01, Liquid Waste System (Purging RCDT). _____
- [34] **PERFORM** a purge of the Pressurizer Relief Tank (PRT) using 2-TOP-68-01, RCS Pressurizer Relief Tank Operation. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 85 of 98 |
|-----------------------|--------------------------------|---|

Date _____

6.8 PRT High Temperature Alarm Functional Test

- [1] **VERIFY** prerequisites listed in Section 4.0 for this Subsection have been completed. _____
- [2] **VERIFY** Annunciator Window 88-D, PRT TEMP HI, at 2-XA-55-5A, is CLEAR. _____
- [3] **LIFT** black lead (wire 19B1) at 2-R-19 on Terminal Board 19B on Terminal Point 1. _____

1st

CV
- [4] **VERIFY** Annunciator Window 88-D, PRT TEMP HI, is in ALARM. (**ACC CRIT**) _____
- [5] **LAND** black lead (wire 19B1) at 2-R-19 on Terminal Board 19B on Terminal Point 1. _____

1st

CV
- [6] **VERIFY** Annunciator Window 88-D, PRT TEMP HI, is CLEAR. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 86 of 98 |
|-----------------------|--------------------------------|---|

Date _____

7.0 POST PERFORMANCE ACTIVITY

NOTE

Post-performance steps may be performed in any order unless otherwise stated and should be completed as close in time as practicable to the end of the instruction performance

[1] **NOTIFY** the Unit 2 US/SRO of the test completion and system alignment. _____

[2] **VERIFY** that Post-test calibration of the M&TE used to record quantitative acceptance criteria has been satisfactorily performed, and _____

RECORD the results on Measuring and Test Equipment (M&TE) Log. _____

[3] **VERIFY** that Post-test calibration of permanent plant instruments used to record quantitative acceptance criteria has been satisfactorily performed **AND** _____

RECORD the results on Appendix C, Permanent Plant Instrumentation Log. _____

[4] **REMOVE** Test Switch #1 (TS-1) between terminal TB611-8 and white wire RBA6, in SSPS Train A output cabinet 2-R-48. _____

1st

CV

[5] **LAND** white field wire RBA6 from terminal TB611-7, in SSPS Train A output cabinet 2-R-48. _____

1st

CV

[6] **REMOVE** Test Switch #2 (TS-2) between terminal TB611-11 and white wire RBH10, in SSPS Train A output cabinet 2-R-48. _____

1st

CV

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 87 of 98 |
|-----------------------|--------------------------------|---|

Date _____

7.0 POST PERFORMANCE ACTIVITY (continued)

- [7] **LAND** white field wire RBH10 from terminal TB611-11, in SSPS Train A output cabinet 2-R-48.

1st

CV

- [8] **REMOVE** Test Switch #3 (TS-3) between terminal TB611-7 and white wire RBB10, in SSPS Train B output cabinet 2-R-51.

1st

CV

- [9] **LAND** white field wire RBB10 from terminal TB611-8, in SSPS Train B output cabinet 2-R-51.

1st

CV

- [10] **REMOVE** plastic screws and washers on the field terminals in SSPS Output Cabinets and land wires AND

DOCUMENT per SMP-15.0: _____

| Terminal Board | Terminal Point | SSPS Cabinet | Initial | CV |
|----------------|----------------|--------------|---------|----|
| TB611 | 7 | 2-R-48 | | |
| TB611 | 8 | 2-R-48 | | |
| TB611 | 11 | 2-R-48 | | |
| TB611 | 12 | 2-R-48 | | |
| TB611 | 7 | 2-R-51 | | |
| TB611 | 8 | 2-R-51 | | |

- [11] **REMOVE** the blank that was installed in step 4.3[16]. _____

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 88 of 98 |
|-----------------------|--------------------------------|---|

Date _____

7.0 POST PERFORMANCE ACTIVITY (continued)

- [12] **DISCONNECT** Test Switch #4 in series completely from wire RBA12 at terminal 2 of TB 106 at 2-R-54.

1st

CV

- [13] **LAND** wire RBA12 to terminal 2 of TB 106 at 2-R-54.

1st

CV

| | | |
|-----------------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 89 of 98 |
|-----------------------------|--------------------------------|---|

Date _____

8.0 RECORDS

A. QA Records

Completed Test Package (PTI)

B. Non-QA Records

None

| | | |
|-----------------------|--------------------------------|---|
| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 90 of 98 |
|-----------------------|--------------------------------|---|

**Appendix A
(Page 1 of 1)**

TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Date _____

| NOTES |
|---|
| 1) Additional copies of this table may be made as necessary. |
| 2) Initial and date indicates review has been completed for impact. |

| PROCEDURE/ INSTRUCTION | REVISION/CHANGES | IMPACT Yes/No | INITIAL AND DATE. (N/A for no change) |
|--|-------------------------|--------------------------|--|
| Unit 2 FSAR - Amendment 109 Section 5.5.11 Chapter 14 Table 14.2-1 Sheets 88 of 89 | | | |
| 2-TSD-68-4, Pressurizer Relief Tank (PRT) | | | |
| 2-TSD-88-5, Containment Isolation System | | | |
| SSD-2-LPP-68-301, RCS PRT Press | | | |
| SSD-2-LPP-68-311C, RCS PRT Pressure | | | |
| SSD-2-LPL-68-312C, RCS PRT Level | | | |
| 2-TOP-68-01, RCS Pressurizer Relief Tank Operation [Later] | | | |
| 2-TOP-77-01, Liquid Waste System Purging RCDT [Later] | | | |
| 2-TOP-81-01, Primary Makeup Water System | | | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 92 of 98 |
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**Appendix C
(Page 1 of 1)**

PERMANENT PLANT INSTRUMENTATION LOG

Date _____

| INSTRUMENT OR INSTRUMENT LOOP # | CAL DUE DATE | FILLED AND VENTED ¹ | PLACED IN SERVICE ¹ | USED FOR QUANTITATIVE ACC CRIT | | POST-TEST CAL DATE ² | POST-TEST CALIBRATION ACCEPTABLE ² INITIAL/DATE |
|--|-----------------|-----------------------------------|-----------------------------------|--------------------------------------|----|------------------------------------|---|
| | | INIT/DATE | INIT/DATE | YES | NO | | |
| 2-LPL-68-300 | | | | | | | |
| 2-LPL-68-312C | | | | | | | |
| 2-LPP-68-301 | | | | | | | |
| 2-LPP-68-311C | | | | | | | |
| 2-LPT-68-309 | | | | | | | |
| 2-LPP-68-304 | | | | | | | |
| | | | | | | | |
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¹ These items may be initialed and dated by personnel performing the task. Instrumentation not required to be filled and vented may be identified as Not Applicable. (N/A)

² May be identified as Not Applicable (N/A) if instrument was not used to verify/record quantitative acceptance criteria data.

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 93 of 98 |
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**Appendix D
(Page 1 of 1)**

SWITCH LINEUP

Date _____

| SWITCH NUMBER | SWITCH LOCATION | NOMENCLATURE | POSITION | VERIFIED BY INITIAL/DATE |
|------------------|--------------------|---------------------------------|----------|-----------------------------|
| 2-HS-68-307C | 2-L-10 | RCS FLOW CNTL VLV WDS GA TO PRT | CLOSE | |
| 2-HS-68-308C | 2-L-10 | RCS FLOW CNTL VLV WDS GA TO PRT | CLOSE | |
| 2-HS-68-305C | 2-L-10 | N2 SUPPLY TO PRT | CLOSE | |
| 2-HS-68-301C | 2-L-10 | RC PRESSURIZER RELIEF TANK | CLOSE | |
| 2-HS-68-303C | 2-L-10 | PRIMARY WATER TO PRT | CLOSE | |
| 2-HS-68-310C | 2-L-10 | RCS FLOW CNTL PRT TO WDS RCDT | CLOSE | |
| 2-XS-68-307 | 2-L-11A | PRT TO GAS ANALYZER | NOR | |
| 2-XS-68-308 | 2-L-11B | PRT TO GAS ANALYZER | NOR | |
| 2-XS-68-305 | 2-L-11A | N2 SUPPLY TO PRT | NOR | |
| 2-XS-68-301 | 2-L-11A | PRT VENT PCV TO WDS VENT HDR | NOR | |
| 2-XS-68-303 | 2-L-11B | PRIMARY WATER TO PRT | NOR | |
| 2-XS-68-310 | 2-L-11A | PRT DRAIN FCV TO RCDT | NOR | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 94 of 98 |
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**Appendix E
(Page 1 of 5)**

VALVE LINEUP

Date _____

| VALVE NUMBER | NOMENCLATURE | LOCATION EL/COL | POSITION | INITIAL/DATE |
|---------------------|--|------------------------|-----------------|---------------------|
| 2-DRV-68-584 | CVCS LETDOWN RELIEF DISCH DRAIN | 702/AZ060 | CLOSED | |
| 2-DRV-68-605 | CVCS LETDOWN RELIEF DISCH DRAIN | 702/AZ060 | CLOSED | |
| 2-FCV-68-310 | PRESSURIZER RELIEF TANK TO RCDT | 702/AZ083 | CLOSED | |
| 2-RTV-68-451A | 2-PT-68-301 ROOT | 712/AZ089 | OPEN | |
| 2-RTV-68-452A | 2-LT-68-300 ROOT | 704/AZ089 | OPEN | |
| 2-ISV-68-572 | PRESSURIZER RELIEF TANK NITROGEN SUPPLY ISOL | 715/AZ089 | OPEN | |
| 2-VTV-68-4 | VACUUM REFILL CONN | 717/AZ89 | CLOSED | |
| 2-VTV-68-573 | PRESSURIZER RELIEF TANK VENT | 718/AZ095 | CLOSED | |
| 2-ISV-68-574 | PRESSURIZER RELIEF TANK GAS ANALYZER SUP ISOL | 716/AZ090 | CLOSED | |
| 2-PCV-68-301 | PRESSURIZER RELIEF TANK VENT HEADER CNTL | 716/AZ090 | INSTALLED | |
| 2-FCV-68-303 | PRESSURIZER RELIEF TANK PRIMARY WATER SUPPLY | 717/AZ090 | CLOSED | |
| 2-FCV-68-307 | PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY | 724/AZ312 | CLOSED | |
| 2-FCV-68-308, | PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY | 722/AZ318 | CLOSED | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 95 of 98 |
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**Appendix E
(Page 2 of 5)
VALVE LINEUP**

Date _____

| VALVE NUMBER | NOMENCLATURE | LOCATION EL/COL | POSITION | INITIAL/DATE |
|---------------------|---|------------------------|-----------------|---------------------|
| 2-DRV-68-583 | RHR PUMP SUCTION HEADER RELIEF DISCH DRAIN | 719/AZ300 | OPEN | |
| 2-ISV-68-1115 | PRESSURIZER TANK N2 HDR ISOL | 721/AZ280 | OPEN | |
| 2-TV-68-850 | PRESSURIZER TANK N2 HDR TEST VENT | 723/AZ280 | CLOSED | |
| 2-TV-68-848 | PRESSURIZER TANK N2 HDR TEST VENT | 719/AZ280 | CLOSED | |
| 2-ISV-81-501 | CNTM ISOLATION BLOCK VALVE | 730/AZ300 | OPEN | |
| 2-RFV-62-662 | CVCS LETDOWN HEADER RELIEF | IC/713 AZ55 | INSTALLED | |
| 2-RFV-74-505 | RHR PUMP SUCTION HDR RELIEF | IC/719 AZ304 | INSTALLED | |
| 2-TV-68-556 | SAFETY INJ SYS RELIEF DISCH TEST VENT | IC/728 AZ301 | CLOSED | |
| 2-TV-68-560 | SAFETY INJ SYS RELIEF DISCH TEST VENT | IC/728 AZ301 | CLOSED | |
| 2-TV-68-561 | SAFETY INJ SYS RELIEF DISCH TEST VENT | IC/728 AZ301 | CLOSED | |
| 2-TV-68-562 | SAFETY INJ SYS RELIEF DISCH TEST CONN ISOL | IC/728 AZ301 | CLOSED | |
| 2-TV-68-601 | SAFETY INJ SYS RELIEF DISCH TEST VENT | IC/728 AZ301 | CLOSED | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 96 of 98 |
|-----------------------|--------------------------------|---|

**Appendix E
(Page 3 of 5)**

VALVE LINEUP

Date _____

| VALVE NUMBER | NOMENCLATURE | LOCATION EL/COL | POSITION | INITIAL/DATE |
|---------------------|--|------------------------|-----------------|---------------------|
| 2-TV-68-602 | SAFETY INJ SYS RELIEF DISCH TEST CONN ISOL | IC/728 AZ301 | CLOSED | |
| 2-RFV-62-636 | CVCS SEAL WTR RETURN HEADER RELIEF | IC/729 AZ280 | INSTALLED | |
| 2-FSV-68-396 | REACTOR VESSEL HEAD VENT | IC/742 AZ60 | CLOSED | |
| 2-FSV-68-397 | REACTOR VESSEL HEAD VENT | IC/742 AZ63 | CLOSED | |
| 2-PCV-68-340A-A | PRESSURIZER PORV | IC/786 AZ105 | CLOSED | |
| 2-PCV-68-334 | PRESSURIZER PORV | IC/786 AZ105 | CLOSED | |
| 2-PCV-68-304 | PRESSURIZER RELEIF TANK NITROGEN SUP PRESS CNTL | 713/A11W | OPERABLE | |
| 2-RFV-68-563 | PRESSURIZER SAFETY VALVE | IC/780 AZ105 | INSTALLED | |
| 2-RFV-68-564 | PRESSURIZER SAFETY VALVE | IC/780 AZ103 | INSTALLED | |
| 2-RFV-68-565 | PRESSURIZER SAFETY VALVE | IC/780 AZ101 | INSTALLED | |
| 2-VTV-68-570 | PRESSURIZER SAFETY VLV VENT | IC/780 AZ100 | CLOSED | |
| 2-RFV-62-505 | CHARGING PUMP SUCTION HDR RELIEF | 692/A5U | INSTALLED | |
| 2-RFV-62-1221 | CCP 2A-A SUCTION RELIEF | 704/A5U | INSTALLED | |
| 2-RFV-62-1222 | CCP 2B-B SUCTION RELIEF | 704/A5U | INSTALLED | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 97 of 98 |
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**Appendix E
(Page 4 of 5)**

VALVE LINEUP

Date _____

| VALVE NUMBER | NOMENCLATURE | LOCATION EL/COL | POSITION | INITIAL/DATE |
|---------------------|---|------------------------|-----------------|---------------------|
| 2-RFV-63-511 | SAFETY INJECTION PUMP 2A-A RELIEF | 699/A5V | INSTALLED | |
| 2-RFV-63-835 | RHR HX 2B-B OUTLET TO SI PUMP SUCTION RELIEF | 702/A5V | INSTALLED | |
| 2-VTV-63-638 | SIS RELIEF VALVE DISCHARGE HEADER VENT | 730/A5V | CLOSED | |
| 2-FCV-68-305 | PRESSURIZER RELIEF TANK NITROGEN SUP FLOW CNTL | 716/A5W | OPEN | |
| 2-TV-68-847 | PRESSURIZER TANK N2 HDR TEST VENT | 716/A4W | CLOSED | |
| 2-RTV-68-307A | TO PCV-68-304 | 716/A5W | OPEN | |
| 2-ISV-77-593 | RCDT VENT HEADER ISOL | 713/A11W | CLOSED | |
| 2-ISV-77-591 | RCDT VENT HEADER ISOL | 716/AZ280 | CLOSED | |
| 2-ISV-77-503 | RCDT VENT HEADER ISOL | 702/AZ275 | OPEN | |
| 2-ISV-77-846 | PRESSURIZER TANK N2 HDR ISOL | 713/A11W | CLOSED | |
| 2-RFV-63-028 | PENET X-30 PRESSURE RELIEF | 713/A12W | INSTALLED | |
| 2-RFV-63-535 | SIS PUMP COLD LEG INJ LINE DISCH RELIEF | 720/A5W | INSTALLED | |

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| WBN Unit 2 | Pressurizer Relief Tank | 2-PTI-068-04 Rev. 0000 Page 98 of 98 |
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**Appendix E
(Page 5 of 5)
VALVE LINEUP**

Date _____

| VALVE NUMBER | NOMENCLATURE | LOCATION EL/COL | POSITION | INITIAL/DATE |
|---------------------|--|------------------------|-----------------|---------------------|
| 2-RFV-63-536 | SIS PUMP 2B-B HOT LEG INJ LINE DISCH RELIEF | 720/A5W | INSTALLED | |
| 2-RFV-63-637 | RHR TO HOT LEG 1 & 3 INJ LINE RELIEF | 726/A5W | INSTALLED | |
| 2-RFV-63-626 | RHR TO COLD LEG 2 & 3 INJ RELIEF | 730/A11W | INSTALLED | |
| 2-RFV-63-627 | RHR TO COLD LEG 1 & 4 INJ RELIEF | 730/A11W | INSTALLED | |
| 2-RFV-63-534 | SIS PUMP COLD LEG INJ LINE DISCH RELIEF | 713/A11W | INSTALLED | |