



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-15-135

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ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2  
Construction Permit No. CPPR-92  
NRC Docket No. 50-391

Subject: **Watts Bar Nuclear Plant (WBN) Unit 2 - Submittal of Pre-operational Test Instructions**

The approved WBN Unit 2 Pre-operational Test Instructions (PTIs) listed below are enclosed.

PTI NUMBER	Rev.	TITLE
2-PTI-262-01	0	Train 2A Unit 2 Integrated Safeguards Test
2-PTI-262-02	0	Unit 2 Integrated Safeguards Test Train 2B

There are no new regulatory commitments associated with this submittal. If you have any questions, please contact Nick Welch at (423) 365-7820.

Respectfully,

J. W. Shea  
Vice President, Nuclear Licensing

Enclosure: Watts Bar Nuclear Plant, Unit 2 Preoperational Test Instructions

cc: (Enclosure)

Regional Administrator, Region II  
Senior Resident Inspector, WBN U2

Enclosure

Watts Bar Nuclear Plant

Unit 2 Preoperational Test Instructions

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

**TITLE:** Train 2A Unit 2 Integrated Safeguards Test

**Instruction No:** 2-PTI-262-01

**Revision No:** 0000

**PREPARED BY:** Diervel L. Wade Jr.  **DATE:** 7/12/13  
PRINT NAME / SIGNATURE

**REVIEWED BY:** David Wiggins  **DATE:** 7/12/13  
PRINT NAME / SIGNATURE

**INSTRUCTION APPROVAL**

**JTG MEETING No:** 2-15-045

**JTG CHAIRMAN:** 

**DATE:** 6/24/15

**APPROVED BY:** 

**DATE:** 6/24/15

PREOPERATIONAL STARTUP MANAGER

**TEST RESULTS APPROVAL**

**JTG MEETING No:** \_\_\_\_\_

**JTG CHAIRMAN:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

PREOPERATIONAL STARTUP MANAGER

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 2 of 591</b>
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### Revision Log

<b>Revision or Change Number</b>	<b>Effective Date</b>	<b>Affected Page Numbers</b>	<b>Description of Revision/Change</b>
0000	<b>6/24/15</b>	All	Initial Issue. Reviewed U-1 PTI, TDN's, and CN's. Review showed no specific changes required although some of the same issues could be encountered such as component manipulation errors, component failures, fuses not properly installed. This review was performed after procedure development and several of the issues were already addressed during procedure development and therefore were not specifically incorporated as part of the U-1 test review. TDN-94-2082 addressed the CS water hammer and the lessons learned have been incorporated into this procedure by starting the CS pump with the RWST recirc closed and then opening the valve.



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## **1.0 INTRODUCTION**

### **1.1 Purpose**

- A. Provide detailed steps to demonstrate proper automatic actuation, alignment, and operation, including bus stripping and load sequencing, of Diesel Generator 2A-A and Train 2A-A Load Group components controlled by Engineered Safety Features Actuation System (ESFAS) with and without offsite power.
- B. Demonstrate electrical independence between redundant load groups by verification of actuated trained components.
- C. Demonstrate operability and reliability of Diesel Generator, 2A-A, including proper starting and dynamic response to loss of loads and to load sequencing.
- D. Demonstrate safety related loads will automatically and manually transfer to onsite standby diesel from normal or alternate supply and from diesel generator back to normal or alternate supply.

### **1.2 Scope**

- A. Proper automatic actuation, alignment and operation, including bus stripping and load sequencing, of ESF components controlled by Engineered Safety Features Actuation System (ESFAS) is demonstrated by the following:
  - 1. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, with offsite power available.
  - 2. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, including Diesel Generator start and sequencing of loads, when offsite power is NOT available.
  - 3. Components actuated by an ESFAS signal remain in actuated condition after reset of initiating signal.
- B. Operability and reliability of Diesel Generator 2A-A, including proper starting and dynamic response to load sequencing, is demonstrated by the following:
  - 1. Diesel Generator 2A-A automatically starts and achieves equal to or greater than 6800 VAC and 58.8 HZ in less than or equal to 10 seconds after receipt of an emergency start signal, with offsite power available.

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## 1.2 Scope (continued)

2. Diesel Generator 2A-A automatically starts and output breaker closes in less than or equal to 10 seconds after receipt of start signal, when offsite power is NOT available.
  3. Diesel Generator 2A-A maintains output voltage and frequency equal to or greater than 5213 VAC and 57 HZ respectively during load sequencing.
  4. Diesel Generator 2A-A restores output voltage and frequency to a band of 6950 (6255-7645) VAC and 60 (58.8-61.2) HZ respectively, in less than or equal to 3 seconds, following each step load increase during load sequencing.
  5. Diesel Generator 2A-A maintains steady state voltage and frequency at 6950 (6800-7260) VAC and 60 (59.8-60.1) HZ respectively.
  6. Diesel Generator 2A-A auto connected loads are less than or equal to 4.4 MW.
  7. Diesel Generator 2A-A capability to supply emergency loads is demonstrated NOT to be impaired during performance of periodic testing (operating in parallel with offsite power) when a Safety Injection (SI) signal overrides testing.
  8. Diesel Generator 2A-A non-emergency protective trips are bypassed while operating in Emergency Run Mode.
  9. Diesel Generator 2A-A is synchronized with offsite power while loaded with emergency loads, loads are transferred to offsite power, and diesel is restored to normal standby alignment.
- C. Power supply to safety related loads automatically and manually transfers to onsite (standby) diesel units from normal or alternate supply, and manually transfers from diesel generator units back to normal or alternate supply.

## 2.0 REFERENCES

### 2.1 Performance References

#### 2.1.1 Procedures/Instruction References

- A. 2-SOI-2&3.01, Condensate and Feedwater
- B. 2-SOI-3.02, Auxiliary Feedwater System.

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### **2.1.1 Procedures/Instruction References (continued)**

- C. 0-SOI-26.01, High Pressure Fire Protection System
- D. 2-SOI-30.02, Containment Purge System.
- E. 2-SOI-30.03, Containment HVAC and Pressure Control.
- F. 2-SOI-30.04, Incore Instrument Room Air Cooling System.
- G. 0-SOI-30.05, Auxiliary Bldg HVAC Systems.
- H. 0-SOI-30.06, Auxiliary Building Gas Treatment System.
- I. 0-SOI-30.07, Shutdown Board Rooms HVAC el 757 & 772.
- J. 2-SOI-30.08, Containment Air Return Fans.
- K. 0-SOI-31.01, Control Building HVAC System.
- L. 0-SOI-32.01, Control Air System.
- M. 0-SOI-32.02, Auxiliary Air System
- N. 2-SOI-41.02 through 41.05, Steam Generator N<sub>2</sub> Sparging, Pressurization, & Draining Loops 1 - 4.
- O. 0-SOI-61.01, Ice Condenser System.
- P. 2-SOI-62.01, CVCS - Charging and Letdown System.
- Q. 2-SOI-63.01, Safety Injection System.
- R. 2-SOI-65.01, Annulus Vacuum System.
- S. 0-SOI-65.02, Emergency Gas Treatment System.
- T. 0-SOI-67.01, Essential Raw Cooling Water System.
- U. 0-SOI-70.01, Component Cooling Water System(CCS)
- V. 2-SOI-72.01, Containment Spray System.
- W. 2-SOI-74.01, Residual Heat Removal System.
- X. 0-SOI-78.01, Spent Fuel Pool Cooling and Cleaning System.
- Y. 0-SOI-81.01, Primary Makeup Water System.

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### **2.1.1 Procedures/Instruction References (continued)**

- Z. 0-SOI-82.01, Diesel Generator (DG) 1A-A.
- AA. 0-SOI-82.03, Diesel Generator (DG) 2A-A.
- BB. 0-SI-82-2, 8 Hour Diesel Generator AC Power Source Operability Verification
- CC. 0-SI-82-9, Diesel Generator Start History
- DD. 0-SOI-90.02, Gaseous Process Radiation Monitors.
- EE. 0-SOI-90.05, Post-Accident Radiation Monitors.
- FF. 0-SOI-211.01, 6.9KV Shutdown Board 1A-A
- GG. 0-SOI-211.02, 6.9KV Shutdown Board 1B-B
- HH. 2-SOI-211.03, 6.9KV Shutdown Board 2A-A.
- II. 2-SOI-211.04, 6.9KV Shutdown Board 2B-B.
- JJ. 2-SOI-212.05, 480 V Shutdown Board 2A1-A.
- KK. 2-SOI-212.06, 480 V Shutdown Board 2A2-A.
- LL. 2-SOI-213.05, 480V Reactor MOV Board 2A1-A.
- MM. 2-SOI-213.06, R0, 480V Reactor MOV Board 2A2-A.
- NN. 2-SOI-214.05, R0, 480V C & A Vent Board 2A1-A.
- OO. 2-SOI-214.06, 480V C & A Vent Board 2A2-A.
- PP. 0-SOI-215.05, 480V Diesel Aux Board 2A1-A.
- QQ. 0-SOI-215.06, 480V Diesel Aux Board 2A2-A.
- RR. 2-SOI-232.03, 480V Reactor Vent Board 2A-A.
- SS. 0-SOI-236.01, 125V DC Vital Battery BD I
- TT. 0-SOI-236.02, 125V DC Vital Battery BD II
- UU. 0-SOI-236.03, 125V DC Vital Battery BD III
- VV. 0-SOI-236.04, 125V DC Vital Battery BD IV

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### **2.1.1 Procedures/Instruction References (continued)**

WW. 1-SOI-235.01, 120V AC Vital Power System 1-I

XX. 1-SOI-235.02, 120V AC Vital Power System 1-II

YY. 1-SOI-235.03, 120V AC Vital Power System 1-III

ZZ. 1-SOI-235.04, 120V AC Vital Power System 1-IV

AAA. 2-SOI-235.05, 120V AC Vital Power System 2-I

BBB. 2-SOI-235.06, 120V AC Vital Power System 2-II

CCC. 2-SOI-235.07, 120V AC Vital Power System 2-III

DDD. 2-SOI-235.08, 120V AC Vital Power System 2-IV

EEE. SOI-237.01, 120V AC Instrument Power 1A

FFF. SOI-237.02, 120V AC Instrument Power 1B

GGG. 2-SOI-237.03, 120V AC Instrument Power 2A

HHH. 2-SOI-237.04, 120V AC Instrument Power 2B

III. OPDP-8, Limiting Conditions for Operation Tracking.

JJJ. NPG-SPP-10.2, Equipment Clearance Program.

KKK. NPG-SPP-18.4.6, Control of Fire Protection Impairments.

LLL. TI-215, Work Permits.

MMM. 0-TI-226, Motor Starting and Operating Limitations

NNN. 0-PI-OPS-1.1, Jumper Control Process

OOO. SMP-9.0, WATTS BAR NUCLEAR PLANT UNIT 2 CONDUCT OF TEST

PPP. Offsite Dose Calculation Manual (ODCM)

QQQ. 2-PTI-099-03, Reactor Protection System Operational Check

RRR. 2-PTI-099-04, Safeguards System

SSS. 2-PTI-099-08, Safeguards System Test Panel



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### **2.1.1 Procedures/Instruction References (continued)**

TTT. WO 112365432

UUU. WO 116656768

VVV. WO 112208321

WWW. WO 112208324

XXX. WO 112208326

YYY. WO 114332654

### **2.1.2 Drawing References**

- A. 45N1648-3, Rev GG, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-9, Conn Diag
- B. 45N1653-3, Rev Z, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-15, Conn Diag
- C. 45N1659-1, Rev DD, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- D. 45N1659-3, Rev W, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- E. 45N1660-5, Rev X, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27A, Conn Diag
- F. 45N1660-11, Rev BB, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- G. 45N1660-12, Rev HH, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- H. 2-45W2642-1, Rev 1, (CC), Wiring Diag Unit Control Board Panel 2-M-3 Conn Diagram
- I. 2-45N2644-6, Rev 0, (CC), Unit Cont Bd PNL 2-M-5, Conn Diag
- J. 2-45N2645-4, Rev 2, (CC), Unit Cont Bd PNL 2-M-6, Conn Diag
- K. 45N2643-4, Rev 14, (AD), Unit Cont Bd PNL 2-M-6, Conn Diag
- L. 45N2648-3, Rev H, (AC), Unit Cont Bd PNL 2-M-9, Conn Diag
- M. 45N2645-5, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag

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### **2.1.2 Drawing References (continued)**

- N. 45N2645-10, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- O. 55W612-1, Rev M, (AC), Wiring Diagram Elec Control Board Panel 2 Common Sta Serv XFMR B & C
- P. 55W613-5, Rev V, (AC), Wiring Diagram Elec Control Board Panel 3 Common Sta Serv XFMR A & D
- Q. 6947D63, RH, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A 480V 3 PH Substation Connection Conn Diag Unit 2
- R. 6947D66, Rev K, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A 480V 3 PH Substation Connection Conn Diag Unit 2

## **2.2 Developmental References**

### **2.2.1 Unit 2 FSAR, Amendment 113**

- A. FSAR Section 6.3, Emergency Core Cooling System
- B. FSAR Section 7.3, Engineered Safety Features Actuation System
- C. FSAR Section 8.1.5.3, Compliance to Regulatory Guides and IEEE Standards
- D. FSAR Section 8.3, Onsite (Standby) Power System
- E. FSAR Section 14.2.7, Conformance of Test Programs with Regulatory Guides
- F. Table 14.2-1, Sheets 26 and 27 of 89, Integrated Engineered Safety Features Actuation System Test Summary
- G. Table 14.2-1. Sheets 44, 45 and 46 of 89, Diesel Generators Test Summary
- H. Table 14.2-1, Sheets 47, 48 and 49 of 89, AC Power Distribution System Test Summary
- I. 2-TSD-262-1, Rev 1, Test Scoping Document, Integrated Safeguards Test - Train A
- J. 2-TSD-63-1, Rev 3, Test Scoping Document, Integrated ESFAS System Test

### **2.2.2 Drawings**

- A. Flow Diagram

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## 2.2.2 Drawings (continued)

1. 2-47W801-2, R25, (CC), Flow Diagram - Steam Generator Blowdown System
2. 2-47W803-1, R28, (CC), Flow Diagram - Feedwater
3. 2-47W803-2, R26, (CC), Flow Diagram - Auxiliary Feedwater
4. 2-47W809-1, R35, (CC), Flow Diagram - Chemical & Volume Control System
5. 2-47W810-1, R21, (CC), Flow Diagram - Residual Heat Removal System
6. 2-47W811-1, R40, (CC), Flow Diagram - Safety Injection System
7. 2-47W812-1, R26, (CC), Flow Diagram - Containment Spray System
8. 1-47W845-1, R69, (CC), Flow Diagram - Essential Raw Cooling Water System
9. 2-47W845-2, R9, (CC), Flow Diagram - Essential Raw Cooling Water System
10. 2-47W859-1, R17, (CC), Flow Diagram - Component Cooling System
11. 1-47W859-2, R37, (CC), Flow Diagram - Component Cooling System

### B. Electrical Diagram

1. 1-15E500-1, R37, (CC), Key Diagram - Station Aux Power System
2. 1-15E500-2, R52, (CC), Key Diagram - Station Aux Power System
3. 1-15E500-3, R24, (CC), Transformer Taps & Voltage Limits Aux Power System
4. 0-45B2755-2A, R0, (CC), Wiring Diagram 480V Reactor Vent BD 2A-A, Compt 2A
5. 45B2770-9A, RF, (AC), Wiring Diagram 480V C&A Bldg VT BD 2A1-A, Conn Diagram, Compt 9A
6. 45B2770-10C, RL, (AC), Wiring Diagram 480V C&A Bldg VT BD 2A1-A, Conn Diagram, Compt 10C
7. 45N1632-8, RX, (AC), Wiring Diagram Miscellaneous Controls Connection Diagram

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## 2.2.2 Drawings (continued)

8. 45N1688-1, RRR, (AC), Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagrams
9. 45N1688-3, RAAH, (AC), Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagrams
10. 45N1688-4, RAAM, (AC), Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagrams
11. 2-45N2612-2, R0, (CC), Wiring Diagram Turbine Instrumentation & Auxiliaries Connection Diagram
12. 2-45W2614-4, R0, (CC), Wiring Diagram Main Feedwater Pump Turbine Connection Diagram
13. 2-45W2614-8, R0, (CC), Wiring Diagram Main FW Pump & Turbine 2B Connection Diagram
14. 45N2637-1, RN, (AC), Wiring Diagram Aux Control Board - Panel 2-L-10, Connection Diagram
15. 45N2637-9, R6, (AD), Wiring Diagram Aux Control Board - Panel 2-L-10, Connection Diagram
16. 2-45N2637-10, R0, (CC), Wiring Diagram Aux Control Board - Panel 2-L-10, Connection Diagram
17. 45N2680-1, R10, Wiring Diagram NSSS Aux Relay Panel 2-R-54
18. 45N2680-3, R9, Wiring Diagram NSSS Aux Relay Panel 2-R-54
19. 45N2684-1, R7, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
20. 2-45N2684-2, R0, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
21. 45N2684-3, R5, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
22. 45N2684-4, R4, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
23. 45N2686-1, R4, Wiring Diagram Turbo-Gen Aux Relay Panel 2-R-71, Connection Diagram

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24. 45N2686-2, R6, Wiring Diagram Turbo-Gen Aux Relay Panel 2-R-71, Connection Diagram
25. 45N2689-1, R11, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
26. 45N2689-2, R7, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
27. 45N2689-3, R0, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
28. 45N2689-4, R18, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
29. 45N2690-1, R9, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
30. 45N2690-2, R6, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
31. 45N2690-3, R5, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
32. 45N2690-4, R6, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
33. 45N2691-1, R9, (AD), Wiring Diagrams Separation Aux Relay PNL 2-R-76, Conn Diagram
34. 45N2691-4, R7, (AD), Wiring Diagram Separation Aux Relay PNL 2-R-76, Conn Diagram
35. 45N2692-1, RM, (AC), Wiring Diagrams Separation Aux Relay PNL 2-R-77, Connection Diagrams
36. 45N2692-4, RK, (AC), Wiring Diagrams Separation Aux Relay PNL 2-R-77, Connection Diagram
37. 45W2770-1, RAD, (AC), Wiring Diagrams 480V CONT &AUX Bldg VENT BD 2A1-A, Conn Diagrams
38. 2-45W2770-6, R1, (CC), Wiring Diagram 480V C&A Bldg Vt Bd 2A1-A, Conn Diagram

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39. 2-45W600-3-1, R6, (CC), Wiring Diagrams - Main and Aux Feedwater SYS Schematic Diagram
40. 2-45W600-3-2, R5, (CC), Wiring Diagram - Main & Auxiliary Feedwater System Schematic Diagram
41. 2-45W600-3-3, R5, (CC), Wiring Diagram - Main & Auxiliary Feedwater Sys Schematic Diagram
42. 2-45W600-3-4, R6, (CC), Wiring Diagram - Main & Auxiliary Feedwater Sys Schematic Diagram
43. 2-45W600-3-5, R6, (CC), Wiring Diagrams - Main & Auxiliary Feedwater SYS Schematic Diagrams
44. 2-45W600-3-6, R8, (CC), Wiring Diagrams - Main & Aux Feedwater System Schematic Diagram
45. 2-45W600-3-7, R6, (CC), Wiring Diagrams - Main & Aux Feedwater System Schematic Diagram
46. 2-45W600-3-8, R4, (CC), Wiring Diagram - Main & Aux Feedwater Sys Schematic Diagram
47. 2-45W600-3-9, R4, (CC), Wiring Diagrams - Main & Aux Feedwater Sys Schematic Diagram
48. 2-45W600-3-10, R6, (CC), Wiring Diagrams - Main & Aux Feedwater Sys Schematic Diagram
49. 2-45W600-3-11, R4, (CC), Wiring Diagrams - Main and Aux Feedwater Sys Schematic Diagram
50. 2-45W600-3-12, R6, (CC), Wiring Diagrams - Main & Aux Feedwater Sys Schematic Diagram
51. 2-45W600-3-14, R2, (CC), Electrical Wiring Diagrams - Main & Auxiliary Feedwater Sys Schematic Diagram
52. 2-45W600-3-15, R4, (CC), Wiring Diagrams - Main & Auxiliary Feedwater Sys Schematic Diagram
53. 1-45W600-30-4, R38, (CC), Wiring Diagrams - Ventilating System Schematic Diagram

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54. 2-45W600-30-7, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagram
55. 2-45W600-30-8, R7, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
56. 2-45W600-30-9, R4, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
57. 2-45W600-30-11, R4, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
58. 2-45W600-30-12, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
59. 2-45W600-31-1, R3, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
60. 1-45W600-31-2, R27, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
61. 2-45W600-31-7, R3, (CC), Wiring Diagram - Air Conditioning System Schematic Diagram
62. 2-45W600-32, R5, (CC), Wiring Diagrams - Control Air System Schematic Diagrams
63. 2-45W600-43-1, R5, (CC), Wiring Diagrams - Sampling & Water Quality Sys Schematic Diagrams
64. 2-45W600-43-2, R6, (CC), Wiring Diagrams - Sampling & Water Quality Sys Schematic Diagrams
65. 2-45W600-46-6, R6, (CC), Wiring Diagrams - Feedwater Pump & Turbines Schematic Diagrams
66. 2-45W600-46-7, R7, (CC), Wiring Diagrams - Feedwater Pump & Turbines Schematic Diagrams
67. 2-45W600-47-2, R16, (CC), Wiring Diagram - Turbo Generator Auxiliaries Schematic Diagrams
68. 2-45W600-57-1, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams

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69. 2-45W600-57-2, R10, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagram
70. 2-45W600-57-3, R6, (CC), Wiring Diagrams - Separation & Misc Aux Relays Schematic Diagrams
71. 2-45W600-57-4, R11, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagram
72. 2-45W600-57-5, R16, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
73. 2-45W600-57-7, R14, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
74. 2-45W600-57-8, R6, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
75. 2-45W600-57-15, R4, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
76. 2-45W600-57-16, R6, (CC), Wiring Diagrams - Separation & Misc Aux Relays Schematic Diagrams
77. 2-45W600-57-17, R6, (CC), Wiring Diagrams - Separation & Misc Aux Relays Schematic Diagrams
78. 2-45W600-57-18, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
79. 2-45W600-57-19, R4, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
80. 2-45W600-57-22, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
81. 2-45W600-57-23, R7, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
82. 2-45W600-57-25, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
83. 2-45W600-57-26, R9, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams



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84. 2-45W600-57-29, R5, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
85. 2-45W600-57-30, R6, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
86. 2-45W600-57-32, R3, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
87. 2-45W600-57-33, R4 (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
88. 2-45W600-61-1, R5, (CC), Wiring Diagram - Ice Condenser System Schematic Diagrams
89. 2-45W600-62-1, R7, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
90. 2-45W600-62-2, R10, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
91. 2-45W600-62-5, R10, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
92. 2-45W600-63-1, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
93. 2-45W600-65-1, R5, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
94. 2-45W600-65-2, R3, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
95. 2-45W600-65-3, R4, (CC), Wiring Diagram - Emergency Gas Treatment System Schematic Diagram
96. 2-45W600-68-1, R13, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
97. 2-45W600-70, R6, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
98. 2-45W600-74, R5, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams

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99. 2-45W600-77-1, R5, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
100. 2-45W600-77-2, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
101. 1-45W600-77-4, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
102. 2-45W600-77-6, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
103. 2-45W600-81, R6, (CC), Wiring Diagram - Primary Makeup Water System Schematic Diagrams
104. 2-45W600-90-1, R4, (CC), Wiring Diagram - Radiation Monitoring System Schematic Diagrams
105. 2-45W600-99-1, R4, (CC) Wiring Diagram - Reactor Protection System Schematic Diagrams
106. 1-45W700-1, R35, (CC), Key Diagram - 120V AC & 125V DC Vital Plant Control Power System
107. 1-45W700-2, R20, (CC), Key Diagram - 250VDC, 120VAC Preferred, 48VDC & 120VAC Misc Plant Power Sys
108. 1-45W708-1, R26, (CC), Wiring Diagrams Misc 120V AC Distr Panels Connection Diagrams
109. 1-45W724-1, R28, (CC), Wiring Diagrams - 6900V Shutdown Board 1A-A Single Line
110. 1-45W724-2, R29, (CC), Wiring Diagrams- 6900V Shutdown Board 1B-B Single Line
111. 2-45W724-3, R11, (CC), Wiring Diagrams - 6900V Shutdown Board 2A-A Single Line
112. 2-45W724-4, R12, (CC), Wiring Diagram - 6900V Shutdown Board 2B-B Single Line
113. 2-45W732-1, R0, (CC), Wiring Diagrams - 480V Diesel Aux Bd 2A1-A Single Lines

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- 114. 2-45W732-2, R0, (CC), Wiring Diagrams - 480V Diesel Aux Bd 2A2-A  
Single Line
- 115. 2-45W749-1, R10, (CC), Wiring Diagram - 480V Shutdown Bd 2A1-A  
Single Line
- 116. 2-45W749-2, R8, (CC), Wiring Diagrams - 480V Shutdown Bd 2A2-A  
Single Line
- 117. 2-45W751-1, R12, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A1-A  
Single Line SH-1
- 118. 2-45W751-2, R12, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A1-A  
Single Line SH-2
- 119. 2-45W751-3, R14, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A1-A  
Single Line SH-3
- 120. 2-45W751-4, R11, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A2-A  
Single Line SH-1
- 121. 2-45W751-5, R9, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A2-A  
Single Line SH-2
- 122. 2-45W751-6, R6, (CC), Wiring Diagrams - 480V Reac MOV Bd 2A2-A  
Single Line SH-3
- 123. 2-45W755-1, R10, (CC), Wiring Diagram - 480V Reactor Vent Bd 2A-A  
Single Line SH-1
- 124. 2-45W755-2, R3, (CC), Wiring Diagram - 480V Reactor Vent Bd 2A-A  
Single Line SH-2
- 125. 2-45W755-3, R9, (CC), Wiring Diagram - 480V Reactor Vent Bd 2B-B  
Single Line SH-1
- 126. 2-45W755-4, R6, (CC), Wiring Diagram- 480V Reactor Vent Bd 2B-B  
Single Line SH-2
- 127. 2-45W756-1, R3, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd  
2A1-A-Single Line SH-1
- 128. 2-45W756-2, R7, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd  
2A1-A Single Line SH-2

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129. 2-45W756-3, R1, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd  
2A2-A Single Line SH-1
130. 2-45W756-4, R4, (CC), Wring Diagrams - 480V Cont & Aux Bldg Vt Bd  
2A2-A Single Line SH-2
131. 2-45W756-9, R8, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd  
2A1-A Single Line SH-9
132. 2-45W760-2-1, R5, (CC), Wiring Diagram - Condensate System Schematic  
Diagram
133. 2-45W760-2-5, R7, (CC), Wiring Diagram - Condensate System Schematic  
Diagram
134. 2-45W760-3-1, R6, (CC), Wiring Diagram - Main & Aux Feedwater System  
Schematic Diagram
135. 2-45W760-3-6, R7, (CC), Wiring Diagram - Main & Aux Feedwater System  
Schematic Diagram
136. 2-45W760-3-7, R7, (CC), Wiring Diagram - Main & Aux Feedwater System  
Schematic Diagram
137. 1-45W760-26-1, R27, (CC), Wiring Diagram - Hi Press. Fire Protection Sys  
Schematic Diagram
138. 2-45W760-26-5, R3, (CC), Wiring Diagram - Hi Press. Fire Protection Sys  
Schematic Diagram
139. 2-45W760-30-9, R13, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagram SH-9
140. 2-45W760-30-10, R11, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
141. 1-45W760-30-11, R11, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
142. 2-45W760-30-11, R0, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
143. 1-45W760-30-12, R8, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams

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- 144. 2-45W760-30-12, R0, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 145. 2-45W760-30-13, R9, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 146. 1-45W760-30-14, R9, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 147. 2-45W760-30-15, R5, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 148. 2-45W760-30-16, R6, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 149. 2-45W760-30-17, R3, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 150. 2-45W760-30-18, R5, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 151. 2-45W760-30-19, R5, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 152. 2-45W760-30-20, R4, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 153. 1-45W760-30-21, R10, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 154. 2-45W760-30-22, R0, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 155. 2-45W760-30-23, R0, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 156. 2-45W760-30-25, R0, (CC), Wiring Diagrams - Ventilating System  
Schematic Diagrams
- 157. 2-45W760-31-6, R5, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 158. 1-45W760-31-9, R6, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams

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- 159. 1-45W760-31-10, R15, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams SH-10
- 160. 1-45W760-31-13, R13, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 161. 1-45W760-31-14, R15, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 162. 1-45W760-31-15, R17, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 163. 1-45W760-31-16, R7, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 164. 2-45W760-31-17, R2, (CC), Wiring Diagrams - Air Conditioning System  
Schematic Diagrams
- 165. 1-45W760-31-18, R21, (CC), Wiring Diagram - Air Conditioning System  
Schematic Diagram
- 166. 1-45W760-31-19, R20, (CC), Wiring Diagram - Air Conditioning System  
Schematic Diagram
- 167. 1-45W760-31-21, R12, (CC, )Wiring Diagram - Air Conditioning System  
Schematic Diagram
- 168. 1-45W760-32-1, R11, (CC), Wiring Diagrams - Control Air System  
Schematic Diagrams SH-1
- 169. 1-45W760-32-2, R8, (CC), Wiring Diagrams - Control Air System  
Schematic Diagrams SH-2
- 170. 2-45W760-62-1, R8, (CC), Wiring Diagrams - Chemical & Volume Control  
Sys Schematic Diagrams
- 171. 2-45W760-62-2, R12, (CC), Wiring Diagram - Chemical & Volume Control  
Sys Schematic Diagrams
- 172. 2-45W760-62-3, R8, (CC), Wiring Diagrams - Chemical & Volume Control  
Sys Schematic Diagrams
- 173. 2-45W760-62-5, R7, (CC), Wiring Diagrams - Chemical & Volume Control  
Sys Schematic Diagrams

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174. 2-45W760-62-6, R7, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
175. 2-45W760-62-7, R6, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
176. 2-45W760-63-1, R6, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
177. 2-45W760-63-2, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
178. 2-45W760-63-3, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
179. 2-45W760-63-4, R10, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
180. 2-45W760-63-7, R8, (CC), Wiring Diagrams - Safety Injection System Schematic Diagrams
181. 1-45W760-65-1, R13, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
182. 2-45W760-65-2, R4, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagrams
183. 2-45W760-67-3, R0, (CC), Wiring Diagram - Essential Raw Cooling Water Sys Schematic Diagrams
184. 2-45W760-67-4, R0, (CC), Wiring Diagrams - Essential Raw Cooling Water Sys Schematic Diagrams
185. 2-45W760-67-5, R8, (CC), Wiring Diagrams - ERCW System Schematic Diagrams
186. 2-45W760-67-6, R9, (CC), Wiring Diagram - ESSN Raw Cooling Water System Schematic Diagrams
187. 2-45W760-67-7, R6, (CC), Wiring Diagrams - ERCW System Schematic Diagrams
188. 2-45W760-67-8, R6, (CC), Wiring Diagrams - Essential Raw Cooling Water Sys Schematic Diagrams

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189. 2-45W760-67-11, R0, (CC), Wiring Diagram - ERCW System Schematic Diagrams
190. 2-45W760-67-15, R6, (CC), Wiring Diagrams - ERCW System Schematic Diagrams
191. 2-45W760-68-1, R9, (CC), Wiring Diagram - 6900V Reactor Coolant Pump Bds Schematic Diagrams
192. 2-45W760-68-3, R9, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
193. 2-45W760-68-4, R9, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
194. 2-45W760-70-1, R3, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
195. 2-45W760-70-3, R10, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
196. 2-45W760-70-4, R5, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
197. 2-45W760-70-5, R7, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
198. 2-45W760-70-6, R8, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
199. 2-45W760-70-7, R5, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
200. 2-45W760-70-8, R9, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
201. 2-45W760-70-9, R9, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
202. 2-45W760-70-10, R7, (CC), Wiring Diagram - Component Cooling System Schematic Diagrams
203. 2-45W760-72-1, R9, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram



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- 204. 2-45W760-72-2, R8, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram
- 205. 2-45W760-72-4, R5, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram
- 206. 2-45W760-74-1, R9, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagram
- 207. 2-45W760-74-2, R10, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 208. 2-45W760-74-3, R5, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 209. 2-45W760-74-4, R10, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 210. 2-45W760-77-3, R3, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
- 211. 1-45W760-78-1, R7, (CC), Wiring Diagram - Spent Fuel Pit Cooling System Schematic Diagrams
- 212. 2-45W760-81-1, R5, (CC), Wiring Diagram - Primary Makeup Water System Schematic Diagrams
- 213. 1-45W760-82-1B, R11, (CC), Wiring Diagram - 6900V Standby Diesel Generator 2A-A Schematic Diagrams
- 214. 1-45W760-82-2B, R10, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2A-A
- 215. 1-45W760-82-3B, R4, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2A-A
- 216. 1-45W760-82-4B, R8, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2A-A
- 217. 1-45W760-82-5B, R10, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2A-A
- 218. 1-45W760-82-6B, R11, (CC), Wiring Diagram - Stby Diesel Generator System Schematic Diagram DG 2A-A

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## 2.2.2 Drawings (continued)

- 219. 2-45W760-211-1, R0, (CC), Wiring Diagram - 6900V Shutdown Power Schematic Diagram
- 220. 2-45W760-211-2, R0, (CC), Wiring Diagram- 6900V Shutdown Power Schematic Diagram
- 221. 2-45W760-211-3, R0, (CC), Wiring Diagram - 6900V Shutdown Power Schematic Diagram
- 222. 1-45W760-211-4, R25, (CC), Wiring Diagram - 6900V Shutdown Power Schematic Diagram
- 223. 2-45W760-211-5, R0, (CC), Wiring Diagrams - 6900V Shutdown Power Schematic Diagram
- 224. 2-45W760-211-6, R0, (CC), Wiring Diagram - 6900V Shutdown Power -Train A Schematic Diagram
- 225. 2-45W760-211-12, R1, (CC), Wiring Diagrams - 6900V Shutdown Power 2A-A Schematic Diagrams
- 226. 2-45W760-211-13, R0, (CC), Wiring Diagrams - 6900V Shutdown Power 2A-A Schematic Diagrams
- 227. 2-45W760-211-16, R0, (CC), Wiring Diagram - 6900V Shutdown Power Diesel Loading Logic
- 228. 2-45W760-211-17, R0, (CC), Wiring Diagram - 6900V Shutdown Power -Train A and B Schematic Diagram
- 229. 2-45W760-211-18, R0, (CC), Wiring Diagram - 6900V Shutdown Power Schematic Diagram
- 230. 45W760-211-22, R2, (AD), Wir Diag SD Pwr 1A-A & 1B-B Schem
- 231. 2-45W760-211-23, R0, (CC), Wiring Diagram - 6900V SD Power 2A-A Schematic Diagrams
- 232. 2-45W760-212-1, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 233. 2-45W760-212-2, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams

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## **2.2.2 Drawings (continued)**

- 234. 2-45W760-212-3, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 235. 2-45W760-212-4, R1, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 236. 2-45W760-212-4A, R2, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 237. 2-45W760-270-2, R10, (CC), Wiring Diagram - Miscellaneous System Schematic Diagram
- 238. 2-54114-1-7246D11-16, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 239. 2-54114-1-7246D11-17, R1, (CC), Solid State Protection System Interconnection Diagram
- 240. 2-54114-1-7246D11-18, R0, (CC), Electrical Solid State Protection System Interconnection Diagram
- 241. 2-54114-1-7246D11-19, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 242. 2-54114-1-7246D11-20, R2, (CC), Electrical Solid State Protection System Interconnection Diagram
- 243. 2-54114-1-7246D11-21, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 244. 2-54114-1-7246D11-22, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 245. 2-54114-1-7246D11-23, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 246. 2-54114-1-7246D11-24, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 247. 2-54114-1-7246D11-25, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 248. 2-54114-1-7246D11-55, R0, (CC), Electrical Solid State Protection System Interconnection Diagram

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### **2.2.2 Drawings (continued)**

249. C5DGM1405(X1526) A/B3, R3, (MD), Schematic Wiring Diagram - IPCX  
230-0Q with Honeywell (W901A) TLC & DX Chiller 115V 60HZ Control

#### **C. Mechanical**

1. None

#### **D. Logic/Control**

1. None

#### **E. Vendor Drawings**

1. None

### **2.2.3 Vendor Manuals**

- A. None

### **2.2.4 Documents**

#### **A. Plant Operating Instructions and Manuals**

1. None

#### **B. Regulatory Documents**

1. Regulatory Guide 1.9, Rev 3, Selection, Design, Qualification, And Testing Of Emergency Diesel Generator Units Used As Class 1E Onsite Electric Power Systems At Nuclear Power Plants
2. Regulatory Guide 1.41, dated 3/16/73, Preoperational Testing of Redundant On -Site Electric Power Systems to Verify Proper Load Group Assignments
3. Regulatory Guide 1.68, Rev 2, Initial Test Programs for Water - Cooled Nuclear Power Plants
4. NUREG-0847, Supplement 23, Section 14.2.2(3)

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#### **2.2.4 Documents (continued)**

- C. Unit 1 Technical Specifications, Amendment 97, Section 3.8, Electrical Power Systems and associated Surveillance Requirements, & T/S Bases Section 3.3.5
- D. Unit 2 Technical Specifications, Revision H:
  - 1. Section 3.3.5, Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation, Table 3.3.5-1 (page 1 of 1) LOP DG Start Instrumentation, Function 3 and 4 and Table 3.3.2-1 (pages 1-6).
  - 2. Section 3.8, Electrical Power Systems and associated Surveillance Requirements

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#### **2.2.4 Documents (continued)**

##### **E. Miscellaneous Documents**

1. NETP - 100, R3, Emergency Diesel Generator Reliability Program
2. PTI-200-01, AC Auxiliary Power System Survey (Unit 1)
3. PTI-262-01, R0, Integrated Safeguards Test (Unit 1)
4. SMP-9.0, R5, Watts Bar Nuclear Plant Unit 2 Conduct of Test
5. WBN2-3B-4002, R2, Auxiliary Feedwater System
6. WBN2-62-4001, R3, Chemical and Volume Control System
7. WBN2-63-4001, R3, Safety Injection System
8. WBN2-68-4001, R4, Reactor Coolant System
9. WBN2-70-4002, R4, Component Cooling System
10. WBN2-72-4001, R3, Containment Heat Removal System
11. WBN2-74-4001, R5, Residual Heat Removal System
12. WBN2-82-4002, R3, Standby Diesel Generator System
13. WBN2-99-4003, R1, Reactor Protection System
14. 2-27-211-1818E-A, R 0, Nuclear Engineering Setpoint and Scaling Document (NESSD)
15. 2-27-211-1818F-A, R 0, NESSD
16. 2-02-062-108A, R 0, NESSD
17. 2-02-063-10-A, R 0, NESSD
18. 2-02-074-10-A, R 0, NESSD
19. 0-02-067-28-A, R 1, NESSD
20. 0-02-067-32-A, R 1, NESSD
21. 0-02-067-36-A, R 1, NESSD
22. 0-02-067-40-A, R 1, NESSD

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#### 2.2.4 Documents (continued)

- 23. 2-02-003-118-A, R 0, NESSD
- 24. 2-02-070-59-A, R 2, NESSD
- 25. 2-02-070-131B-A, R 1, NESSD
- 26. 2-02-68-341A-A, R 1, NESSD
- 27. 2-02-072-27-A, R 0, NESSD
- 28. 0-02-031-36/2-A, R 0, NESSD
- 29. 2-02-30-38-A, R 0, NESSD
- 30. 0-02-70-51A-A, R 2, NESSD

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### 3.0 PRECAUTIONS AND LIMITATIONS

#### 3.1 Precautions

- A. Shorting of test equipment leads can occur if lifted leads are not adequately taped or otherwise insulated when lifted.
- B. To prevent relays from inadvertent actuation, manual actuation of relays should be made with a nonconductive device.
- C. Manual action to maintain ERCW pressures within normal pressure band, 95 to 110 psig, and below relief valve pressure setpoints on lower Auxiliary Building areas, may be required, including stopping or starting pump(s) on the non-tested shutdown board(s).
- D. Due to the nature of this testing, numerous annunciators will actuate on both units. Annunciators will need to be evaluated and determined if they are a result of testing and addressed as necessary. Communication with Unit 1 is essential during test sequence initiation.
- E. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Manual Procedure 1021.
- F. 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.
- G. 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.
- H. All open problems are to be tracked by a corrective action document and entered on the appropriate system punchlist.
- I. Observe all Radiation Protection (RP) requirements when working in or near radiological areas.



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### 3.1 Precautions (continued)

- J. Ensure there are no adverse effects to the operation of Unit 1 structures, systems, or components.
- K. Test personnel will coordinate with Unit 1 Operations when manipulating Unit 1 equipment if required.

### 3.2 Limitations

- A. Maximum permissible duty rating of DG 2A-A is 4840 kW for any 2 hour period in any 24 hour period. Normal continuous duty rating of DG 2A-A is 4400 kW.
- B. To provide for uniform time measurement, all clock times recorded in this test are to be taken from Unit 2 (U-2) Main Control Room clock located on 2-M-3, when possible, recorded in 24 hour clock format. For example, if time is required to be recorded at 10:35 A. M., time will be entered as 1035. A time recording required for 1 P.M., is recorded 1300. Personnel recording time from locations outside of the Main Control Room may either request time from the control room or timepieces may be synchronized to the Main Control Room clock. If Unit 2 clock is not operating, Unit 1 clock may be used for time reference.
- C. To prevent RCP seal leakage into containment, RCP motors and pumps are required to be uncoupled with pump shaft backseated for duration of this test.
- D. Since ABI/CVI Crosstie Handswitches, 2-HS-90-410-A and 2-HS-90-415-B are required to be placed in NORMAL position during test performance, fuel movement is required to be stopped or containment must be isolated if either movement of irradiated fuel in containment or auxiliary bldg is planned, or in progress, when containment is open to ABSCE spaces. 2-SOI-30.02 contains further information related to ABI/CVI Crosstie Handswitches.
- E. To prevent overloading of associated Emergency Diesel Generator, only one ERCW pump at a time can be automatically started off same 6900V Shutdown Board . Therefore, testing of two ERCW pumps will be performed as follows:

<b>ERCW PUMP</b>	<b>TEST SECTION and EVENT</b>	<b>TEST SECTION and EVENT</b>
B-A	6.3 - SIS	6.3 - LOOP (load sequence)
D-A	6.1 - LOOP (load sequence)	6.2 - SIS

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### 3.2 Limitations (continued)

F. The following pump run out flowrate limits apply during performance of this test:

1. Centrifugal Charging Pump: 550 gpm
2. Safety Injection Pump: 650 gpm
3. Residual Heat Removal Pump: 5,000 gpm
4. Containment Spray Pump: 4,950 gpm
5. Motor-Driven Auxiliary Feedwater Pump: 410 gpm

#### **NOTE**

0-TI-226 provides information on starting and operating limitations for motors listed.

G. The following motor starting limitations apply during performance of this test:

1. Centrifugal Charging Pump permissible starts per hour:
  - a. Motor at ambient temperature - 3 consecutive starts
  - b. Motor at operating temperature - 2 consecutive starts
2. Safety Injection Pump;
  - a. Motor at ambient temperature - 3 consecutive starts
  - b. Motor at operating temperature - 2 consecutive starts
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes

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### 3.2 Limitations (continued)

3. Residual Heat Removal Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
4. Containment Spray Pump permissible starts per hour:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
5. Auxiliary Feedwater Pump (motor-driven)
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
6. Essential Raw Cooling Water Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes

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### 3.2 Limitations (continued)

7. Component Cooling Water Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
8. Thermal Barrier Booster Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive start
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
- H. The following chillers have compressor start limitations of 20 minutes between starts. These limits will be bypassed during performance of this test as normally done during 0-SI-82-3, -4, -5, -6 series surveillance testing:
  - a. Main Control Room Chillers
  - b. Shutdown Board Room Chillers
  - c. Electrical Board Room Chillers
- I. Anytime Motor-Driven Auxiliary Feedwater Pumps are running, additional recirculation flow path may be used during low flow demand conditions using 2-SOI-3.02.
- J. Review 0-SOI-82.03 for diesel generator 2A precautions/limitations that will be applicable during this testing.

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Date \_\_\_\_\_

#### 4.0 PREREQUISITE ACTIONS

##### NOTES

- Section 4.3, Approvals and Notifications, provides for notifications to and approvals from various groups involved with performance of this Instruction and should be addressed prior to performing any plant configuration changes.
- Steps 4.3[1] and 4.3[2] may be completed at any point prior to beginning equipment alignments and verifications of plant equipment configuration, as well as installing M&TE, or other temporary equipment required for this test.
- Preliminary actions administrative in nature, that do not change plant configuration, may be completed prior to obtaining appropriate management approval in Section 4.3. Examples of administrative actions are, but not limited to, reviewing drawings and WITEL for test impact, sampling of water systems by Chemistry group when procedures are used by Chemistry and configuration of plant components are controlled by those personnel/procedures.
- Prerequisite Sub-Sections 4.1, 4.2, 4.3, and 4.4, and steps within those subsections, may be performed in any order or concurrently with Test Director's approval. Approval by Test Director is noted by Test Director notation at bottom of page for those steps performed out of sequence.

#### 4.1 Preliminary Actions

[1] **INITIATE** work orders for craft support: \_\_\_\_\_

- Perform 2-PTI-262-01, Train 2A Integrated Safeguards Test.

Work Order No. \_\_\_\_\_ 112365432

- Install M&TE and monitor power on CSST A, B, C, D.

Work Order No. \_\_\_\_\_ 116656768

- Makeup cables required for sequence of events and response time as required by this test.

Work Order No. \_\_\_\_\_ 112208321

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#### 4.1 Preliminary Actions (continued)

- Perform test support activities such as install or remove jumpers, check contacts open or closed, etc.

Work Order No. \_\_\_\_\_ 112208324

- Drain Steam Generators as required during performance of this test.

Work Order No. \_\_\_\_\_ 112208326

- Uncouple RCP motors and pumps and backseat RCPs using WO listed:

Work Order No. \_\_\_\_\_ 114332654

- [2] **EVALUATE** punch list items on Open Watts Bar Integrated Task Equipment List (WITEL) **AND**

**ENSURE** any open items will NOT adversely affect test performance:

SUBSECTION	INITIAL	DATE
Subsection 6.1		
Subsection 6.2		
Subsection 6.3		

- [3] **ENSURE** plant instruments required for test performance, listed on Appendix B, Permanent Plant Instrumentation Log, have been verified filled, vented (as required), placed in service, and within their calibration interval. \_\_\_\_\_

- [4] **ENSURE** outstanding Design Change Notices (DCN's), Engineering Document Construction Releases (EDCR's) or Temporary Modifications (T-Mod) do NOT adversely impact testing, and

**ATTACH** documentation of DCN's, EDCR's and T-Mod's that were reviewed to the data packag \_\_\_\_\_

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#### 4.1 Preliminary Actions (continued)

- [5] **ENSURE** changes to references listed in Appendix A, Test Procedure Reference Review, have been reviewed, recorded in Appendix A, and determined NOT to adversely affect test results. \_\_\_\_\_
- [6] **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. \_\_\_\_\_
- [7] **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. \_\_\_\_\_
- [8] **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. \_\_\_\_\_
- [9] **VERIFY** Measuring and Test Equipment (M&TE) calibration due dates will support the completion of this test performance. \_\_\_\_\_
- [10] **PERFORM** a pretest walkdown on equipment to be tested to ensure no conditions exist that will impact test performance. \_\_\_\_\_
- [11] **REVIEW** preventive maintenance for system/components covered by this test, and  
  
**VERIFY** no conditions exist that will impact test performance. \_\_\_\_\_
- [12] **ENSURE** preoperational tests have been successfully completed for SSPS Train 2A:
- 2-PTI-099-03, Reactor Protection System Operational Test; \_\_\_\_\_
  - 2-PTI-099-04, Safeguards System; \_\_\_\_\_
  - 2-PTI-099-08, Safeguards System Test Panel. \_\_\_\_\_

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#### 4.1 Preliminary Actions (continued)

- [13] **ENSURE** Essential Raw Cooling Water (ERCW) system flow balance has been completed per 2-PTI-067-02-A, Train A ERCW Flow Balancing. \_\_\_\_\_
- [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] **ENSURE** Communications methods have been established, or will be provided in areas where testing is to be conducted. \_\_\_\_\_
- [16] **ENSURE** U-2 Reactor Vessel head, upper internals and lower internals are removed. \_\_\_\_\_
- [17] **ENSURE** U-2 Reactor Vessel stud hole covers are installed. \_\_\_\_\_
- [18] **ENSURE** U2 Refueling Cavity seal is installed. \_\_\_\_\_
- [19] **ENSURE** U2 Refueling Cavity has been verified to meet requirements for Cleanliness Class B and is available to accept overflow from Reactor Vessel. \_\_\_\_\_
- [20] **ENSURE** U2 Reactor Coolant Pumps (RCPs) are uncoupled and pump shaft is backseated:
  - Reactor Coolant Pump 1 \_\_\_\_\_
  - Reactor Coolant Pump 2 \_\_\_\_\_
  - Reactor Coolant Pump 3 \_\_\_\_\_
  - Reactor Coolant Pump 4 \_\_\_\_\_
- [21] **REQUEST** Chemistry to sample the following water sources for use in the Reactor Coolant System (RCS) and Steam Generators (SGs):
  - U2 Refueling Water Storage Tank (RWST) \_\_\_\_\_
  - U2 Condensate Storage Tank (CST) \_\_\_\_\_

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Chemistry Contact

Date



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**4.1 Preliminary Actions (continued)**

[22] **OBTAIN** Chemistry approval for use of water contained in CST  
 B for the SGs. \_\_\_\_\_

[23] **OBTAIN** Chemistry approval for use of water contained in  
 RWST for the RCS. \_\_\_\_\_

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Chemistry

Date

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

##### NOTES

- 1) Each recorder requires an uninterruptible power supply to allow continuous operation should a local power outlet lose power during testing sequence.
- 2) Each recorder channel should be fitted with a power supply such that no battery/toggle switch operation is required to supply a channel with power to record channel data.
- 3) Each recorder should be set up to initiate recording of data by personnel simply "STARTING" the recorder.
- 4) The Sequence of Events recorder should be placed in standby and a trigger event set to begin recording without personnel intervention, if possible.

[1] **ENSURE** the following M&TE or equivalent is available:

- One (1) Dranetz System 22 Sequence of Event Recorder (SER), capable of monitoring 68 simultaneous inputs. (resolution 0.020 seconds, accuracy  $\pm 0.010$  seconds)

##### NOTE

Refer to Appendix G, DG Chart Recorder Connections, for channel scaling requirements.

- Eight (8) Western Graphtec WR3101 Chart Recorders, 6-Channels each (accuracy  $\pm 1.8\%$  full-scale, chart speed  $\pm 0.24\% \pm 0.6\text{mm}$ ).
- One (1) Dranetz 325 Power System Polymeter, capable of monitoring 0-150 VAC at 55 to 65 Hz [Voltage Accuracy  $\pm (0.36\%$  of reading  $\pm 0.06\%$  of range); Frequency Accuracy  $\pm 1.2 \times (0.002 \text{ Hz} + 1 \text{ LSD})$ ]
- Uninterruptible Power Supply for each recorder.
- One (1) Keithley 197 Digital Multimeter, capable of measuring 20 VDC. Accuracy  $\pm (0.018\%$  of reading  $0.0012\%$  of range).
- Eleven (11) multimeters, capable of monitoring 0-120 VAC, 250 VDC, and continuity ( $\pm 2\%$  range).
- Two (2) 6.9KV breaker umbilical test cords

Date \_\_\_\_\_

**4.2 Special Tools, Measuring and Test Equipment, Parts and Supplies (continued)**

- Two (2) 6.9KV breaker test links \_\_\_\_\_
- Two (2) sets of 6.9KV breaker test C-clamps and Wheel Chocks \_\_\_\_\_
- Fifty (50) electrical jumpers \_\_\_\_\_

[2] **ANNOTATE** information for each test equipment or equivalent used during performance of this Instruction (NA unused information blanks):

TEST EQUIPMENT	MODEL NO.	TVA ID NO.	CAL DUE DATE	RANGE	INIT
Stopwatch			N/A		
Stopwatch			N/A		
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					

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Date \_\_\_\_\_

**4.2 Special Tools, Measuring and Test Equipment, Parts and Supplies (continued)**

<b>TEST EQUIPMENT</b>	<b>MODEL NO.</b>	<b>TVA ID NO.</b>	<b>CAL DUE DATE</b>	<b>RANGE</b>	<b>INIT</b>
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					

**[3] ENSURE** keys for the following panels are available:

- 1-R-73 \_\_\_\_\_
- 1-R-78 \_\_\_\_\_
- 1-R-79 \_\_\_\_\_
- 2-R-48 \_\_\_\_\_
- 2-R-50 \_\_\_\_\_
- 2-R-51 \_\_\_\_\_
- 2-R-54 \_\_\_\_\_
- 2-R-73 \_\_\_\_\_
- 2-R-74 \_\_\_\_\_
- 2-R-75 \_\_\_\_\_
- 2-R-76 \_\_\_\_\_
- 2-R-78 \_\_\_\_\_

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -  Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 47 of 591</b>
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Date \_\_\_\_\_

**4.2 Special Tools, Measuring and Test Equipment, Parts and  
Supplies (continued)**

- 2A-A 6.9 KV SD Bd Logic Panels \_\_\_\_\_

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 48 of 591</b>
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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications

##### NOTE

Shift Manager's approval is required prior to performing any equipment manipulations or realignments.

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

\_\_\_\_\_  
Preoperational Startup Manager      Date  
Signature

- [2] **OBTAIN** Shift Manager's (SM) authorization to begin test.

\_\_\_\_\_  
SM Signature      Date

- [3] **VERIFY** Units 1 and 2 are in "Train B Protected Status".

\_\_\_\_\_  
U2 SRO      Date

- [4] **OBTAIN** U-2 Unit Supervisor's (US) authorization to begin test.

\_\_\_\_\_  
U-2 US Signature      Date

- [5] **OBTAIN** U-1 Unit Supervisor's (US) authorization to begin test.

\_\_\_\_\_  
U-1 US Signature      Date

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 49 of 591</b>
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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- [6] **NOTIFY** U2 SRO of requirement to have ABI/CVI Crosstie Switches 2-HS-90-410-A & 2-HS-90-415-B in NORMAL position for duration of this test (Signoff for switch placement in Section 4.4).

---

U2 SRO

Date

- [7] **NOTIFY** U1 and U2 Operations Work Control Center of test preparations beginning **AND**

**REQUEST** notification of any tagging planned on plant common equipment or Train 2A equipment.

---

Unit 1 Work Control SRO

Date

---

Unit 2 Work Control SRO

Date

- [8] **NOTIFY** U1 and U2 Operations Work Control Center to NOT allow hydrocarbon use permits in areas open to EGTS and ABGTS for 24 hours prior to testing.

---

Unit 1 Work Control SRO

Date

---

Unit 2 Work Control SRO

Date

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- [9] **NOTIFY** Chemistry and Radiation Protection (RP) sample carts will be required for Unit 2 Shield Building Vent 2-RE-90-400 rad monitors which are removed from service during this test **AND**

**PROVIDE** both groups a copy of Appendix V. \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

\_\_\_\_\_  
RP Contact

\_\_\_\_\_  
Date

- [10] **REQUEST** Chemistry to open U2 Containment Purge and U2 Incore Instrument Room purge packages for duration of test.

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

- [11] **NOTIFY** Radiation Protection LCC coolers, CRDM coolers, and Air Return Fans will be starting and running for this test.

\_\_\_\_\_  
RP Contact

\_\_\_\_\_  
Date



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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

##### NOTE

- 1) Signoff of Step 4.3[12] may be delayed until start time of DG is determined within relative certainty.
- 2) Timely notification with expected time of start is important for Dispatcher to ensure system response.
- 3) Notification requirement in 0-SOI-82.03 may be signed off in Section 8.1.4, Step 3 once notification is completed.

- [12] **NOTIFY** load dispatcher that DG 2A-A will be synchronized to and disconnected from the grid several times over the course of this test:

_____	_____
Person Contacted	Date

- [13] **PROVIDE** Operations with Appendix T as Information Only for potential LCO evaluations required during this test evolution.

- [14] **OBTAIN PERMISSION** to stage recorders and wiring in Train 2A areas such as SD BD RMS and DG 2A-A rooms.

_____	_____
U2 SRO	Date

- [15] **OBTAIN** U2 SRO permission to perform M&TE connections to 2A Train equipment.

_____	_____
U2 SRO	Date

- [16] **NOTIFY** Startup I&C (SUTI) personnel to install and connect recording equipment and cabling in the following Appendixs:

- Appendix G, DG 2A-A Chart Recorder Connections \_\_\_\_\_
- Appendix H, DG 2A-A Chart Recorder Hookup \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
- Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

[17] **REQUEST** Startup Electrical (SUTE) support for performing Appendix E, Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_

#### NOTE

Impairment Permit required in Step 4.3[18] addresses defeat of 0-FCV-26-320, -3145, and -3146, loss of all water based suppression systems from 1-R-79 and loss of U2 A Train Electric Fire Pump during Blackouts.

[18] **NOTIFY** Fire Operations of Blackout testing on U2 Train A Power Supply **AND**

**REQUEST** an impairment permit, Appendix C of NPG-SPP-18.4.6, Fire Protection Impairment Permit, for components listed in Appendix C, section 6.0. \_\_\_\_\_

\_\_\_\_\_  
Fire Operations Contact

\_\_\_\_\_  
Date

[19] **NOTIFY** Chemistry that sample lines to Gas Analyzers 0-H2E-43-450, 0-O2E-43-450, and recorder 0-XR-43-232, GAS ANALYZER SYSTEM O2/H2 RECORDER, will be isolated when 2-FCV-68-307, PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY, is closed by Phase A Containment Isolation signal and to take appropriate actions for these recorders. \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

[20] **REQUEST** Chemistry suspends sampling of U2 Reactor Coolant Drain Tank (RCDT) and Pressurizer Relief Tank (PRT). \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

\_\_\_\_\_  
Chemistry Contact Date

- [21] **NOTIFY** Chemistry and Radiation Protection to take appropriate actions required for the Radiation Monitors listed in Appendix V which will lose power during the performance of this test. A sample cart(s) should be installed for 2-RE-90-400. \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact Date

\_\_\_\_\_  
RP Contact Date

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Date \_\_\_\_\_

#### 4.4 Field Preparations

- [1] **REQUEST** I&C (SUTI) remove Train 2B Solid State Protection System (SSPS) from service using Appendix D, Section 1.0. \_\_\_\_\_

\_\_\_\_\_  
I & C (SUTI) Contact

Date

- [2] **REQUEST** permission of U2 SRO to make test recorder connections for DG 2A-A and Unit 2 equipment, **AND**

**EVALUATE** LCO entry conditions for DG 2A-A while connecting cabling. \_\_\_\_\_

\_\_\_\_\_  
U2 SRO

Date

- [3] **ENSURE** I&C (SUTI) has installed and connected test Recorder(s) per Appendixs G, H, I, and J. \_\_\_\_\_

\_\_\_\_\_  
I & C (SUTI) Contact

Date

- [4] **ENSURE** the following systems/components are filled, vented, and available for service using applicable system operating instruction:

- U2 Auxiliary Feedwater System motor-driven pump (AFW) 2A-A and associated piping for recirc and full flow injection in accordance with Appendix C, Equipment Alignment and 2-SOI-3.02. \_\_\_\_\_
- High Pressure Fire Protection System in Standby using 0-SOI-26.01. \_\_\_\_\_
- Control Air System is in service using 0-SOI-32.01. \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- Auxiliary Air System is in service using 0-SOI-32.02. \_\_\_\_\_
- U2 Chemical and Volume Control System Centrifugal Charging Pump (CCP) 2A-A and associated piping for recirc operations and full flow injection IAW Appendix C, Equipment Alignment and 2-SOI-62.01. \_\_\_\_\_
- U2 Safety Injection System pump 2A-A and associated piping for recirc and full flow injection as specified by applicable portions of Appendix C, Equipment Alignment and 2-SOI-63.01. \_\_\_\_\_
- U2 Residual Heat Removal System Pump 2A-A and associated piping for recirc and full flow injection as specified by applicable portions of Appendix C, Equipment Alignment and 2-SOI-74.01. \_\_\_\_\_
- U2 Containment Spray Pump 2A-A and associated piping for recirc and full flow injection as specified by applicable portions of Appendix C, Equipment Alignment and 2-SOI-72.01. \_\_\_\_\_
- Essential Raw Cooling Water System is in operation using 0-SOI-67.01. \_\_\_\_\_
- Component Cooling Water System is in operation using 0-SOI-70.01. \_\_\_\_\_
- U2 Containment Purge System is available IAW 2-SOI-30.02. \_\_\_\_\_
- U2 Train A Containment HVAC and Pressure Control System (Upper & Lower Containment Vent Coolers and CRDM Coolers) are aligned in Standby Readiness per 2-SOI-30.03. \_\_\_\_\_
- U2 Train A Incore Instrument Room Air Cooling System is in operation IAW 2-SOI-30.04. \_\_\_\_\_
- Auxiliary Building HVAC System, U2, Train A is in operation using 0-SOI-30.05. \_\_\_\_\_
- Auxiliary Building Gas Treatment System Train A and B, aligned in Standby, NOT in service, using 0-SOI-30.06. \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- Train A Shutdown Board Room HVAC System is in operation using 0-SOI-30.07. \_\_\_\_\_
- U2 Containment Air Return Fans are available, handswitches in Pull To Lock, using 2-SOI-30.08. \_\_\_\_\_
- Train A Control Building HVAC Systems (MCR & EBR Systems) are in operation using 0-SOI-31.01. \_\_\_\_\_
- U2 Primary Makeup Water System is available or in operation using 0-SOI-81.01. \_\_\_\_\_
- Emergency Gas Treatment System is aligned in Standby Readiness using 0-SOI-65.02. \_\_\_\_\_

[5] **INITIATE** equipment alignment per Appendix C, Equipment Alignment. \_\_\_\_\_

[6] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% as indicated by the following [2-M-3] indicators, using applicable portion(s) of 2-SOI-41.02 thru 2-SOI-41.05 as appropriate:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
T-D AFW PMP SG1 LEVEL	2-LI-3-174		
T-D AFW PMP SG2 LEVEL	2-LI-3-173		
T-D AFW PMP SG3 LEVEL	2-LI-3-172		
T-D AFW PMP SG4 LEVEL	2-LI-3-175		
AFW PMP A-A SG1 LEVEL	2-LI-3-164		
AFW PMP A-A SG2 LEVEL	2-LI-3-156		
AFW PMP B-B SG3 LEVEL	2-LI-3-148		
AFW PMP B-B SG4 LEVEL	2-LI-3-171		

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- [7] **ENSURE** U-2 Refueling Water Storage Tank (RWST) levels are equal to or greater than 70% as indicated by the following 2-M-6 indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
RWST LEVEL	2-LI-63-50		
RWST LEVEL	2-LI-63-51		
RWST LEVEL	2-LI-63-52		
RWST LEVEL	2-LI-63-53		

- [8] **ENSURE** U-2 Condensate Storage Tank (CST B) level is equal to or greater than 200,000 gallons as indicated by the following 2-M-2 indicator:

DESCRIPTION	INDICATOR	LEVEL (gals)	INITIALS
CST B LEVEL	2-LI-2-233D		

- [9] **VERIFY** 6.9KV Shutdown Boards are energized from Normal feeder per applicable SOI:

- 6.9KV SD BD 1A-A (0-SOI-211.01) \_\_\_\_\_
- 6.9KV SD BD 1B-B (0-SOI-211.02) \_\_\_\_\_
- 6.9KV SD BD 2A-A (2-SOI-211.03) \_\_\_\_\_
- 6.9KV SD BD 2B-B (2-SOI-211.04) \_\_\_\_\_

- [10] **VERIFY** 480V Shutdown Boards are energized from Normal feeder:

- 480V SD BD 2A1-A (2-SOI-212.05) \_\_\_\_\_
- 480V SD BD 2A2-A (2-SOI-212.06) \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[11] **VERIFY** 480V Reactor MOV Boards are energized from Normal feeder:

- 480V Reactor MOV BD 2A1-A (2-SOI-213.05) \_\_\_\_\_
- 480V Reactor MOV BD 2A2-A (2-SOI-213.06) \_\_\_\_\_

[12] **VERIFY** 480V Boards are energized from Normal feeder:

- 480V Reactor Vent BD 2A-A (2-SOI-232.03) \_\_\_\_\_
- 480V C&A Building Vent BD 2A1-A (2-SOI-214.05) \_\_\_\_\_
- 480V C&A Building Vent BD 2A2-A (2-SOI-214.06) \_\_\_\_\_
- 480V Diesel Aux BD 2A1-A (0-SOI-215.05) \_\_\_\_\_
- 480V Diesel Aux BD 2A2-A (0-SOI-215.06) \_\_\_\_\_

[13] **VERIFY** 125V DC Vital Battery Boards are energized per applicable SOI:

- 125V DC Vital Battery BD I (0-SOI-236.01) \_\_\_\_\_
- 125V DC Vital Battery BD II (0-SOI-236.02) \_\_\_\_\_
- 125V DC Vital Battery BD III (0-SOI-236.03) \_\_\_\_\_
- 125V DC Vital Battery BD IV (0-SOI-236.04) \_\_\_\_\_

[14] **VERIFY** 120V AC Vital Power Systems (Vital Instrument Power Board & associated Vital Inverter) are energized on NORMAL feeder:

- 120V AC Vital Power System 1-I (1-SOI-235.01) \_\_\_\_\_
- 120V AC Vital Power System 1-II (1-SOI-235.02) \_\_\_\_\_
- 120V AC Vital Power System 1-III (1-SOI-235.03) \_\_\_\_\_
- 120V AC Vital Power System 1-IV (1-SOI-235.04) \_\_\_\_\_
- 120V AC Vital Power System 2-I (2-SOI-235.05) \_\_\_\_\_
- 120V AC Vital Power System 2-II (2-SOI-235.06) \_\_\_\_\_



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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- 120V AC Vital Power System 2-III (2-SOI-235.07) \_\_\_\_\_
- 120V AC Vital Power System 2-IV (2-SOI-235.08) \_\_\_\_\_
- [15] **VERIFY** 120V AC Instrument Power Systems are energized and aligned to Normal power supply:
  - 120V AC Instrument Power 1A (SOI-237.01) \_\_\_\_\_
  - 120V AC Instrument Power 1B (SOI-237.02) \_\_\_\_\_
  - 120V AC Instrument Power 2A (2-SOI-237.03) \_\_\_\_\_
  - 120V AC Instrument Power 2B (2-SOI-237.04) \_\_\_\_\_
- [16] **ENSURE** breakers at 2-DPL-68-341A, PZR BACKUP HTR GRP 2A-A DISTRIBUTION PANEL [A5W, 782], are OPEN:
  - 2-BKR-68-341A/A1, PRESSURIZER HTR (2-HTR-68-341A/A1-A) \_\_\_\_\_
  - 2-BKR-68-341A/A2, PRESSURIZER HTR (2-HTR-68-341A/A2-A) \_\_\_\_\_
  - 2-BKR-68-341A/A3, PRESSURIZER HTR (2-HTR-68-341A/A3-A) \_\_\_\_\_
  - 2-BKR-68-341A/A4, PRESSURIZER HTR (2-HTR-68-341A/A4-A) \_\_\_\_\_
  - 2-BKR-68-341A/A5, PRESSURIZER HTR (2-HTR-68-341A/A5-A) \_\_\_\_\_
  - 2-BKR-68-341A/A6, PRESSURIZER HTR (2-HTR-68-341A/A6-A) \_\_\_\_\_
  - 2-BKR-68-341A/A7 PRESSURIZER HTR (2-HTR-68-341A/A7-A) \_\_\_\_\_
- [17] **ENSURE** breakers listed in 4.4 [16] are tagged with a Hold Order. \_\_\_\_\_
- [18] **RECORD** the Hold Order Number from step [17], \_\_\_\_\_

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -  Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 60 of 591</b>
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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[19] **ENSURE** breakers at 2-DPL-68-341F, PZR CONTROL HTR GRP 2D DISTRIBUTION PANEL [A5W, 782], are OPEN:

- 2-BKR-68-341F/D1, PRESSURIZER HTR  
(2-HTR-68-341F/D1) \_\_\_\_\_
- 2-BKR-68-341F/D2, PRESSURIZER HTR  
(2-HTR-68-341F/D2) \_\_\_\_\_
- 2-BKR-68-341F/D3, PRESSURIZER HTR  
(2-HTR-68-341F/D3) \_\_\_\_\_
- 2-BKR-68-341F/D4, PRESSURIZER HTR  
(2-HTR-68-341P/D4) \_\_\_\_\_
- 2-BKR-68-341F/D5, PRESSURIZER HTR  
(2-HTR-68-341F/D5) \_\_\_\_\_
- 2-BKR-68-341F/D6, PRESSURIZER HTR  
(2-HTR-68-341F/D6) \_\_\_\_\_

[20] **ENSURE** breakers listed in 4.4 [18] are tagged with a Hold Order. \_\_\_\_\_

[21] **RECORD** the Hold Order Number from step [20], \_\_\_\_\_

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 61 of 591</b>
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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

##### NOTE

If work in Steps 4.4[22] and 4.4[23], are performed in 2-PTI-262-02, N/A may be entered in steps and explained at bottom of page.

[22] **INHIBIT** U2 Train A and Train B RHR Spray Header Isolation valves:

[22.1] **ENSURE** by local valve stem position 2-FCV-72-40, RHR SPRAY HDR A ISOLATION, is CLOSED [713/A11W]

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.2] **ENSURE** by local valve stem position 2-FCV-72-41, RHR SPRAY HDR B ISOLATION, is CLOSED [713/A11W]

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.3] **ENSURE** 2-BKR-72-40, RHR SPRAY HDR A ISOL (2-FCV-72-40), at 480V Reactor MOV BD 2A1-A, Compt. 14A, is OPEN.

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.4] **ENSURE** 2-BKR-72-41, RHR SPRAY HDR B ISOL (2-FCV-72-41), at 480V Reactor MOV BD 2B1-B, Compt. 14D, is OPEN.

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.5] **REQUEST** Unit 2 Operations WCC tag RHR Spray header breakers in OPEN position.

[22.6] **ENSURE** breakers are tagged with a hold order in OPEN position:

- 2-BKR-72-40, RHR SPRAY HDR A ISOL (2-FCV-72-40), at 480V Reactor MOV BD 2A1-A, Compt. 14A

\_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- 2-BKR-72-41, RHR SPRAY HDR B ISOL (2-FCV-72-41),  
at 480V Reactor MOV BD 2B1-B, Compt. 14D

Hold Order No.

#### [23] ISOLATE U2 Containment Spray Ring Headers:

- [23.1] **ENSURE** by local valve stem position 2-FCV-72-39,  
Containment Spray Header 2A Isolation Valve is closed.

\_\_\_\_\_  
CV

- [23.2] **ENSURE** by local valve stem position 2-FCV-72-2,  
Containment Spray Header 2B Isolation Valve is closed.

\_\_\_\_\_  
CV

- [23.3] **ENSURE** 2-BKR-72-39, CNTMT SPRAY HDR 2A ISOL  
VLV (2-FCV-72-39), at 480V Reactor MOV BD 2A1-A,  
Compt. 13E, is OPEN.

\_\_\_\_\_  
1st

\_\_\_\_\_  
CV

- [23.4] **ENSURE** 2-BKR-72-2, CNTMT SPRAY HDR 2B ISOL  
VLV (2-FCV-72-2), at 480V Reactor MOV BD 2B1-B,  
Compt. 14A, is OPEN.

\_\_\_\_\_  
1st

\_\_\_\_\_  
CV

- [23.5] **REQUEST** Unit 2 Operations WCC tag Containment  
Spray header breakers in OPEN position.

\_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[23.6] **ENSURE** breakers are tagged with a hold order in OPEN position:

- 2-BKR-72-39, CNTMT SPRAY HDR 2A ISOL VLV (2-FCV-72-39), at 480V Reactor MOV BD 2A1-A, Compt. 13E.
- 2-BKR-72-2, CNTMT SPRAY HDR 2B ISOL VLV (2-FCV-72-2), at 480V Reactor MOV BD 2B1-B, Compt. 14A.

Hold Order No. \_\_\_\_\_

[24] **ISOLATE** ERCW supply to U2 Auxiliary Feedwater Pumps:

[24.1] **ENSURE** by local valve stem position each of the following valves are CLOSED:

- 2-FCV-3-116A, ERCW HEADER A AFW PUMP 2A-A SUCTION (713/A12S)
- 2-FCV-3-116B, ERCW HEADER A AFW PUMP 2A-A SUCTION (713/A12S)
- 2-FCV-3-126A, ERCW HEADER B AFW PUMP 2B-B SUCTION (713/A13S)
- 2-FCV-3-126B, ERCW HEADER B AFW PUMP 2B-B SUCTION (713/A13S)
- 2-FCV-3-136A, ERCW HEADER A TD AFW PMP SUCT (692/A14T)

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- 2-FCV-3-136B, ERCW HEADER A TD AFW PMP  
SUCT (692/A14T)

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-FCV-3-179A, ERCW HEADER B TD AFW PMP  
SUCT (692/A14T)

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-FCV-3-179B, ERCW HEADER B TD AFW PMP  
SUCT (692/A14T)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[24.2] **ENSURE** breakers are OPEN on 480V Reactor MOV BD  
2A2-A:

- 2-BKR-3-116A, ERCW HDR A AFW PMP 2A-A  
SUCTION (2-FCV-3-116A), Compt. 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-116B, ERCW HDR A AFW PMP 2A-A  
SUCTION (2-FCV-3-116B), Compt. 2B

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-136A, ERCW HDR A TD AFW PMP  
SUCTION (2-FCV-3-136A), Compt. 3A

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-136B, ERCW HDR A TD AFW PMP  
SUCTION (2-FCV-3-136B), Compt. 3B

\_\_\_\_\_  
\_\_\_\_\_  
CV

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#### 4.4 Field Preparations (continued)

[24.3] **ENSURE** breakers are OPEN on 480V Reactor MOV BD 2B2-B:

- 2-BKR-3-126A, ERCW HDR B AFW PMP 2B-B  
SUCTION (2-FCV-3-126A), Compt. 2A

\_\_\_\_\_  
CV

- 2-BKR-3-126B, ERCW HDR B AFW PMP 2B-B  
SUCTION (2-FCV-3-126B), Compt. 2B

\_\_\_\_\_  
CV

- 2-BKR-3-179A, ERCW HDR B TD AFW PMP  
SUCTION (2-FCV-3-179A), Compt. 3A

\_\_\_\_\_  
CV

- 2-BKR-3-179B, ERCW HDR B TD AFW PMP  
SUCTION (2-FCV-3-179B), Compt. 3B

\_\_\_\_\_  
CV

[24.4] **WHEN** Steps 4.4[24.2] and 4.4[24.3] are COMPLETE,  
**THEN**

**ENSURE** Unit 2 WCC issues a hold order for each  
breaker in Steps 4.4[24.2] and 4.4[24.3] in OPEN  
position.

Hold Order No. \_\_\_\_\_

[25] **ENSURE** U2 Safety Injection System Cold Leg Accumulators  
are depressurized using 2-SOI-63.01:

- SIS Cold Leg Accumulator 1
- SIS Cold Leg Accumulator 2
- SIS Cold Leg Accumulator 3
- SIS Cold Leg Accumulator 4

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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#### 4.4 Field Preparations (continued)

- [26] **ENSURE** U2 Condensate/MFW is secured. \_\_\_\_\_
- [27] **ENSURE** 2-HS-3-45, MFW - MODE SWITCH, at 2-M-3, is in NORMAL position. \_\_\_\_\_
- [28] **INSTALL** temporary equipment modifications per Appendix E, Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_

#### NOTE

If SG tubes are water solid, maintaining water level above Hot legs may prevent inadvertent draining of tubes.

- [29] **ENSURE** Reactor Vessel water level is above cold and hot legs, but below vessel flange, (EL 722 to 724ft.), **AND**  
**RECORD** vessel level. \_\_\_\_\_

Vessel Level: EL. \_\_\_\_\_ ft.

- [30] **ENSURE** ABI/CVI Crosstie Handswitches in NORMAL:
- 2-HS-90-410-A (back of 2-R-73) \_\_\_\_\_
  - 2-HS-90-415-B (back of 2-R-78) \_\_\_\_\_

#### NOTE

Section 6.2 requires C-S CCS pump to have power supply connected to U1 Train A. Steps in Section 6.2.1 are provided to swap power supply.

- [31] **ENSURE** CCS pumps aligned as follows:
- CCS Pump 2A-A in standby to U2 Train A CCS. \_\_\_\_\_
  - CCS Pump 2B-B in service to U2 Train A CCS. \_\_\_\_\_
  - C-S CCS Pump aligned to Train B CCS. \_\_\_\_\_
- [32] **ENSURE** Ice Condenser Lower Inlet Doors BLOCKED closed, allowing running of LCC, CRDM, and Air Return Fans during this test. \_\_\_\_\_



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#### 4.4 Field Preparations (continued)

##### NOTE

- 1) No LCO condition is entered as a result of Step 4.4[34].

[33] **REQUEST** permission from U2 SRO to perform Step [34]. \_\_\_\_\_

U2 SRO

Date

##### NOTE

To prevent emergency starts from DG2A-A to Unit 1 Diesel Generators and Unit 2B-B Diesel Generator, DG 2A-A Common Emergency Start circuit fuses are removed during performance of this test.

[34] **REMOVE** the following fuses:

FUSES FOR RELAY CES2AY	DG	PANEL 1-R-75	INITIALS	
			PERFORMER	CV
1-FU-275-R75/M3	2A-A	Row M		
1-FU-275-R75/M4	2A-A	Row M		

[35] **WHEN** Backup Heater Group 2A-A and Control Group 2D breaker configuration changes are completed in Appendix E, Temporary Wire Lift and Jumper Equipment Modifications, **THEN**

**CYCLE** breakers manually using Main Control Room breaker handswitches, 2-HS-68-341A, BACKUP HEATER A-A & 2-HS-68-341F, CONTROL HEATERS D, to ensure breaker readiness for testing with jumpers installed. \_\_\_\_\_

[36] **PERFORM** Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_

[37] **ENSURE** Waste Gas Compressor B removed from service using the appropriate instruction. \_\_\_\_\_

[38] **CONDUCT** a pretest briefing with all Test and Operations personnel using SMP-9.0. \_\_\_\_\_

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#### 4.4 Field Preparations (continued)

- [39] **ENSURE** performers are briefed for contact checks for Appendix W, Step 2.0[1], which performs testing to ensure that DG 2A-A non-emergency trips are bypassed upon an emergency start. \_\_\_\_\_
- [40] **ENSURE** Chemistry is prepared to obtain compensatory samples of U2 Shield Building release upon actuation of EGTS/ABGTS. \_\_\_\_\_
- [41] **PERFORM** Appendix W, section 1.0 Test Setup with Electrical Support. \_\_\_\_\_
- [42] **PERFORM** Appendix X, Electrical Isolation Alignment, and inform Test Director when completed. \_\_\_\_\_

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## **5.0 ACCEPTANCE CRITERIA**

<b>NOTES</b>
<ol style="list-style-type: none"> <li>1) References to Technical Specifications, Technical Requirements, and other Licensing documents referred to in this Instruction should be to Unit 1 Licensing documents until Unit 2 is licensed and Unit 2 TS/TR and other Unit 2 License documents are implemented.</li> <li>2) Unit 1 TS acceptance criteria begin in Section 5.2.</li> </ol>

### **5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)**

- A. Proper automatic actuation, alignment and operation, including bus stripping and load sequencing, of ESF components controlled by Engineered Safety Features Actuation System (ESFAS) is demonstrated by the following:
  1. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, including Diesel Generator start, with offsite power available:
    - a. Safety Injection (SI) - Train 2A (Section 6.2)
      - (1) Post—SI component status (**Step 6.2.2[85]**)
      - (2) SI-Sequencing (**Step 6.2.2[89.1]**)
      - (3) RWST/CNTMT-Sump Switchover (**6.2.2[30.5]**, **6.2.2[30.6]**)
    - b. Containment Isolation Phase B — Train 2A (Section 6.2)
      - (1) Post-CIØB component status (**Step 6.2.2[87]**)
      - (2) CIØB-Sequencing (**Step 6.2.2[89.2]**)
  2. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, including Diesel Generator, start and sequencing of loads, when offsite power is NOT available:
    - a. Loss of Offsite Power (LOOP) - Train 2A (Section 6.1)
      - (1) Post-LOOP component status (**Step 6.1.2[105]**)
      - (2) Bus-Stripping (**Step 6.1.2[106.1]**)
      - (3) LOOP-Sequencing (**Step 6.1.2[106.3]**)

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)**  
**(continued)**

- b. Coincident LOOP/SI/CIØB - Train 2A (Section 6.3)
      - (1) Post-EVENT component status (**Step 6.3.2[81]**)
      - (2) Bus-Stripping (**Step 6.3.2[83.1]**)
      - (3) 2A-A LOOP-Sequencing (**Step 6.3.2[83.3]**)
  - 3. Components actuated by a ESFAS signal remain in ACTUATED condition after reset of initiating signal:
    - a. SI Train 2A Post-Reset (**Steps 6.2.2[86]**)
    - b. CIØB Train 2A Post-Reset (**Step 6.2.2[88]**)
    - c. LOOP/SI/CIØB Load Group A Post-Reset (**Step 6.3.2[82]**)
    - d. RWST/CNTMT-Sump Switchover Train 2A Post-Reset (**Step 6.2.2[32.1], 6.2.2[32.2]**)
- B. Operability and reliability of Diesel Generator 2A-A, including proper starting and dynamic response to load sequencing, is demonstrated by the following:
  - 1. Diesel Generator 2A-A automatically starts and achieves equal to or greater than 6800 VAC and 58.8 HZ in less than or equal to 10 seconds after receipt of start signals, with offsite power available:
    - a. Diesel Generator 2A-A (**Step 6.2.2[90.1]**)
  - 2. Diesel Generator 2A-A automatically starts and output breaker closes in less than or equal to 10 seconds after receipt of start signal, when offsite power is NOT available:
    - a. Diesel Generator 2A-A (**Steps 6.1.2[106.2], 6.3.2[83.2]**)
  - 3. Diesel Generator 2A-A non-emergency protective trips are bypassed while operating in Emergency Run Mode:
    - a. Diesel Generator 2A-A (**Step 6.1.2[102]**)

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)**  
**(continued)**

4. Diesel Generator 2A-A maintains output voltage and frequency equal to or greater than 5213 VAC and 57 HZ respectively during load sequencing:
  - a. LOOP Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.1.2[108]**)
  - b. LOOP/SI/CIØB Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.3.2[85]**)
5. Diesel Generator 2A-A restores output voltage and frequency to a band of 6950 (6255 to 7645) VAC and 60 (58.8 to 61.2) HZ respectively, in less than or equal to 3 seconds following each step load increase during load sequencing:
  - a. LOOP Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.1.2[109]**)
  - b. LOOP/SI/CIØB Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.3.2[86]**)
6. Diesel Generator 2A-A maintains steady state voltage and frequency at 6950 (6800 to 7260) VAC and 60 (59.8 to 60.1) HZ respectively, for each of the following:
  - a. Standby Operation (output breaker open):
    - (1) Diesel Generator 2A-A (**Step 6.2.2[90.2], 6.2.2[91.1], 6.2.2[91.2]**)
  - b. Following LOOP Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.1.2[111]**)
  - c. Following LOOP/SI/CIØB Sequencing:
    - (1) Diesel Generator 2A-A (**Step 6.3.2[87]**)

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)  
(continued)**

7. Diesel Generator 2A-A auto connected loads are less than or equal to 4400 kW for each of the following:
  - a. LOOP loads:
    - (1) Diesel Generator 2A-A (**Step 6.1.2[67.6]**)
  - b. LOOP/SI/CIØB loads:
    - (1) Diesel Generator 2A-A (**Step 6.3.2[42]**)
8. Diesel Generator capability to supply emergency loads is demonstrated NOT to be impaired during performance of periodic testing (operating in parallel with offsite power) when a Safety Injection (SI) signal overrides test mode as follows:
  - a. Diesel Generator returns to Standby Operation (running in Emergency [Isochronous] Mode with output breaker open)
    - (1) Diesel Generator 2A-A (**Step 6.2.2[61]**)
    - (2) Diesel Generator 1A-A (**Step 6.2.2[18]**)
  - b. Emergency loads are energized from offsite power:
    - (1) 6.9KV Shutdown Board 2A-A (**Step 6.2.2[61]**)
    - (2) 6.9KV Shutdown Board 1A-A (**Step 6.2.2[18]**)
9. Each Diesel Generator is synchronized with offsite power while loaded with emergency loads, loads are transferred to offsite power, and diesel is restored to normal standby alignment:
  - a. Diesel Generator 2A-A (**Steps 6.1.2[84]A, 6.1.2[90] , 6.1.2[112], 6.3.2[66], 6.3.2[67]**)
10. Each Diesel Generator will maintain voltage and speed upon rejection of largest single load and full load.
  - a. Diesel Generator 2A-A ( total loss of load )
    - (1) DG 2A-A does not trip on overspeed. (**6.2.2[92.1]**)
    - (2) DG 2A-A voltage is maintained less than or equal to 8880V (**6.2.2[92.2]**)

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)  
(continued)**

**b. Diesel Generator 2A-A (single largest load loss)**

- (1) Voltage is within 10% of nominal, 6950VAC, greater than or equal to 6555V and less than or equal to 7260V within 3 seconds  
(Step 6.3.2[88.4])**
- (2) Frequency is within 2% of nominal, 60 Hz, greater than 58.8 Hz and less than or equal to 61.2 Hz, within 4 seconds  
(Step 6.3.2[88.5])**
- (3) DG 2A-A speed is maintained less than or equal to 1001 RPM  
(Step 6.3.2[88.2])**
- (4) Verify frequency is maintained less than or equal to 66.75 Hz.**

**C. POWER supply to safety related loads automatically and manually transfers to onsite (standby) diesel units from NORMAL or alternate supply, and manually transfers from diesel generator units back to NORMAL or alternate supply, when the following is demonstrated:**

- 1. Each 6.9KV Shutdown Board is manually transferred from Normal to Diesel Generator:**
  - a. 6.9KV Shutdown Board 2A-A (Step 6.1.2[5],6.1.2[6] )**
- 2. Each from 6.9KV Shutdown Board is manually transferred Alternate to Diesel Generator:**
  - a. 6.9KV Shutdown Board 2A-A (Step 6.1.2[19],6.1.2[20] )**
- 3. Each 6.9KV Shutdown Board is manually transferred from Diesel Generator to Normal:**
  - a. 6.9KV Shutdown Board 2A-A (Step 6.1.2[7])**
- 4. Each 6.9KV Shutdown Board is manually transferred from Diesel Generator to Alternate:**
  - a. 6.9KV Shutdown Board 2A-A (Step )6.1.2[21]**
- 5. Each 6.9KV Shutdown Board is automatically transferred from Normal to Diesel Generator on bus undervoltage:**
  - a. 6.9KV Shutdown Board 2A-A (Step 6.3.2[32])**

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)  
(continued)**

6. Each 6.9KV Shutdown Board is automatically transferred from Alternate to Diesel Generator on bus undervoltage:
  - a. 6.9KV Shutdown Board 2A-A **(Step 6.1.2[61])**
- D. Demonstrate that CSST A, B, C, and D have capacity to supply power concurrently to one unit in Mode 3, Hot Standby then subsequently cooling down from Mode 3 to Mode 5 while other unit is under accident conditions.
  1. Unit 1 hot standby loads less than the rating of each transformer secondary winding. A & B CSST's are 48MVA and C & D CSST's are 40 MVA. **(Step 6.4[3])**
  2. Unit 2 ESF loads under accident conditions will be less than associated transformer ratings. A & B CSST's are 48MVA and C & D CSST's are 40 MVA. **(Step 6.4[4])**

**5.2 Loss of Offsite Power - With No ESF Actuation**

- A. On an actual or simulated loss of offsite power signal: (SR 3.8.1.11)
  1. De-energization of emergency buses. **(Step 6.1.2[60])**
  2. Load shedding from emergency buses. **(Step 6.1.2[106.1])**
  3. DG auto-start from standby condition and:
    - a. Energizes permanently connected loads in less than or equal to 10 seconds. **(Step 6.1.2[106.2], 6.3.2[83.2])**
    - b. Energizes auto-connected shutdown loads through automatic load sequencer. **(Step 6.1.2[106.3], 6.1.2[63])**
    - c. Maintains steady state voltage greater than or equal to 6800 V and less than or equal to 7260 V **(Step 6.1.2[111])**
    - d. Maintains steady state frequency greater than or equal to 59.8 Hz and less than or equal to 60.1 Hz. **(Step 6.1.2[111])**
    - e. Supplies permanently connected and auto-connected shutdown loads for greater than or equal to five minutes. **(Step 6.1.2[67.4])**
- B. The auxiliary feedwater pumps receive a start signal automatically upon receipt of a simulated Blackout test signal (SR 3.7.5.4). **(Step 6.1.2[63])**



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## **5.2 Loss of Offsite Power - With No ESF Actuation (continued)**

### **C. Verification that DG 2A-A: (SR 3.8.1.16)**

1. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power. **(Step 6.3.2[66])**
2. Transfers loads to offsite power source. **(Step 6.3.2[66])**
3. Returns to ready-to-load operation. **(Step 6.3.2[67])**

## **5.3 ESF Actuation - Offsite Power Available**

### **A. On an actual or simulated Engineered Safety Feature (ESF) actuation signal with no loss of offsite power, DG 2A-A auto-starts from standby condition AND: (SR 3.8.1.12)**

1. In less than or equal to 10 seconds after auto-start and during tests, achieves voltage greater than or equal to 6800 V and frequency greater than or equal to 58.8 Hz. **(Step 6.2.2[90.1])**
2. After DG fast start from standby conditions DG achieves Steady state voltage greater than or equal to 6800 V and less than or equal to 7260 V, and frequency greater than or equal to 59.8 Hz and less than or equal to 60.1 Hz. **(Step 6.2.2[90.2])**
3. Operates for greater than or equal to five minutes. **(Step 6.2.2[23.3])**
4. Permanently connected loads remain energized from offsite power system. **(Step 6.2.2[23.4])**
5. Emergency loads are energized from offsite power system. **(Step 6.2.2[23.4])**

### **B. Actuation of 2-HS-63-133A, SI ACTUATE TR A & B (Section 6.3) or 2-HS-63-133B, SI ACTUATE TR A & B (Section 6.2), will cause initiation of Safety Injection and reactor trip breakers to trip (SR 3.3.2.8-1.a and 3.3.1.13). **(Steps 6.2.2[12.4], 6.2.2[12.3], 6.3.2[27]), 6.3.2[30])****

### **C. Verification that each ECCS pump starts automatically on an actual or simulated signal (SR 3.5.2.6). **(Step 6.2.2[63])****

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#### 5.4 DG Test Mode Override

- A. Verification that with Unit 1 DG 1A-A operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides test mode by: (SR 3.8.1.17) **(Step 6.2.2[18] )**
  - 1. Returning DG to ready-to-load operation.
    - a. DG 1A-A
  - 2. Automatically energizing emergency load from offsite power.
    - a. 6.9kV SD BD 1A-A

#### 5.5 DG Load Rejection Capability

- A. Verification that DG 2A-A, while loaded with emergency loads: (SR 3.8.1.9)
  - 1. Maintains the following criteria upon rejection of single largest load of 640 kW (800 Hp)
    - a. Frequency is less than or equal to 66.75 Hz **AND (6.3.2[88.3])**
    - b. Within three seconds following load rejection, voltage is greater than or equal to 6555 VAC and less than or equal to 7260 VAC **AND (6.3.2[88.4])**
    - c. Within four seconds following load rejection, frequency is between 58.8 Hz and 61.2 Hz. (SR 3.8.1.9). **(6.3.2[88.5])**
- B. Verification that DG 2A-A operating under the following parameters: (SR 3.8.1.10) **(Step 6.2.2[92])**
  - 1. Load of greater than or equal to 3960 kW and less than or equal to 4400 kW (6.2.2[41])
  - 2. DG MEGAVAR loading greater than or equal to 2970 kVAR (0.8 pf) and less than or equal to 3300 kVAR (0.9 pf) (6.2.2[42])
    - a. Maintains the following criteria upon full load rejection
      - (1) DG 2A-A does NOT overspeed trip. (6.2.2[92.1])

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## **5.5 DG Load Rejection Capability (continued)**

- (2) DG 2A-A Voltage is maintained less than or equal to 8880VAC.  
(6.2.2[92.2])

## **5.6 Loss of Offsite Power - coincident with ESF Actuation**

- A. On an actual or simulated loss of offsite power in conjunction with an actual or simulated ESF actuation signal: (SR 3.8.1.19)
  1. De-energization of emergency buses. **(Step 6.3.2[26])**
  2. Load shedding from emergency buses. **(Step 6.3.2[83.1])**
  3. DG 2A-A auto starts from standby condition and:
    - a. Energizes permanently connected loads in less than or equal to 10 seconds. **(Step 6.3.2[83.2])**
    - b. Energizes auto connected emergency loads through automatic load sequencer. **(Step 6.3.2[83.3])**
    - c. Achieves steady state voltage greater than or equal to 6800 V and less than or equal to 7260 V. **(Step 6.3.2[87])**
    - d. Achieves steady state frequency greater than or equal to 59.8 Hz and less than or equal to 60.1 Hz. **(Step 6.3.2[87])**
    - e. Supplies permanently connected and auto connected emergency loads for greater than or equal to five minutes. **(Step 6.3.2[41.5])**

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## 5.7 Slave Relay Safeguard State Testing

### NOTE

Section 5.7 is provided as information on which Slave Relay actuates which component. All acceptance criteria are determined in appropriate performance section according to related Appendix documenting safeguard state actuation position.

#### A. Slave Relay K605 (CI-ØA):

The following devices reach Safeguard state when Slave Relay K605 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-1-14	SG 2 BLOWDOWN FLOW CONTROL VLV	CLOSED
2-FCV-1-32	SG 4 BLOWDOWN FLOW CONTROL VLV	CLOSED
2-FCV-1-181	SG 1 BLOWDOWN ISOLATION VLV	N/A (1)
2-FCV-1-183	SG 3 BLOWDOWN ISOLATION VLV	N/A (1)
2-FCV-43-3	PRESSURIZER GAS CNTMT ISOL VLV	CLOSED
2-FCV-43-12	PRESSURIZER LIQ CNTMT ISOL VLV	CLOSED
2-FCV-43-23	RCS HOT LEGS HDR CNTMT ISOL VLV	CLOSED
2-FCV-43-35	ACCUM TK HDR CNTMT ISOL VLV	CLOSED
2-FCV-43-55	STM GEN BLDN NO 1 SAMP ISOL VLV	CLOSED
2-FCV-43-58	STM GEN BLDN NO 2 SAMP ISOL VLV	CLOSED
2-FCV-43-61	STM GEN BLDN NO 3 SAMP ISOL VLV	CLOSED
2-FCV-43-64	STM GEN BLDN NO 4 SAMP ISOL VLV	CLOSED
2-MTR-77-4	RCDT PUMP 2A	OFF (1) (2)
2-FCV-77-10	RCDT PUMP DISCH FLOW CONTROL VALVE	CLOSED
2-FCV-77-17	RCDT TO GA FLOW CONTROL	CLOSED
2-FCV-77-19	RCDT TO VENT HDR FLOW CONTROL	CLOSED
2-FCV-77-20	RCDT N2 SUPPLY FLOW CONTROL	CLOSED
2-FCV-77-128	REAC BLDG SUMP DISCH FLOW CONTROL	CLOSED
2-FCV-81-12	PW RCS PRESS RELF TNK & RCP STANDPIPES	CLOSED

- (1) Submerged components are deenergized on a simulated accident signal and remain deenergized when accident signal is reset
- (2) Pump trips when 2-FCV-77-10 closes.

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## 5.7 Slave Relay Safeguard State Testing (continued)

### B. Slave Relay K606 (CI-ØA, ABI):

The following devices reach Safeguard state when Slave Relay K606 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). 6.2.2[13], 6.2.2[17], 6.2.2[59], 6.2.2[85], 6.3.2[31], 6.3.2[40], 6.3.2[55.4], 6.3.2[81]

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-63-64	SIS ACCUM TANK N2 HDR INLET VALVE	CLOSED
0-MTR-31-64-A	A SDBR PRESSURIZATION FAN A-A	OFF
2-FCV-63-71	PRESSURIZER GAS CNTMT ISOL VLV	CLOSED (1)
2-FCV-68-305	RCS FLOW CONT VLV WDS N2 MAN TO PRT	CLOSED
2-FCV-68-307	PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY	CLOSED
2-FAN-31-265	INCORE INSTR RM AHU 2A FAN	OFF (1)
2-XX-55-6C-5	ABI	LIT

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when accident signal is reset

### C. Slave Relay K607 (CI-ØA):

The following devices reach Safeguard state when Slave Relay K607 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81]

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-61-191	GLYCOL SUPPLY ISOLATION VALVE	CLOSED
2-FCV-61-193	GLYCOL RETURN ISOLATION VALVE	CLOSED
2-FCV-62-72	REGEN HT EXCH LETDOWN ISO VLV A	CLOSED (1)
2-FCV-62-73	REGEN HT EXCH LETDOWN ISO VLV B	CLOSED (1)
2-FCV-62-76	REGEN HT EXCH LETDOWN ISO VLV	CLOSED (1)
2-FCV-63-185	RHR SUPPLY TEST LINE VALVE	CLOSED

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when accident signal is reset

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## 5.7 Slave Relay Safeguard State Testing (continued)

### D. Slave Relay K608 (SI):

The following devices reach Safeguard state when Slave Relay K608 is energized. Pumps running can be determined by observing MCR indication, or indication of circuit breaker closure. ( 6.2.2[13], 6.2.2[17], 6.2.2[59],6.2.2[85], 6.3.2[31], 6.3.2[40], 6.3.2[55.4], 6.3.2[81]

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-6	CRI	LIT
2-XA-55-5C-106A	MCR ISOLATION ACTUATION	LIT
2-PMP-62-108	CHARGING PUMP 2A-A	RUNNING
2-PMP-63-10	SI PUMP 2A-A	RUNNING
2-PMP-70-59	CCS PUMP 2A-A (Normal Power)	RUNNING
0-PMP-70-51-S	C-S CCS PUMP (Alternate Power)	RUNNING
2-PMP-74-10	RHR PUMP 2A-A	RUNNING
2-CLR-30-183	CCP PUMP ROOM COOLER	RUNNING
2-CLR-30-180	SIS PUMP ROOM COOLER	RUNNING
2-CLR-30-175	RHR PUMP ROOM COOLER	RUNNING

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## 5.7 Slave Relay Safeguard State Testing (continued)

### E. Slave Relay K609 (SI):

The following devices reach Safeguard state when Slave Relay K609 is energized. Device state can be determined by observing MCR indication, or indication of circuit breaker closure. 6.2.2[17], 6.2.2[85], 6.3.2[32], 6.3.2[33], 6.3.2[40], 6.3.2[81]

DEVICE	DESCRIPTION	SAFEGUARD STATE
DG 2A-A	DIESEL GENERATOR 2A-A	RUNNING
2-MTR-77-125A	REACTOR BUILDING FLOOR & EQUIPMENT DRAIN SUMP PUMP 2A	OFF
0-MTR-26-2A	HIGH PRESSURE FIRE PUMP 2A-A	OFF
2-PMP-70-131	RCP THERMAL BARRIER CCS BOOSTER PUMP 2A-A	ON
THERMAL OVERLOAD BYPASS	THERMAL OVERLOAD BYPASS	ON
480V Reactor MOV BD 2A1-A C/17E & C/18F2	POWER OUTLETS	OFF

### F. Slave Relay K611 (SI):

The following devices reach Safeguard state when Slave Relay K611 is energized. Pumps running can be determined by observing a rise in discharge pressure on chart recorder, or indication of circuit breaker closure. (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
AFW Separation Relay	RELAY RA1	ENERGIZED
AFW Separation Relay	RELAY RA2	ENERGIZED
0-PMP-67-28-A	ERCW PUMP A-A	RUNNING
0-PMP-67-32-A	ERCW PUMP B-A	RUNNING
2-PMP-3-118-A	AUX MD FD PMP 2A-A	RUNNING
0-PMP-67-36-A	ERCW PUMP C-A	RUNNING
0-PMP-67-40-A	ERCW PUMP D-A	RUNNING

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## 5.7 Slave Relay Safeguard State Testing (continued)

### G. Slave Relay K612/K613 (CI-ØA):

The following devices reach Safeguard state when Slave Relay K612 and K613 are energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off) or from a 125 to 0 VDC step change on recorder chart. (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
0-FAN-31-62	SHUTDOWN BOARD ROOM B PRESSURIZING FAN B-A	OFF
0-FAN-65-23	EMERGENCY GAS TREATMENT FAN A-A	RUNNING (steady state ΔP)
2-FCV-31-306	INCORE INSTR RM AHU 2A CW PUMP ISOL	CLOSED
2-FCV-31-308	INCORE INSTR RM AHU 2A CWS ISOL	CLOSED
2-FCV-31-326	INCORE INSTR RM AHU 2B CWR ISOL	CLOSED
2-FCV-31-330	INCORE INSTR RM AHU 2B CWS ISOL	CLOSED
2-FCV-62-74	CVCS LETDOWN ORIFICE C ISOLATION	CLOSED
2-FAN-65-77	EGTS CNTMT ANN VAC FAN 2A	TRIPPED
2-FCO-65-77	EGTS CNTMT ANN VAC FAN 2A SUCT ISOLATION	CLOSED
2-FCV-65-9	EGTS TRAIN A UNIT 2 SUCT ISOL	OPEN
2-FCO-65-46	EGTS TO U2 SHIELD BLDG	OPEN
2-FCV-65-5	EGTS CNTMT ANN VAC SUCT ISOL	CLOSED
2-PCV-65-81	SHIELD BLDG VENT & CNTMT ANN ISOL VLV	OPEN
2-PCV-65-86	EGTS CNTMT ANNULUS ISOL VLV	OPEN

### H. Slave Relay K614 (CI-ØA):

The following devices reach Safeguard state when Slave Relay K614 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[13], 6.2.2[17], 6.2.2[59], 6.2.2[85], 6.3.2[31], 6.3.2[40], 6.3.2[55.4], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-1	ØA	LIT
2-FCV-62-63	CVCS SEAL WATER RETURN HEADER ISOL	CLOSED



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## 5.7 Slave Relay Safeguard State Testing (continued)

### I. Slave Relay K615 (CI-ØA & CVI):

The following devices reach Safeguard state when Slave Relay K615 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FAN-30-1	CONTAINMENT PURGE AIR SUPPLY FAN 2A	TRIPPED
2-FAN-30-1E	CONTAINMENT PURGE AIR EXHAUST FAN 2A	TRIPPED
2-FAN-30-4	CONTAINMENT PURGE AIR SUPPLY FAN 2B	TRIPPED
2-FAN-30-4E	CONTAINMENT PURGE AIR EXHAUST FAN 2B	TRIPPED
2-FAN-30-11	CNTMT INCORE INSTR ROOM SUPPLY FAN	TRIPPED
2-FAN-30-11E	CNTMT INCORE INSTR ROOM EXHAUST FAN	TRIPPED
2-FCV-30-2	CONTAINMENT PURGE AIR SUPPLY FAN 2A DISCHARGE	CLOSED
2-FCV-30-5	CONTAINMENT PURGE AIR SUPPLY FAN 2B DISCHARGE	CLOSED
2-FCV-30-12	CNTMT ANNULUS PURGE SUPPLY	CLOSED
2-FCV-30-54	CNTMT ANNULUS PURGE EXHAUST	CLOSED
2-FCV-30-61	CNTMT PURGE AIR EXHAUST FAN 2A SUCTION	CLOSED
2-FCV-30-62	CNTMT PURGE AIR EXHAUST FAN 2B SUCTION	CLOSED

### J. Slave Relay K618 (CIØB):

The following devices reach Safeguard state when Slave Relay K618 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[65], 6.2.2[87])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-70-90	RC PMP THERM BAR RET CNTMT ISOL VLV	CLOSED
2-FCV-70-92	RC PMP OIL CLR RET CNTMT ISOL VLV	CLOSED
2-FCV-70-100	RC OIL CLR HDR CNTMT ISLN VLV	CLOSED
2-FCV-70-133	RC PMP THRM BAR CONT ISOL VLV	CLOSED

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## 5.7 Slave Relay Safeguard State Testing (continued)

### K. Slave Relay K619 (CIØB):

The following devices reach Safeguard state when Slave Relay K619 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[59], 6.3.2[31], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-3	ØB	LIT
2-FCV-32-81	REACTOR BLDG UNIT 2 TRAIN A ISOL	CLOSED
2-PMP-70-131	RCP THERMAL BARRIER CCS BOOSTER PUMP 2A-A	OFF

### L. Slave Relay K622 (CVI):

The following devices reach Safeguard state when Slave Relay K622 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[13], 6.2.2[17], 6.2.2[59], 6.2.2[85], 6.3.2[31], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-30-7	UPPER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-10	UPPER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-14	LOWER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-17	CNTMT LOWER COMPARTMENT PURGE SUPPLY	CLOSED
2-FCV-30-20	INCORE INSTR RM PURGE ISOL VALVE	CLOSED (1)
2-FCV-30-40	CNTMT LOWER COMPARTMENT PURGE EXH PRESS RELIEF	CLOSED (1)
2-FCV-30-51	CNTMT UPPER COMPARTMENT EXHAUST ISOLATION	CLOSED
2-FCV-30-52	CNTMT UPPER COMPARTMENT EXHAUST ISOLATION	CLOSED
2-FCV-30-56	CNTMT LOWER COMPARTMENT EXHAUST ISOLATION	CLOSED (1)
2-FCV-30-59	CNTMT INSTRUMENT ROOM EXHAUST ISOLATION	CLOSED
2-FCV-90-107	CNTMT BLDG LOWER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-111	CNTMT BLDG LOWER COMPT AIR RAD MON RETURN	CLOSED
2-FCV-90-113	CNTMT BLDG UPPER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-117	CNTMT BLDG UPPER COMPT AIR RAD MON RETURN	CLOSED
2-XX-55-6C-2	CVI	LIT

- (1) Submerged components are deenergized on a simulated accident signal and remain deenergized when accident signal is reset

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## 5.7 Slave Relay Safeguard State Testing (continued)

### M. Slave Relay K625 (CIØB):

The following devices reach Safeguard state when Slave Relay K625 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). Containment Air Return Fan is NOT started during performance of this instruction. (6.2.2[65], 6.2.2[87], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-67-87	LWR CNTMT 2A CLRS DISCH ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-95	LWR CNTMT 2C CLRS DISCH ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-97	LOWER CNTMT 2C COOLER SUPPLY ISLN VLV IC	CLOSED
2-FCV-67-99	LWR CNTMT 2B COOLERS SUPPLY ISOL VLV	CLOSED
2-FCV-67-107	LWR CNTMT 2D COOLERS SUPPLY ISOL VLV	CLOSED
2-FCV-67-130	UPPER CNTMT VENT CLR 2A SUPPLY ISOL VLV	CLOSED
2-FCV-67-133	UPPER CNTMT VENT CLR 2C SUPPLY ISOL VLV	CLOSED
2-FCV-67-295	UPPER CNTMT VENT CLR 2A ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-296	UPPER CNTMT VENT CLR 2C ISOL VLV INSIDE CNTMT	CLOSED
2-FAN-30-38	CNTMT AIR RETURN FAN 2A-A	RUNNING (2-02-30-38-A ENERGIZED)
2-FAN-30-83	CRDM CLR 2A-A	OFF (1)
2-FAN-30-88	CRDM CLR 2C-A	OFF (1)
2-FAN-30-74	LWR CNTMT CLR 2A-A	OFF (1)
2-FAN-30-77	LWR CNTMT CLR 2C-A	OFF (1)
2-FAN-30-95	UPR CNTMT CLR 2A	OFF (1)
2-FAN-30-99	UPR CNTMT CLR 2C	OFF (1)

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when accident signal is reset

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## 5.7 Slave Relay Safeguard State Testing (continued)

### N. Slave Relay K626 (CIØB):

The following devices reach Safeguard state when Slave Relay K626 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[65], 6.2.2[87], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-67-89	LOWER CNTMT A COOLER SUPPLY ISLN VALVE IC	CLOSED
2-FCV-67-104	LWR CNTMT B CLRS DISCH ISOL VLV OUTSIDE CNTMT	CLOSED
2-FCV-67-112	LWR CNTMT D CLRS DISCH ISOL VLV OUTSIDE CNTMT	CLOSED
2-FCV-67-139	UPPER CNTMT VENT CLR B ISOL VLV OUTSIDE CNTMT	CLOSED
2-FCV-67-142	UPPER CNTMT VENT CLR D ISOL VLV OUTSIDE CNTMT	CLOSED

### O. Slave Relay K630 (CI-ØA):

The following devices reach Safeguard state when Slave Relay K630 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (6.2.2[17], 6.2.2[85], 6.3.2[40], 6.3.2[81])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-26-240	CONTAINMENT STANDPIPE ISOLATION VALVE	CLOSED
2-FCV-26-243	RCP SPRAY ISOLATION VALVE	CLOSED
2-FCV-61-96	FLOOR COOLANT GLYCOL ISOLATION VALVE	CLOSED
2-FCV-61-110	FLOOR COOLANT GLYCOL ISOLATION VALVE	CLOSED
2-FCV-70-143	ISOL VLV TO EXCESS LETDOWN HX	CLOSED

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## **5.7 Slave Relay Safeguard State Testing (continued)**

### **P. Slave Relay K643 (CS):**

The following devices reach Safeguard state when Slave Relay K643 is energized. Pump Running can be determined by observing MCR indication, or indication of circuit breaker closure. (6.2.2[65], 6.2.2[87], 6.3.2[40], 6.3.2[81])

<b>DEVICE</b>	<b>DESCRIPTION</b>	<b>SAFEGUARD STATE</b>
2-PMP-72-27	CONTAINMENT SPRAY PMP 2A-A	RUNNING
2-CLR-30-177	CSP 2A-A ROOM COOLER	RUNNING

## **5.8 System Description Manual, N3-82-4002, Standby Diesel Generator System**

### **5.8.1 Appendix G, Preoperational Test Criteria, (Page 2 of 3), Paragraph 2.4, Random Loads Test**

- A. DG 2A-A capability to start and carry random loads along with sequenced loads shall be verified. Random load to be started with medium voltage motor shall be either fire pump or main control room or shutdown board room chiller. Verification of capability to start and carry random loads will also verify potential of overlapping loading sequences due to sequence timer inaccuracies.  
(Step 6.3.2[36])
- B. The ability of an emergency start to override idle start circuit is demonstrated by placing DG 2A-A in a ready to load condition from an idle condition.  
(Step 6.2.2[21])

### **5.8.2 Appendix G, Preoperational Test Criteria, (Page 2 of 3), Paragraph 2.5, Integrated ESF System Test**

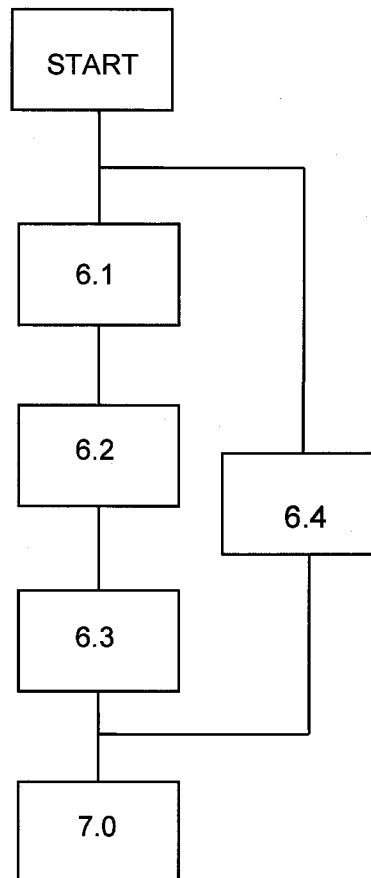
For integrated ESF System Test with loss of offsite power test, safety-related pumps must be aligned for full flow conditions. Prior to or immediately following this test with pumps operating at full flow, an identical test will be performed with pumps operating under miniflow conditions. Results from full flow and miniflow tests will establish a baseline for each DG's dynamic loading response.  
(Step 6.3.2[41.1], 6.3.2[50])

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## 6.0 PERFORMANCE

### NOTES

- 1) Subsections should be performed in the following order.
- 2) Subsection 6.4 is performed independently and gathers data for inclusion in this Instruction.



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Date \_\_\_\_\_

## 6.1 Loss of Offsite Power (LOOP) - Train 2A - No ESF Actuation

### NOTES

- 1) This Section initiates the following test evolutions:
- 2) Synchronize 6.9KV Shutdown Board 2A-A and DG 2A-A, transfer loads between DG and Offsite (Preferred) power source for both Normal and Alternate 6.9KV Shutdown Board feeders;
- 3) Loss of Offsite Power to 6.9KV Shutdown Board 2A-A while on Alternate Offsite power supply;
- 4) Verification of loads to sequence onto 6.9KV Shutdown Board while powered from associated DG;
- 5) Verification of DG 2A-A non-emergency trips bypassed while operating in emergency mode;
- 6) D-A ERCW pump to strip and auto load sequence on Loss of Offsite Power.

### 6.1.1 Preliminary Actions for Subsection 6.1

- [1] **ENSURE** prerequisites in Section 4.0, Preliminary Actions, completed. \_\_\_\_\_
- [2] **ALIGN** components to their "PRE-TEST" "REQ'D POS OR COND" positions per Appendix K, Loss of Offsite Power - Train 2A, Section 6.1. \_\_\_\_\_
- [3] **VERIFY** DG Recorder(s) installation and connection COMPLETED:
  - Appendix G, DG 2A-A Chart Recorder Connections \_\_\_\_\_
  - Appendix H, DG 2A-A Chart Recorder Hookup \_\_\_\_\_
- [4] **VERIFY** SER recorders installation and connection COMPLETED:
  - Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
  - Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

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#### 6.1.1 Preliminary Actions for Subsection 6.1 (continued)

<b>NOTE</b>
Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

[5] IF DG 2A-A has **NOT** operated within past 12 hours, **THEN:**

[5.1] **ROLL** DG 2A-A to check for water in cylinders using 0-SOI-82.03, Section 8.2. \_\_\_\_\_

[5.2] **RECORD** in 0-SI-82-9, DIESEL GENERATOR START HISTORY, time of inoperability for roll of DG 2A-A. \_\_\_\_\_

[6] **ENSURE** DG 2A-A is in Standby Alignment using 0-SOI-82.03. \_\_\_\_\_

[7] **PLACE** D-A ERCW pump in service using 0-SOI-67.01 **AND** \_\_\_\_\_

**ENSURE** 0-XS-67-286, ERCW PMP B-A/D-A DG POWER SEL, is in PUMP D-A position. \_\_\_\_\_

[8] **ENSURE** Handswitch CSST C LTC-Y REMOTE CONTROL, at 0-ECB-2, is in OFF(Pull for Auto) \_\_\_\_\_

[9] **ENSURE** Handswitch CSST C LTC-X REMOTE CONTROL, at 0-ECB-2, is in OFF(Pull for Auto) \_\_\_\_\_

[10] **WHEN** initiation of Loss of Offsite Power test is imminent, **THEN**

**SHUT DOWN** U2 glycol system circ pumps and chillers using 0-SOI-61.01, ICE CONDENSER SYSTEM. \_\_\_\_\_

[11] **ENSURE** Breaker 11, FIRE PUMP CONTROL, 120V AC Preferred Dist Bd, 0-DBD-3 [Main Control Room] is ON. \_\_\_\_\_

[12] **ENSURE** 2-PDIC-3-122A, AFW PMP A-A DISCH PRESS CONTROL, in AUTO. \_\_\_\_\_

[13] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% to support 2A-A MD AFW pump operation. \_\_\_\_\_

[14] **GO TO** Section 6.1.2, Performance of Loss of Offsite Power (LOOP) - Train 2A. \_\_\_\_\_



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## 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A

### NOTE

Steps 6.1.2[2] through 6.1.2[32] demonstrate capability of DG 2A-A and 6.9KV Shutdown Board 2A-A to transfer loads to DG then back to Offsite Power using either 6.9KV Shutdown Board 2A-A normal feeder or alternate feeder. These steps may be performed independently, in sequence, with Test Directors' concurrence while final alignment and final setup for Section 6.1.2 is being completed.

- [1] **VERIFY** all prerequisites listed in Section 6.1.1 have been completed. \_\_\_\_\_
- [2] **WHEN** ready to start DG 2A-A, **THEN:**
  - [2.1] **ANNOUNCE** starting of DG 2A-A over plant PA. \_\_\_\_\_
  - [2.2] **START** DG 2A-A, **AND**  
**RAISE** engine speed to Rated speed using 0-SOI-82.03, Section 8.1. \_\_\_\_\_
  - [2.3] **SYNCHRONIZE AND LOAD** DG 2A-A with offsite power through 1816 - NORMAL FROM CSST C, using 0-SOI-82.03, Section 8.1.4. \_\_\_\_\_
- [3] **WHEN** DG 2A-A is loaded to greater than or equal to 1.1 Megawatts, as indicated on 2-EI-82-70A, DG MEGAWATTS, **THEN:**
  - [3.1] **STOP** loading DG 2A-A. \_\_\_\_\_
  - [3.2] **MAINTAIN** DG MEGAVARS between 0.75 to 1.25 OUTGOING indicated on 2-EI-82-71A using 2-HS-82-72, VOLTAGE REGULATOR. \_\_\_\_\_

### CAUTION

Operation of the DG at load of 2.7 MW or less for extended period of time may lead to exhaust fire.

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A  
(continued)**

**NOTE**

When offsite power is disconnected from Shutdown Board in Step 6.1.2[4], DG voltage, frequency, and amp parameters may change rapidly requiring manual adjustment of DG speed and voltage to nominal 6.9KV and 60 HZ.

- [4] **PLACE** 2-HS-57-41B, 1816 - NORMAL FROM CSST C, in TRIP position. \_\_\_\_\_
- [5] **VERIFY** by indicating lights at 2-HS-57-41B, 1816 - NORMAL FROM CSST C, breaker is OPEN. (**Acc Crit 5.1C.1.a**) \_\_\_\_\_
- [6] **VERIFY** by indicating lights at 2-HS-57-46A, 1922 - DG TO SD BD 2A-A remains CLOSED. (**Acc Crit 5.1C.1.a**) \_\_\_\_\_
- [7] **RESTORE** offsite power to 6.9KV SD BD 2A-A from 1816-NORMAL FROM CSST C as follows:  
(**Acc Crit 5.1C.3.a**)
- [7.1] **ENSURE** 2-XS-57-43, 6.9 SD BD 2A-A XFER SELECTOR, in MAN. \_\_\_\_\_
- [7.2] **ENSURE** the following sync switches for DG 2A-A in OFF:

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2B SYNC SWITCH	0-M-26	OFF	2-HS-57-45	
NORMAL - CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-42	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-47	
ALTERNATE CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-114	

- [7.3] **PLACE** 2-HS-57-42, NORMAL - CSST C SYNC SWITCH, to SYN position. \_\_\_\_\_

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A  
(continued)**

**NOTE**

Small adjustments in DG 2A-A voltage provide better control of voltage limiting overshooting of required DG 2A-A voltage. Voltage control response is approximately five times faster than speed control response.

- [7.4] **MATCH** generator INCOMING FREQUENCY (2-XI-82-62) with RUNNING FREQUENCY (2-XI-82-63) using 2-HS-82-73, SPEED CONTROL. \_\_\_\_\_
- [7.5] **MATCH** generator INCOMING VOLTAGE (2-EI-82-64) with RUNNING VOLTAGE (2-EI-82-65) using 2-HS-82-72, VOLTAGE REGULATOR. \_\_\_\_\_
- [7.6] **PLACE** 2-HS-82-78, DG MODE SELECTOR, in PARALLEL. \_\_\_\_\_
- [7.7] **ENSURE** DG 2A-A Frequency and Voltage are MATCHED with 6.9 kV SD BD 2A-A. \_\_\_\_\_
- [7.8] **ADJUST** 2-HS-82-73, SPEED CONTROL, 0-M-26 to obtain desired slow clockwise rotation for at least one revolution (15 or more seconds) on 2-XI-82-61, TRAIN 2A-A SYNCHROSCOPE. \_\_\_\_\_

CV

**Start of Critical Step(s)**

- [7.9] **WHEN** TRAIN 2A-A SYNCHROSCOPE (2-XI-82-61) reaches 12 o'clock, **THEN**

**CLOSE** 2-HS-57-41B, 1816 - NORMAL FROM CSST C. \_\_\_\_\_

**End of Critical Step(s)**

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A  
(continued)**

[7.10] **RECORD** clock time 1816 - NORMAL FROM CSST C is  
CLOSED.

Clock Time \_\_\_\_\_

[7.11] **PLACE** 2-HS-57-42, NORMAL - CSST C SYNC  
SWITCH, in OFF position.

[8] **IF** DG 2A-A operated at less than or equal to 1.32 megawatts  
load for greater than four hours but less than eight hours,  
**THEN:**

[8.1] **RAISE** DG 2A-A load to greater than or equal to  
2.2 Megawatts.

[8.2] **OPERATE** DG 2A-A for greater than or equal to  
30 minutes at greater than 2.2 megawatts load.

[9] **IF** DG 2A-A operated at less than or equal to 1.32 megawatts  
load for greater than or equal to eight hours, **THEN:**

[9.1] **RAISE** load gradually until exhaust smoke is about twice  
as dense as normal.

[9.2] **MAINTAIN** load until exhaust clears.

[9.3] **REPEAT** Steps 6.1.2[9.1] and 6.1.2[9.2] until full load  
can be carried with a clear exhaust.

**CAUTION**

If load is lowered to zero or below zero, a reverse power trip is possible.

[10] **REDUCE** megawatts as indicated on 2-EI-82-70A, using  
2-HS-82-73, SPEED CONTROL, to near ZERO.

[11] **REDUCE** megavars as indicated on 2-EI-82-71A, using  
2-HS-82-72, VOLTAGE REGULATOR, to near ZERO.

[12] **WHEN** DG 2A-A load is near ZERO, **THEN**

**OPEN** 1922 - DG TO SD BD 2A-A, using 2-HS-82-46A.

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A**  
**(continued)**

- [13] **VERIFY** by indicating lights at 2-HS-57-41B, 1816 - NORMAL FROM CSST C, breaker is CLOSED. \_\_\_\_\_
- [14] **VERIFY** by indicating lights at 2-HS-57-46A, 1922 - DG TO SD BD 2A-A, is OPEN. \_\_\_\_\_
- [15] **TRANSFER** 6.9KV SD BD 2A-A from 1816-NORMAL FROM CSST C to 1936-ALTERNATE FROM CSST D using 2-SOI-211.03. \_\_\_\_\_
- [16] **SYNCHRONIZE AND LOAD** DG 2A-A with offsite power through 1936-ALTERNATE FROM CSST D using 0-SOI-82.03, Section 8.1.4. \_\_\_\_\_
- [17] **WHEN** DG 2A-A is loaded to greater than or equal to 1.1 Megawatts, as indicated on 2-EI-82-70A, DG MEGAWATTS, **THEN:**
  - [17.1] **STOP** loading DG 2A-A. \_\_\_\_\_
  - [17.2] **MAINTAIN** DG MEGAVARS between 0.75 to 1.25 OUTGOING on 2-EI-82-71A, using 2-HS-82-72, VOLTAGE REGULATOR. \_\_\_\_\_
- [18] **PLACE** 2-HS-57-97B, 1936 - ALTERNATE FROM CSST D, in TRIP position. \_\_\_\_\_
- [19] **VERIFY** by indicating lights at 2-HS-57-97B, 1936 - ALTERNATE FROM CSST D, is OPEN. **(Acc Crit 5.1C.2.a)** \_\_\_\_\_
- [20] **VERIFY** by indicating lights at 2-HS-57-46A, 1922 - DG TO SD BD 2A-A, is CLOSED. **(Acc Crit 5.1C.2.a)** \_\_\_\_\_
- [21] **RESTORE** offsite power to 6.9KV SD BD 2A-A from 1936 - ALTERNATE FROM CSST D as follows: **(Acc Crit 5.1C.4.a)** \_\_\_\_\_
  - [21.1] **ENSURE** 2-XS-57-43, 6.9 SD BD 2A-A XFER SELECTOR, [2-M-1], in MAN. \_\_\_\_\_

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2A  
(continued)**

[21.2] **ENSURE** the following sync switches for DG 2A-A in  
OFF:

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2B SYNC SWITCH	0-M-26	OFF	2-HS-57-45	
NORMAL - CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-42	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-47	
ALTERNATE CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-114	

[21.3] **PLACE** 2-HS-57-114, NORMAL - CSST D SYNC  
SWITCH, to SYN position. \_\_\_\_\_

**NOTE**

Small adjustments in DG 2A-A voltage provide better control of voltage limiting overshooting of required DG 2A-A voltage. Voltage control response is approximately five times faster than speed control response.

[21.4] **MATCH** generator INCOMING FREQUENCY  
(2-XI-82-62) with RUNNING FREQUENCY (2-XI-82-63)  
using 2-HS-82-73, SPEED CONTROL. \_\_\_\_\_

[21.5] **MATCH** generator INCOMING VOLTAGE (2-EI-82-64)  
with RUNNING VOLTAGE (2-EI-82-65) using  
2-HS-82-72, VOLTAGE REGULATOR. \_\_\_\_\_

[21.6] **PLACE** 2-HS-82-78, DG MODE SELECTOR, in  
PARALLEL. \_\_\_\_\_

[21.7] **ENSURE** DG 2A-A Frequency and Voltage are  
MATCHED with 6.9 kV SD BD 2A-A. \_\_\_\_\_

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- [21.8] **ADJUST** 2-HS-82-73, SPEED CONTROL, [0-M-26], to obtain desired slow clockwise rotation for at least one revolution (15 or more seconds) on 2-XI-82-61, TRAIN 2A-A SYNCHROSCOPE.

CV

**Start of Critical Step(s)**

- [21.9] **WHEN** TRAIN 2A-A SYNCHROSCOPE (2-XI-82-61) reaches 12 o'clock, **THEN**

**CLOSE** 2-HS-57-97B, 1936 - ALTERNATE FROM CSST D.

**End of Critical Step(s)**

- [21.10] **RECORD** clock time 1936 - ALTERNATE FROM CSST D, is CLOSED.

Clock Time \_\_\_\_\_

- [21.11] **PLACE** 2-HS-57-114, ALTERNATE - CSST D SYNC SWITCH, in OFF position.

- [22] **VERIFY** by indicating lights at 2-HS-57-97B, 1936 - ALTERNATE FROM CSST D, is CLOSED.

- [23] **IF** DG 2A-A operated at less than or equal to 1.32 megawatts load for greater than four hours but less than eight hours, **THEN:**

- [23.1] **RAISE** DG 2A-A load to greater than or equal to 2.2 Megawatts.

- [23.2] **OPERATE** DG 2A-A for greater than or equal to 30 minutes at greater than 2.2 megawatts load.

- [24] **IF** DG 2A-A operated at less than or equal to 1.32 megawatts load for greater than or equal to eight hours, **THEN:**

- [24.1] **RAISE** load gradually until exhaust smoke is about two times normal density.

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- [24.2]    **MAINTAIN** load until exhaust clears. \_\_\_\_\_
- [24.3]    **REPEAT** Steps 6.1.2[24.1] and 6.1.2[24.2] until full load  
can be carried with a clear exhaust. \_\_\_\_\_
- [25]    **REDUCE** megawatts as indicated on 2-EI-82-70A, using  
2-HS-82-73, SPEED CONTROL, to near ZERO. \_\_\_\_\_
- [26]    **REDUCE** megavars as indicated on 2-EI-82-71A, using  
2-HS-82-72, VOLTAGE REGULATOR, to near ZERO. \_\_\_\_\_



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- [27] **PLACE** 2-HS-82-74, START-STOP control switch, in STOP. \_\_\_\_\_
- [28] **CHECK** the following:
- A. Generator ACB 1922 OPEN (2-HS-57-46A indicating lights). \_\_\_\_\_
  - B. Generator Voltage ZERO (2-EI-82-66A) by placing 2-XS-82-66A to DG 2A-A position. \_\_\_\_\_
  - C. Engine Speed dropped to 450 rpm (440 to 460 rpm). [2-PNL-82-A] \_\_\_\_\_
  - D. Crankcase lube oil dipstick level at 7 day mark or greater. \_\_\_\_\_
  - E. Engine Speed holds at 450 rpm (440 to 460 rpm) for 10 minutes. [2-PNL-82-A] \_\_\_\_\_
  - F. Engine Speed drops to ZERO after 10 minutes. [2-PNL-82-A] \_\_\_\_\_
  - G. Soak back pump RUNNING by oil pressure 10 psig or more on 2-IPI-82-1045/2A1, DG ENG 2A1 TURBOCHARGER SOAK BACK OIL PRESS, and 2-IPI-82-1045/2A2, DG ENG 2A2 TURBOCHARGER SOAK BACK OIL PRESS. \_\_\_\_\_
- [29] **PLACE** 2-HS-57-46A, 1922 - DG TO SD BD 2A-A, in TRIP position to clear breaker disagreement. \_\_\_\_\_
- [30] **PLACE** 2-HS-82-78, DG MODE SELECTOR, in UNIT. \_\_\_\_\_
- [31] **RECORD** DG 2A-A operational information in 0-SI-82-9. \_\_\_\_\_
- [32] **PERFORM** 0-SOI-82.03, Section 5.2, Verification of Standby Alignment, for DG 2A-A. \_\_\_\_\_
- [33] **ENSURE** Appendix C, Equipment Alignment, is COMPLETE. \_\_\_\_\_

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#### NOTE

With Test Director approval, Step 6.1.2[34] may be performed at any time prior to starting pumps.

- [34] **VERIFY** each of pumps listed in Step 6.1.2[37] recirc flow paths have been walked down with pump flowpath aligned for starting pumps. \_\_\_\_\_
- [35] **ENSURE** 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, for CS Pump 2A-A RWST recirc flow is **CLOSED** \_\_\_\_\_
- [36] **MAKE** a plant announcement for starting of pumps in Step 6.1.2[37]. \_\_\_\_\_

#### CAUTION

Pump damage may occur for any running pump not meeting minimum flow requirements.

- [37] **START** the following pumps **AND**

**VERIFY** by HS indicating lights associated pumps are **RUNNING** on recirc and handswitches are in **A AUTO/A-P AUTO**:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-118A	AFW PMP A-A	
2-M-5	2-HS-62-108A	CCP A-A (ECCS)	
2-M-6	2-HS-63-10A	SI PMP A (ECCS)	
2-M-6	2-HS-74-10A	RHR PMP A (ECCS)	
2-M-6	2-HS-72-27A	CNTMT SPRAY PMP A	
0-M-27B	2-HS-70-59A	CCS PMP 2A-A	

- [38] **VERIFY** by indicating lights [2-M-6] at 2-HS-74-12A, RHR PMP A MINI FLOW valve is **OPEN**. \_\_\_\_\_

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[39] **START** HPFP Pump 2A-A **AND**

**PLACE** 0-HS-26-9A, HPFP PMP 2A-A, in A-P Auto. \_\_\_\_\_

[40] **REVIEW** Appendix K for completion and sign for pumps started in Step 6.1.2[37] and 6.1.2[39]. \_\_\_\_\_

[41] **PERFORM** Appendix W, Electrical Support, Steps 5.0[1] & 5.0[2] to install jumper to place automatic start signal to HPFP 2A-A. \_\_\_\_\_

#### **NOTE**

All individual heater element breakers are opened in preliminary actions, Steps 4.4[16] and 4.4[19], no power will be transmitted to pressurizer heater elements

[42] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in **MANUAL AND**

**LOWER** controller output to 0% to allow **BACKUP HEATERS A-A (2-HS-68-341A) and CONTROL HEATERS D (2-HS-68-341F) to ENERGIZE.** \_\_\_\_\_

[43] **VERIFY** 2-HS-68-341A, **BACKUP HEATERS A-A [2-M-4],** indicates breaker closed by **RED light LIT.** \_\_\_\_\_

[44] **CLOSE** control group 2D breaker using 2-HS-68-341F, **CONTROL HEATERS D, [2-M-4] AND**

**VERIFY** breaker indicates closed by **RED light LIT.** \_\_\_\_\_

#### **NOTE**

Steps 6.1.2[45] through 6.1.2[51] may be performed concurrently or in any order.

[45] **TRANSFER** 6.9KV SD BD 1B-B from 1728-NORMAL FROM CSST D, to 1934-ALTERNATE FROM CSST C, using 0-SOI-211.02, Section 8.1. \_\_\_\_\_

[46] **ENSURE** 2-XS-57-43, 6.9 SD BD 2A-A XFER SELECTOR, at [2-M-1], in **MAN** position. \_\_\_\_\_

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- [47] **EVALUATE** LCO 3.8.9 for entry conditions met for 6.9 kV Shutdown Board 2A-A with AUTO/MAN switch in MAN.

\_\_\_\_\_  
U2 SRO

- [48] **VERIFY** Ice Condenser chillers and pumps removed from service.

\_\_\_\_\_

- [49] **NOTIFY** U2 SRO to evaluate TS 3.3.7 for entry conditions for inhibiting CRI Train A function in Step 6.1.2[50] for 0-RM-90-125.

\_\_\_\_\_

- [50] **SELECT** 0-HS-90-136A1, VENT ISOL RAD MON BLOCK, to 0-125 **AND**

**PLACE** in PULL OUT, to inhibit Train A CRI when 2A-A Shutdown Board is deenergized.

\_\_\_\_\_

\_\_\_\_\_  
CV

- [51] **PERFORM** the following for Sequence of Events Recorder (SER):

[51.1] **OBTAIN** a SER status summary printout.

\_\_\_\_\_

[51.2] **ENSURE** SER is in Standby Mode.

\_\_\_\_\_

- [52] **VERIFY** Test personnel are stationed for performance of Steps 6.1.2[57], Loss of Offsite Power, Train 2A.

\_\_\_\_\_

#### **NOTE**

Steps 6.1.2[53] and 6.1.2[54] may be performed concurrently.

- [53] **ANNOUNCE** over paging system the following message:

Attention in the plant, Attention in the plant: Unit 2 will be initiating a Loss of Offsite Power to 6.9kV Shutdown Board 2A-A resulting in Diesel Generator 2A-A automatically starting and reenergizing 2A-A 6.9kV Shutdown Board. All personnel should remain clear of U2 operating equipment and electrical boards. (repeat message)

\_\_\_\_\_  
Ops.

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- [54] **NOTIFY** U1 SRO to evaluate entry conditions for LCO 3.8.1, 3.8.4, 3.8.7, 3.8.9, upon performance of Step 6.1.2[57]. \_\_\_\_\_

U1 SRO

Date

- [55] **ENSURE** 2-XS-57-39, 6.9 SD BD 2A-A VOLTMETER SELECTOR selected to SHTDN BD 2A-A position to provide indication of 6.9 kV SD BD 2A-A voltage on 2-EI-57-39, 6.9 SDB 2A-A VOLTS. \_\_\_\_\_

- [56] **NOTIFY** personnel to start the following recorders:

[56.1] DG Recorder \_\_\_\_\_

[56.2] Sequence of Events Recorder \_\_\_\_\_

[56.3] **REQUEST** acknowledgement that BOTH recorders are running. \_\_\_\_\_

#### NOTE

Step 6.1.2[57] initiates Loss of Offsite Power load strip and load sequence for DG 2A-A and 6.9kV SD BD 2A-A.

- [57] **PERFORM** a five second countdown over paging system, **THEN**

**OPEN** Breaker 2814, NORM FEEDER FOR 6.9KV SHDN BD 1B-B & ALT FEEDER FOR 6.9KV SHDN BD 2A-A, at 0-ECB-3 to initiate Train 2A Loss of Offsite Power (LOOP). \_\_\_\_\_

- [58] **RECORD** clock time. \_\_\_\_\_

Clock Time \_\_\_\_\_

- [59] **Verify** by indicating lights at 2-HS-57-97B, 1936 - ALTERNATE FROM CSST D [0-M-26], breaker is open. \_\_\_\_\_

- [60] **VERIFY** 6.9 kV SD BD 2A-A voltage reduces to ZERO on 2-EI-57-39, 6.9 SDB 2A-A VOLTS. (**Acc Crit 5.2A.1**) \_\_\_\_\_

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- [61] **VERIFY** 2-HS-57-46A, 1922-DG TO SD BD 2A-A, breaker CLOSED, red light is LIT. **(Acc Crit 5.1C.6.a)** \_\_\_\_\_
- [62] **NOTIFY** U2 SRO to perform 0-SI-82-2, 8 HOUR DG AC POWER SOURCE OPERABILITY VERIFICATION, within one hour of time recorded in Step 6.1.2[58]. \_\_\_\_\_
- [63] **VERIFY** components listed below are either running OR indicate breakers closed using RED indicating light at handswitch:**(Acc Crit 5.2A.3.b)(Acc Crit 5.2B)**

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
CCP A-A (ECCS)	2-HS-62-108A	[2-M-5]	
ERCW PMP D-A	0-HS-67-40A	[0-M-27A]	
CCS PMP 2A-A	2-HS-70-59A	[0-M-27B]	
THRM BAR BSTR PMP 2A (TBBP)	2-HS-70-131A	[0-M-27B]	
AFW PMP A-A	2-HS-3-118A	[2-M-4]	
HPFP PMP 2A-A	0-HS-26-9A	[1-M-15]	
BACKUP HEATERS A-A	2-HS-68-341A	[2-M-4]	

[64] **VERIFY** Channel III Inverters voltage and frequency are normal **AND**

**RECORD** the following values:

**FREQUENCY - 59.5 to 60.5 HZ**

- 1-INV-235-3

Frequency	_____ HZ
-----------	----------

- 2-INV-235-3

Frequency	_____ HZ
-----------	----------

**VOLTAGE - 118V to 126V**

- 1-INV-235-3

Voltage	_____ VAC
---------	-----------

- 2-INV-235-3

Voltage	_____ VAC
---------	-----------

[65] **WHEN** all loads have sequenced ON (Chillers - approximately 7 minutes), **THEN**

[65.1] **RECORD** clock time:

Clock Time \_\_\_\_\_

[65.2] **START** stopwatch to time five minute DG 2A-A run.

[66] **RECORD** "POST-LOOP" status of Components per Appendix K.

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[67] **WHEN** a minimum of five minutes has elapsed from time stop watch started in Step 6.1.2[65.2], **THEN**:

[67.1] **RECORD** clock time.

Clock Time \_\_\_\_\_

[67.2] **RECORD** DG 2A-A load indicated by 2-EI-82-70A, DG MEGAWATTS.

DG 2A-A	MW
---------	----

[67.3] **CALCULATE** DG 2A-A run time as determined from clock times recorded in Step 6.1.2[65.1] and 6.1.2[67.1]:

CV

-	=	mins secs
Clock Time Step 6.1.2[67.1]	Clock Time Step 6.1.2[65.1]	DG 2A-A Runtime

[67.4] **VERIFY** time calculated in Step 6.1.2[67.3] is greater than or equal to five minutes. (**Acc Crit 5.2A.3.e**)

[67.5] **STOP** DG 2A-A Chart Recorder(s).

[67.6] **VERIFY** DG 2A-A load recorded in Step 6.1.2[67.2] is less than or equal to 4400 kW. (**Acc Crit 5.1B.7.a(1)**)



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[68] **ENSURE** 2-FCV-3-355, AFWP 2A-A Recirc Valve is OPEN. \_\_\_\_\_

**NOTE**

1) ERCW pumps are started and stopped as required to adjust header pressures and/or flows. Flow rates are also adjusted by adding or removing flow paths and/or adjusting the CCS HX outlet valves (**REFER** to 0-SOI-70.01, CCS for CCS Heat Exchanger flow adjustment.) Normal pressure is 95 to 110 PSIG.

2) If desired to change position of 1-FCV-67-146, 0-FCV-67-151, or 0-FCV-67-152, the valve should be repositioned from FULL CLOSED or MORE CLOSED position, using the MCR handswitch.

3) if 0-FCV-67-152 changes position from CLOSED due to a Black Out or a 2B-B SD BD transfer, 0-HS-67-152A must be taken to the OPEN position, PULL TO RESET, to break the seal-in, PUSH IN, then taken back to CLOSE.

[69] **MAINTAIN** ERCW and CCS Train 2A powered pumps running,  
**AND**

**ADJUST** ERCW and CCS system pressure as necessary by  
adjusting system flows. \_\_\_\_\_

[70] **INITIATE** verification of DG 2A-A non-emergency trips  
bypassed while operating in Emergency Mode using  
Appendix W, Section 2.0 [1]. \_\_\_\_\_

[71] **PERFORM** the following:

[71.1] **VERIFY** by both RED/GREEN indicating lights lit at  
2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL (2-M-4),  
Level Bypass Control Valve LCV-3-164A is **NOT**  
CLOSED (Modulating/Open) \_\_\_\_\_

[71.2] **VERIFY** by both RED/GREEN indicating lights lit at  
2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL (2-M-4)  
Level Bypass Control Valve LCV-3-156A is **NOT**  
CLOSED (Modulating/Open) \_\_\_\_\_

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[72] **PERFORM** the following for each hand switch listed below:

[72.1] **ROTATE** to ACC RESET MODULATE, **THEN**  
**ROTATE** to CLOSE **THEN**

**PLACE** handswitch in PULL-TO-LOCK position.

- 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL \_\_\_\_\_
- 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL \_\_\_\_\_

[72.2] **VERIFY** by indicating lights associated Level Bypass  
Control Valve is CLOSED:

- 2-LCV-3-164A CLOSED (2-HS-3-164A) \_\_\_\_\_
- 2-LCV-3-156A CLOSED (2-HS-3-156A) \_\_\_\_\_

[73] **VERIFY** breakers are OPEN by Green light LIT:

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
1936-ALTERNATE FROM CSST D	2-HS-57-97B	0-M-26	
1728-NORMAL FROM CSST D	1-HS-57-71B	0-M-26	

[74] **PLACE** Breaker 2814 Handswitch, NORM FEEDER FOR  
6.9K SHDN BD 1B-B & ALT FEEDER FOR 6.9KV SHDN BD  
2A-A, 0-ECB-3, in CLOSED position. \_\_\_\_\_

[75] **CHECK** verification of DG 2A-A trips being bypassed, Step  
6.1.2[70], is COMPLETE. \_\_\_\_\_

#### NOTE

The Common Emergency Start Relay for DG 2A-A (CES2AY) did not energize upon loss of board voltage due to fuses being removed enabling DG 2A-A 86LOR relay to be reset without placing 43T(L) for DG 2A-A, or any DG, in Test position.

[76] **PERFORM** the following to restore offsite power to 6.9KV SD  
BD 2A-A from 1936 - ALTERNATE FROM CSST D:

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[76.1] **CHECK** 2-RLY-82-86LOR1, DG 2A-A EMERGENCY START LOCKOUT, (red) indicating light is **NOT** illuminated. [2-ARB-82-A/1, Diesel Generator 2-A-A Relay Board]

[76.2] **RESET** 2-RLY-82-86LOR1, DG 2A-A EMERGENCY START LOCKOUT, [2-ARB-82-A/1, Diesel Generator 2-A-A Relay Board]

[76.3] **ENSURE** 2-XS-57-43, 6.9 SD BD 2A-A XFER SELECTOR [2-M-1], in MAN.

[76.4] **ENSURE** the following sync switches for DG 2A-A in OFF:

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2B SYNC SWITCH	0-M-26	OFF	2-HS-57-45	
NORMAL - CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-42	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-47	
ALTERNATE CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-114	

[76.5] **PLACE** 2-HS-57-114, ALTERNATE CSST D SYNC SWITCH, in SYN position.

#### NOTE

Small adjustments in DG 2A-A voltage provide better control of voltage limiting overshooting of required DG 2A-A voltage. Voltage control response is approximately five times faster than speed control response.

[76.6] **MATCH** generator INCOMING FREQUENCY (2-XI-82-62) with RUNNING FREQUENCY (2-XI-82-63) using 2-HS-82-73, SPEED CONTROL.

[76.7] **MATCH** generator INCOMING VOLTAGE (2-EI-82-64) with RUNNING VOLTAGE (2-EI-82-65) using 2-HS-82-72, VOLTAGE REGULATOR.

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[76.8] **PLACE** 2-HS-82-78, DG MODE SELECTOR, in PARALLEL.

[76.9] **ENSURE** DG 2A-A Frequency and Voltage are MATCHED with 6.9 kV SD BD 2A-A, **AND**

**ADJUST** 2-HS-82-73, SPEED CONTROL, 0-M-26 to obtain desired slow clockwise rotation for at least one revolution (15 or more seconds) on 2-XI-82-61, TRAIN 2A-A SYNCHROSCOPE.

CV

**Start of Critical Step(s)**

[76.10] **WHEN** TRAIN 2A-A SYNCHROSCOPE (2-XI-82-61) reaches 12 o'clock, **THEN**

**CLOSE** 1936 - ALTERNATE FROM CSST D.

**End of Critical Step(s)**

[76.11] **RECORD** clock time 1936 - ALTERNATE FROM CSST D, is CLOSED.

Clock Time \_\_\_\_\_

[76.12] **PLACE** 2-HS-57-114, ALTERNATE CSST D SYNC SWITCH, in OFF.

[77] **IF** DG 2A-A operated at less than or equal to 1.32 megawatts load for more than four hours but less than eight hours, **THEN:**

[77.1] **RAISE** DG 2A-A load to greater than or equal to 2.2 Megawatts.

[77.2] **OPERATE** DG 2A-A load greater than or equal to 30 minutes at greater than or equal to 2.2 megawatts.

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[78] IF DG 2A-A operated at or below 1.32 megawatts load for greater than or equal to eight hours, **THEN:**

[78.1] **RAISE** load gradually until smoke is about two times normal density. \_\_\_\_\_

[78.2] **MAINTAIN** load until exhaust clears. \_\_\_\_\_

[78.3] **REPEAT** Steps 6.1.2[78.1] and 6.1.2[78.2] until full load can be carried with a clear exhaust. \_\_\_\_\_

[79] **PRESS** BLACK-OUT RELAYS BO-RESET pushbutton resetting BO Relays on SD Bd 2A-A Logic Relay Panel. \_\_\_\_\_

[80] **CHECK** Window 213-E, DIESEL GEN 2A-A (0-XA-55-26C), LOGIC PANEL 2A-A LOAD STRIP RELAYS OUT OF SYNC OR UV TEST, **NOT** LIT. \_\_\_\_\_

#### **CAUTION**

If load is lowered to zero or below zero, a reverse power trip is possible.

[81] **REDUCE** megawatts (2-EI-82-70A) using 2-HS-82-73, SPEED CONTROL, to near ZERO. \_\_\_\_\_

[82] **REDUCE** megavars (2-EI-82-71A) using 2-HS-82-72, VOLTAGE REGULATOR, to near ZERO. \_\_\_\_\_

[83] **PLACE** 2-HS-82-74, START-STOP control switch, in STOP. \_\_\_\_\_

[84] **CHECK** the following:

A. Generator ACB 1922 OPEN (2-HS-57-46A indicating lights). (**Acc Crit 5.1B.9.a**) \_\_\_\_\_

B. Generator Voltage ZERO (2-EI-82-66A) by placing 2-XS-82-66A to DG 2A-A position. \_\_\_\_\_

C. Engine Speed dropped to 450 rpm (440 to 460 rpm). [2-PNL-82-A] \_\_\_\_\_

D. Crankcase lube oil dipstick level at 7 day mark or greater. \_\_\_\_\_

E. Engine Speed holds at between 450 rpm (440 to 460 rpm) for 10 minutes. [2-PNL-82-A] \_\_\_\_\_

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F. Engine Speed drops to ZERO after 10 minutes of idle.  
[2-PNL-82-A] \_\_\_\_\_

G. Soak back pump RUNNING by oil press. 10 psig or more  
on 2-IPI-82-1045/2A1, DG ENG 2A1 TURBOCHARGER  
SOAK BACK OIL PRESS, and 2-IPI-82-1045/2A2, DG  
ENG 2A2 TURBOCHARGER SOAK BACK OIL PRESS. \_\_\_\_\_

[85] **PLACE** 2-HS-57-46A, 1922 - DG TO SD BD 2A-A, in TRIP  
position to clear breaker disagreement. \_\_\_\_\_

[86] **PLACE** 2-HS-82-78, DG MODE SELECTOR, in UNIT. \_\_\_\_\_

[87] **RECORD** DG 2A-A operating information in 0-SI-82-9. \_\_\_\_\_

[88] **NOTIFY** load coordinator that DG 2A-A is secured. \_\_\_\_\_

[89] **IF** DG 2A-A run time is greater than one hour, **THEN**

**REQUEST** Chemistry to sample Day Tanks 2A1 & 2A2 for  
condensate. \_\_\_\_\_

---

Chemistry Contact

Date

[90] **PERFORM** 0-SOI-82.03, Section 5.2, Verification of Standby  
Conditions. (**Acc Crit 5.1B.9.a**) \_\_\_\_\_

[91] **NOTIFY** U1 SRO to evaluate exit conditions for LCO 3.8.1,  
3.8.4, 3.8.7, 3.8.9. \_\_\_\_\_

---

U1 SRO

Date

[92] **STOP** the following pumps and place handswitch in  
Pull-To-Lock position:

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
AFW PMP A-A	2-HS-3-118A	[2-M-4]	
CCP A-A (ECCS)	2-HS-62-108A	[2-M-5]	
ERCW PMP D-A	0-HS-67-40A	[0-M-27A]	
CCS PMP 2A-A	2-HS-70-59A	[0-M-27B]	
THRM BAR BSTR PMP 2A (TBBP)	2-HS-70-131A	[0-M-27B]	

[93] **REMOVE** jumper for HPFP 2A-A using Appendix W, Electrical Support, Section 5.0, Steps [3] & [4].

[94] **WHEN** Step 6.1.2[93] is COMPLETE, **THEN**

**PLACE** 0-HS-26-9A, HPFP PMP 2A-A, in STOP, **AND**

**RETURN** handswitch to one of the following positions clearing annunciator WINDOW 171-B, TR A HPFP PMP CNTL SWITCH MISALIGNED:

- A Auto (STANDBY)

CV

- Pull A-P AUTO

CV

[95] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, output to 25 to 30% to allow BACKUP HEATERS A-A (2-HS-68-341A) to DEENERGIZE.

[96] **PLACE** 2-HS-68-341A, BACKUP HEATERS A-A, in OFF, **THEN**

**PLACE** 2-HS-68-341A, BACKUP HEATERS A-A, in A-P AUTO position.

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- [97] **PLACE** 2-HS-68-341F, CONTROL GROUP 2D, in OFF, **THEN**  
**ENSURE** 2-HS-68-341F, CONTROL GROUP 2D, spring  
returns to P AUTO. \_\_\_\_\_

**NOTE**

Appendices L and M contain required positions for testing in Section 6.2 and may be used to align equipment to required positions rather than to AS-FOUND positions of Appendix K.

- [98] **ALIGN** components to "AS-FOUND" positions per Appendix K. \_\_\_\_\_
- [99] **CHECK** Step 6.1.2[74] is COMPLETE. \_\_\_\_\_
- [100] **TRANSFER** 6.9KV SD BD 2A-A from Alternate (Breaker 1936)  
to Normal (Breaker 1816) using 2-SOI-211.03, Section 8.3. \_\_\_\_\_
- [101] **TRANSFER** 6.9KV SD BD 1B-B from Alternate (Breaker 1934)  
to Normal (Breaker 1728) using 0-SOI-211.02, Section 8.3. \_\_\_\_\_

**NOTE**

Remaining steps in this subsection are data reduction steps and need **NOT** be completed prior to beginning next test subsection.

- [102] **VERIFY** by successful completion of Appendix W, Section 2.0,  
DG 2A-A non-emergency trips are bypassed when operating in  
Emergency Mode. (**Acc Crit 5.1B.3.a**) \_\_\_\_\_
- [103] **COMPLETE** Appendix O, Table 1 and Table 2, using  
Sequence of Events Recorder (SER) printout(s). \_\_\_\_\_
- [104] **COMPLETE** Appendix R using DG 2A-A Chart Recorder  
trace(s). \_\_\_\_\_



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[105] **VERIFY** "Actual" POST-LOOP component status recorded on Appendix K matches "Required" status specified by Appendix K. **(Acc Crit 5.1A.2.a(1))**

[106] **REVIEW** Elapsed Time calculations performed on Appendix 15 and **PERFORM** the following:

[106.1] **VERIFY** "BUS STRIP" components properly STOPPED (load shed) as specified by Appendix O. **(Acc Crit 5.1A.2.a(2), 5.2A.2)**

[106.2] **VERIFY** "DG 2A-A BKR 1922" CLOSED in less than or equal to ten (10) seconds following receipt of LOOP start signal. **(Acc Crit 5.1B.2.a, 5.2A.3.a)**

[106.3] **VERIFY** "LOOP-SEQ" calculated times are within Acceptable ranges specified by Appendix O. **(Acc Crit 5.1A.2.a(3), 5.2A.3.b)**

[107] **REVIEW** DG 2A-A Chart Recorder trace(s) for diesel response following LOOP, **THEN**

**RECORD** minimum DG 2A-A voltage and frequency which occurred during load sequencing:

Generator Minimum Voltage	VAC	≥5213 VAC
Generator Minimum Frequency	Hz	≥57 Hz

[108] **VERIFY** data recorded in Step 6.1.2[107] meets Generator Minimum Voltage and Frequency required response of DG 2A-A during sequencing of LOOP loads. **(Acc Crit 5.1B.4.a(1))**

[109] **VERIFY** Voltage and Frequency Recovery Times recorded on Appendix R for LOOP loading sequence meet acceptance criteria following each step load increase. **(Acc Crit 5.1B.5.a(1))**

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[110] **REVIEW** DG 2A-A Chart Recorder trace(s) for diesel response following LOOP, **AND**

**RECORD** minimum and maximum steady state DG 2A-A voltage and frequency which occurred during run (minimum period of five minutes):

Parameter	Acceptance Criteria	Actual Value	Initials
Minimum Voltage	$\geq 6800$ VAC	VAC	
Maximum Voltage	$\leq 7260$ VAC	VAC	
Minimum Frequency	$\geq 59.8$ Hz	HZ	
Maximum Frequency	$\leq 60.1$ Hz	HZ	

[111] **VERIFY** minimum and maximum steady state DG 2A-A voltage and frequency meet acceptance criteria following minimum five minute run.  
(Acc Crit 5.1B.6.b(1), 5.2A.3.c, 5.2A.3.d)

[112] **VERIFY** emergency loads transferred from DG 2A-A to 6.9kV SD BD 2A-A and offsite power source.  
(Acc Crit 5.1B.9.a)

[113] **PERFORM** board walk down of U2 and Common panels in Main Control Room in preparation for testing in Section 6.2.

[114] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% as indicated on 2-M-3 indicators.

[115] **ENSURE** 2-PDIC-3-122A, AFW PMP 2A-A DISCH PRESS CONTROL, is in AUTO.

[116] **IF** Chemistry sampled DG 2A-A Day Tanks, **THEN**

**RECORD** results of Chemistry sampling for condensate in DG 2A-A Day Tanks.

Day Tank	Results	Initials	Results	Initials
Engine 1	No Condensate Found		Condensate Found and Removed	

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Engine 2	No Condensate Found		Condensate Found and Removed	
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[117] **IF** Ice Condenser conditions require chillers and pumps returned to service prior to Section 6.2.2, **THEN**

**RESTORE** Ice Condenser chillers and pumps using 0-SOI-61-01.

[118] **GO TO** Section 6.2.

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## 6.2 Safety Injection (SI) - Offsite Power Available, Train 2A

### NOTES

- 1) This Section initiates the following tests:
  - Safety Injection with ESF pumps full flow to Reactor Vessel;
  - Containment Sump Swapover initiated manually by actuation of appropriate SSPS output relay with Safety Injection Signal present;
  - DG 2A-A Test Mode Override from initiation of a U2 Safety Injection Signal;
  - DG 2A-A accelerates from Idle speed to a state of ready to load, rated speed and voltage upon a U2 Safety Injection;
  - Initiation of a Safety Injection Signal concurrent with ØB actuation with ESF pumps on recirculation flow.
  - A-A & D-A ERCW pumps auto starting on an ESF signal, and B-A & C-A ERCW pumps auto starting on an ESF signal.
- 2) C-S CCS pump is aligned to Alternate power source (480V SD BD 1A2-A) to allow testing of auto start from U2 Train A Safety Injection Signal.
- 3) 1B-B CCS pump is aligned to Train B CCS for CCS operability considerations as well as maintain cooling water to Unit 1 Train B ESF equipment while C-S CCS pump is placed in standby with periodic stopping and starting C-S CCS pump.
- 4) 2B-B CCS pump is aligned to Unit 2 Train A CCS supporting Unit 2 Train A loads while 2A-A CCS pump is tested.

### 6.2.1 Preliminary Actions Required for Subsection 6.2

- [1] **ALIGN** components to "PRE-TEST" REQUIRED positions per Appendix L, Safety Injection (SI) - TR. 2A, Section 6.2. \_\_\_\_\_
- [2] **ALIGN** components to "PRE-TEST" REQUIRED positions per Appendix M, Containment Isolation Phase B (CIØB) Train 2A, Section 6.2. \_\_\_\_\_
- [3] **ENSURE** at least one Unit 1 Train A ERCW pump in service to allow starting and stopping the other Train A ERCW pumps during this test. \_\_\_\_\_
- [4] **ENSURE** DG 2A-A CES2AY relay fuses pulled in Step 4.4[34] remain pulled to prevent starting other diesel generators in performance of this test section. \_\_\_\_\_
- [5] **NOTIFY** US/SRO to enter tracking for LCO 3.3.7. for CRI Train A function disabled in Step 6.2.1[6] \_\_\_\_\_

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- [6] **NOTIFY** Electrical support to install jumpers across terminals of Relay VKDA-1 [1-R-73] per Appendix W, Section 3.0 [1], for CRI jumper installation. \_\_\_\_\_
- [7] **NOTIFY** Electrical support to install a jumper across terminals of Relay CPD5 per Appendix W, Step 4.0[1], to bypass ABL trip to U2 Containment Purge Fan and Incore Instrument Room Fan. \_\_\_\_\_

**NOTE**

Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

- [8] **IF** DG 2A-A has **NOT** been operated in the past 12 hours,  
**THEN**
- ROLL** DG 2A-A to check for water in cylinders by performing Section 8.2 of 0-SOI-82.03. \_\_\_\_\_
- [9] **ENSURE** DG 2A-A in STANDBY ALIGNMENT per Section 5.0 of 0-SOI-82.03. \_\_\_\_\_

**NOTE**

Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

- [10] **IF** DG 1A-A has **NOT** been operated within past 12 hours,  
**THEN**
- ROLL** DG 1A-A to check for water in cylinders by performing Section 8.2 of 0-SOI-82.01. \_\_\_\_\_
- [11] **ENSURE** DG 1A-A in STANDBY ALIGNMENT per Section 5.0 of 0-SOI-82.01. \_\_\_\_\_
- [12] **RECORD** DG 1A-A and 2A-A roll time information in 0-SI-82-9. \_\_\_\_\_
- [13] **INFORM** U1 SRO of alignment requirements of CCS **AND**
- REQUEST** U1 SRO evaluate U1 TS for potential LCO 3.7.7 entry conditions. \_\_\_\_\_
- [14] **ENSURE** CCS PMP 2B-B in service to Header 2A using 0-SOI-70.01, Section 8.14. \_\_\_\_\_

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- [15] **ENSURE** CCS PMP 2A-A in standby alignment to CCS Header 2A. \_\_\_\_\_
- [16] **ALIGN** CCS PMP 1B-B to supply Train B CCS using 0-SOI-70.01, Section 8.1. \_\_\_\_\_
- [17] **WHEN** Step 6.2.1[16] is complete, **THEN**  
**TRANSFER** C-S CCS pump from NORMAL to ALTERNATE (TR A) power supply using 0-SOI-70.01, Section 8.7. \_\_\_\_\_
- [18] **ENSURE** 0-XS-67-286, ERCW PMP B-A/D-A DG POWER SEL, at 0-M-27A is in PUMP D-A position. \_\_\_\_\_
- [19] **ENSURE** 0-XS-67-285, ERCW PMP A-A/C-A DG Power SEL, at 0-M-27A is in Pump A-A position. \_\_\_\_\_
- [20] **ENSURE** U2 Steam Generator levels are less than or equal to 30% as indicated by [2-M-3] indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
T-D AFW PMP SG1 LEVEL	2-LI-3-174		
T-D AFW PMP SG2 LEVEL	2-LI-3-173		
T-D AFW PMP SG3 LEVEL	2-LI-3-172		
T-D AFW PMP SG4 LEVEL	2-LI-3-175		
AFW PMP A-A SG1 LEVEL	2-LI-3-164		
AFW PMP A-A SG2 LEVEL	2-LI-3-156		
AFW PMP B-B SG3 LEVEL	2-LI-3-148		
AFW PMP B-B SG4 LEVEL	2-LI-3-171		

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- [21] **ENSURE** U2 Refueling Water Storage Tank (RWST) levels are greater than or equal to 70% as indicated by [2-M-6] indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
RWST LEVEL	2-LI-63-50		
RWST LEVEL	2-LI-63-51		
RWST LEVEL	2-LI-63-52		
RWST LEVEL	2-LI-63-53		

- [22] **ENSURE** U2 Condensate Storage Tank (CST) level is greater than or equal to 200,000 gallons as indicated on [2-M-2] indicator:

DESCRIPTION	INDICATOR	LEVEL (gals)	INITIALS
CST B LEVEL	2-LI-2-233D		

- [23] **ENSURE** all REACTOR TRIP FIRST OUT alarms, 2-XA-55-4D, [2-M-4] are **NOT** LIT.

- [24] **ENSURE** 2-XA-55-4A-70A, [2-M-4] SI ACTUATED, is **NOT** LIT.

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[25] **PERFORM** the following alignment:

<b>PUMP</b>	<b>HANDSWITCH</b>	<b>STOPPED</b>	<b>HANDSWITCH POSITION</b>	<b>INITIALS</b>
AFW PMP A-A	2-HS-3-118A [2-M-4]	STOP	A-P AUTO	
CCP A-A (ECCS)	2-HS-62-108A [2-M-5]	STOP	A AUTO	
RHR PMP A (ECCS)	2-HS-74-10A [2-M-6]	STOP	A AUTO	
SI PMP A (ECCS)	2-HS-63-10A [2-M-6]	STOP	A AUTO	
CNTMT SPRAY PMP A	2-HS-72-27A [2-M-6]	STOP	A AUTO	
ERCW PMP D-A (2)	0-HS-67-40A [0-M-27A]	STOP	A AUTO	
ERCW PMP A-A (2)	0-HS-67-28A [0-M-27A]	STOP	A AUTO	
CCS PMP 2A-A (1)	2-HS-70-59A [0-M-27B]	STOP	A-P AUTO	

- (1) Flow on CCS may have to be adjusted so that 2A-A CCS pump does NOT restart on low HDR pressure.
- (2) Other ERCW pumps should be started and pressure adjusted as needed to allow stopping of D-A and A-A pump.



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- [26] **ENSURE** the following room cooler fans are **NOT** running and breakers aligned for PRE-TEST positions:

DESCRIPTION	BREAKER COMPT NUMBER	PRE-TEST POSITION	INIT
<b>C&amp;A VENT BD 2A1-A</b>			
RHR PUMP 2A-A RM COOLER (2-PMCL-30-175)	2-BKR-30-175 C/9A	BREAKER: ON RED LIGHT: OFF	
SIS PUMP 2A-A RM CLR (2-PMCL-30-180)	2-BKR-30-180 C/8A	BREAKER: ON RED LIGHT: OFF	
CENT CHG PUMP 2A-A RM CLR (2-PMCL-30-183)	2-BKR-30-183 C/10A	BREAKER: ON RED LIGHT: OFF	
CS PUMP 2A-A RM CLR (2-PMCL-30-177)	2-BKR-30-177 C/3C	BREAKER: ON RED LIGHT: OFF	

- [27] **VERIFY** DG Recorder(s) installation and connection  
COMPLETED:

- Appendix G, DG 2A-A Chart Recorder Connections \_\_\_\_\_
- Appendix H, DG 2A-A Chart Recorder Hookup \_\_\_\_\_

- [28] **VERIFY** SER recorders installation and connection  
COMPLETED:

- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
- Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

- [29] **ENSURE** CSST C LTC-Y REMOTE CONTROL, 0-ECB-3, is in  
OFF (PULL FOR AUTO) position. \_\_\_\_\_

- [30] **ENSURE** CSST C LTC-X REMOTE CONTROL, 0-ECB-3, is in  
OFF (PULL FOR AUTO) position. \_\_\_\_\_

- [31] **ENSURE** Reactor Trip Breakers at 2-L-116 are racked into  
CONNECTED position, and OPEN:

- Reactor Trip Breaker A (2-BKR-99-L116/1B) \_\_\_\_\_
- Reactor Trip Breaker B (2-BKR-99-L116/1C) \_\_\_\_\_

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[32] **ENABLE** U2 Train A Solid State Protection System (SSPS):

[32.1] **ENSURE** Mode SELECTOR switch at SSPS Train A  
(2-R-48) output bay, in OPERATE position. \_\_\_\_\_

[32.2] **ENSURE** Mode SELECTOR switch at SSPS Train B  
(2-R-51) output bay, in TEST position. \_\_\_\_\_

[33] **ENSURE** the following Incore Instrument Room Cooling CIVs  
are OPEN:

NOMENCLATURE	LOCATION	POSITION	UNID	INIT
2-HS-31-305 CIRC PMP A SUCT CIV-ØA	2-M-9	OPEN	2-FCV-31-305	
2-HS-31-306 CIRC PMP A SUCT CIV-ØA	2-M-9	OPEN	2-FCV-31-306	
2-HS-31-308 CIRC PMP A DISCH CIV-ØA	2-M-9	OPEN	2-FCV-31-308	
2-HS-31-309 CIRC PMP A DISCH CIV-ØA	2-M-9	OPEN	2-FCV-31-309	

[34] **ENSURE** the following equipment and handswitches are in the  
required condition and position:

DESCRIPTION	HANDSWITCH	CONDITION	POS	INIT
SD BD ROOM B PRESS FAN B-A	0-HS-31-62A [1-M-9]	RED LIGHT LIT	P AUTO	
SD BD ROOM A PRESS FAN A-A	0-HS-31-64A [1-M-9]	RED LIGHT LIT	P AUTO	
INSTR ROOM CLG A AHU CIRC PMP & FCO	2-HS-31-265A [2-M-9]	RED LIGHT LIT	A AUTO	
CNTMT PURGE SUP & EXH FANS 2A AND FCO-30-1A & 1B	2-HS-30-1A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	
CNTMT PURGE SUP & EXH FANS 2B AND FCO-30-4A & 4B	2-HS-30-4A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	

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INSTR RM PURGE SUP & EXH FANS AND FCO-30-11A & 11B	2-HS-30-11A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	
ANN VAC FAN 2A & SUCT FCO	2-HS-65-77A [0-M-27B]	RED LIGHT LIT	A-P AUTO	
RX BLDG F& EQ SUMP PMP A	2-HS-77-125A1 [2-M-15]	RED LIGHT LIT	PULL A-P AUTO	
HPFP PMP 2A-A	0-HS-26-9A [1-M-15]	RED LIGHT LIT	PULL A-P AUTO	
RCDT PUMP 2A	2-HS-77-4A [0-PNL-77-L2]	RED LIGHT LIT	PULL P AUTO	

[35] **VERIFY** components aligned to their "PRE-TEST" REQUIRED positions per Appendix L, Safety Injection (SI) - Train 2A, Section 6.2.

\_\_\_\_\_

[36] **VERIFY** components aligned to their "PRE-TEST" REQUIRED positions per Appendix M, Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2.

\_\_\_\_\_

[37] **VERIFY** the following:

[37.1] ECCS pumps recirc paths aligned per Appendix C.

\_\_\_\_\_

[37.2] ESF pumps available for starting.

\_\_\_\_\_

[37.3] CST level is greater than 200,000 gal to ensure AFW pumps have adequate suction.

\_\_\_\_\_

[37.4] RWST level is greater than 70% to ensure ECCS pumps have adequate suction.

\_\_\_\_\_

[38] **CONDUCT** a pretest briefing with Test and Operations personnel using SMP-9.0 at Test Director discretion.

\_\_\_\_\_

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#### NOTE

In the following step, no power will be transmitted to pressurizer heater elements because all individual heater element breakers are opened in preliminary actions, Steps 4.4[16] and 4.4[19]

- [39] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in  
MANUAL AND

**LOWER** controller output to 0% to allow BACKUP HEATERS  
A-A (2-HS-68-341D) and CONTROL HEATERS D  
(2-HS-68-341D) to ENERGIZE.

- [40] **VERIFY** 2-HS-68-341A, BACKUP HEATERS A-A, indicates  
breaker closed by RED light LIT.

- [41] **CLOSE** control group 2D breaker using 2-HS-68-341F,  
CONTROL HEATERS D, AND

**VERIFY** breaker indicates closed by RED light LIT.

- [42] **VERIFY** U2 CRDM MG sets are shutdown by verifying breaker  
alignment per Appendix C, Section 7.0 [2].

- [43] **VERIFY** individual annunciators for Reactor Trip First Out  
Panel 2-XA-55-4D are **NOT** LIT.

- [44] **VERIFY** Annunciator Window, 70-A, SI ACTUATED, Panel 2-  
XA-55-4A, is CLEAR.

- [45] **PLACE** 2-RT-1, REACTOR TRIP, at 2-M-4 in CLOSE position,  
AND

**VERIFY** the following by indicating lights:

- RX TRIP BKR A [2-M-4] indicates CLOSED
- RX TRIP BKR B [2-M-4] indicates CLOSED

- [46] **RACK** in the B RX TRIP BYPASS BKR(BYB), 2-52BYB

- [47] **CLOSE** the B RX TRIP BYPASS BKR and **VERIFY** closed  
indication [2-M-4]

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[48] **PLACE** handswitches at [2-M-3] to RESET position, and  
RELEASE:

- 2-HS-3-99A1, MFW ISOL ACT RESET TR-A \_\_\_\_\_
- 2-HS-3-99B1, MFW ISOL ACT RESET TR-B \_\_\_\_\_

[49] **PRESS** MFW ISOL RESET pushbuttons at [2-M-3], and  
RELEASE:

- 2-HS-3-99A2, RESET TR-A. MFW ISOL \_\_\_\_\_
- 2-HS-3-99B2, RESET TR-B MFW ISOL \_\_\_\_\_

[50] **VERIFY** status of 2-XX-55-6C, Train A Master ISOL SIGNAL  
STATUS PNL (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI Window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- MFW Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_
- CS Window is **NOT** LIT \_\_\_\_\_

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[51] **VERIFY** the following Feedwater valves position:

DESCRIPTION	COMPONENT	LOCATION	POSITION	INITIALS
MFW REG FCV 3-35	2-FCV-3-35	2-XX-3-35	OPEN	
MFW REG FCV 3-48	2-FCV-3-48	2-XX-3-35	OPEN	
MFW REG FCV 3-90	2-FCV-3-90	2-XX-3-35	OPEN	
MFW REG FCV 3-103	2-FCV-3-103	2-XX-3-35	OPEN	
BYP REG FCV 3-48A	2-FCV-3-48A	2-XX-3-35A	OPEN	
BYP REG FCV 3-103A	2-FCV-3-103A	2-XX-3-35A	OPEN	
2-FCV-3-236 SG 1 MFW BYP ISOL	2-FCV-3-236	2-XI-3-236	OPEN	
2-FCV-3-239 SG 2 MFW BYP ISOL	2-FCV-3-239	2-XI-3-239	OPEN	
2-HS-3-33A, SG 1 MFW ISOL VLV	2-FCV-3-33-A	2-M-3	OPEN	
2-FCV-3-242, SG 3 MFW BYP ISOL	2-FCV-3-242	2-XI-3-242	OPEN	
2-FCV-3-245, SG 4 MFW BYP ISOL	2-FCV-3-245	2-XI-3-245	OPEN	
2-HS-3-87A SG 3 MFW ISOL VLV	2-FCV-3-87-A	2-M-3	OPEN	
FCV 3-186 CKV BYP-REV FLUSH	2-FCV-3-186	2-XX-3-235	OPEN	
FCV 3-188 CKV BYP-REV FLUSH	2-FCV-3-188	2-XX-3-235	OPEN	

[52] **ENSURE** C-S CCS pump 1-HS-70-51A, CCS PMP C-S ALT  
ACB, at 0-M-27B, in A-P AUTO position, **AND**

**VERIFY** by GREEN indication light pump is STOPPED.

[53] **ENSURE** Ice Condenser chillers and pumps are out of service  
IAW 0-SOI-61.01.

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[54] **ENSURE** the following valves are OPEN:

- 2-FCV-77-9, RCDT PUMP DISCHARGE FLOW  
CONTROL VALVE. \_\_\_\_\_
- 2-FCV-77-10, RCDT PUMP DISCHARGE FLOW  
CONTROL VALVE. \_\_\_\_\_

[55] **GO TO** Section 6.2.2, Performance - Safety Injection  
(SI) - Train 2A. \_\_\_\_\_

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## 6.2.2 Performance - Safety Injection (SI) - Train 2A, Offsite Power Available

### NOTE

OUTGOING amps are indicated upon loading DG 1A-A while monitoring NORMAL ACB 1716 AMPS dropping to zero then begin rising.

- [1] **START and LOAD** DG 1A-A to obtain a maximum indication of 40 to 50 Amps OUTGOING on 1-EI-57-40B, NORMAL ACB 1716 AMPS, with offsite power using 0-SOI-82.01.

### NOTE

Steps 6.2.2[3] through 6.2.2[8] may be performed concurrently.

- [2] **START** DG 2A-A using 0-SOI-82.03, Section 8.1.2, Idle Start,  
**AND**

**WARM** DG 2A-A for at least 10 minutes, staying in Idle.

- [3] **PERFORM** the following for Sequence of Events Recorder (SER):

[3.1] **OBTAIN** a SER status summary printout.

[3.2] **ENSURE** SER is in Standby Mode.

- [4] **ENSURE** appropriate Operations personnel are stationed, and briefed, for performance of Steps 6.2.2[9], 6.2.2[12], 6.2.2[15] and 6.2.2[24].

- [5] **ANNOUNCE** to plant personnel the following:

Attention all plant personnel - Unit 2 is preparing to initiate a Safety Injection signal as part of Unit 2 Integrated Safeguards Tests. Plant equipment will be automatically starting. Unit 2 2A-A Diesel Generator and Emergency Core Cooling equipment will be starting and operating. There will be Auxiliary Building ventilation changes occurring and all personnel should use caution when opening and closing any doors. (repeat)



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- [6] **RECORD** CSST C Load Tap Changer (LTC) positions from indicators at 0-ECB-2:

- CSST C LTC-Y TAP POSITION

\_\_\_\_\_ (TAP) \_\_\_\_\_

- CSST C LTC-X TAP POSITION

\_\_\_\_\_ (TAP) \_\_\_\_\_

- [7] **RECORD** 6.9KV Shutdown Board 1A-A and 2A-A voltages from digital indicators:

Description	Value (VAC)	Acceptance Criteria	INITIALS
1-EI-57-39, 6.9 SDB 1A-A VOLTS (1-M-1)		(6928 to 7214 VAC)	
2-EI-57-39, 6.9 SDB 2A-A VOLTS (2-M-1)			

- [8] **VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINI FLOW valve [2-M-6] is CLOSED. \_\_\_\_\_

**NOTE**

To minimize gravity fill of reactor vessel from RWST, performance of Steps 6.2.2[9] through 6.2.2[12] require close coordination and performance.

- [9] **PLACE SIMULTANEOUSLY** the following handswitches at 2-M-6 in OPEN position **AND**

**VERIFY** by indicating lights associated valves are OPEN:

- [9.1] 2-HS-63-93A, RHR TO CL 2 & 3 \_\_\_\_\_

- [9.2] 2-HS-63-94A, RHR TO CL 1 & 4 \_\_\_\_\_

- [9.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4 \_\_\_\_\_

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[10] **PLACE** 2-HS-62-136A, RWST TO CHARGING PMPS  
SUCTION, [2-M-5], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

[11] **NOTIFY** personnel to start the following recorders:

- DG Recorder \_\_\_\_\_
- Sequence of Events Recorder \_\_\_\_\_

[11.1] **ENSURE** BOTH recorders are running. \_\_\_\_\_

#### NOTES

- 1) Countdown is recommended as follows: 5, 4, 3, 2, 1, START.
- 2) The Safety Injection actuation is initiated upon the word START.
- 3) Also note other ECCS pump starts when SI is actuated.

[12] **PERFORM** a five second countdown over paging system, **THEN**

**INITIATE** Train 2A Safety Injection (SI) by placing 2-HS-63-133A, SI  
ACTUATE TR A & B, [2-M-6], in ACTUATE position.

[12.1] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[12.2] **START** a stopwatch to time DG 2A-A for greater than or  
equal to five minutes unloaded at rated speed. \_\_\_\_\_

[12.3] **VERIFY** Annunciator Window, 70-A, SI ACTUATED,  
Panel 2-XA-55-4A, [2-M-4] is LIT. (**Acc Crit 5.3B**) \_\_\_\_\_

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- [12.4] **VERIFY** Unit 2 Reactor Trip Breakers are OPEN.  
(Acc Crit 5.3B)

Description	Required Position	Actual Position	Initials
2-52RTA RX TRIP BKR A	OPEN		
2-52RTB RX TRIP BKR B	OPEN		
2-52BYB BYPASS BKR B	OPEN		

**NOTE**

Train 2B MISSP may have lights lit due to actuation of master relays on Train 2B SSPS from manual SIS. No actions are required on Train 2B MISSP.

- [13] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows: (Acc Crit 5.7B, 5.7H, 5.7L, 5.7D)

[13.1] ØA Window is LIT

\_\_\_\_\_

[13.2] CVI Window is LIT

\_\_\_\_\_

[13.3] MFW Window is LIT

\_\_\_\_\_

[13.4] ABI Window is LIT

\_\_\_\_\_

[13.5] CRI Window is LIT

\_\_\_\_\_

- [14] **VERIFY** status of Train A Master Isolation Signal Status Panel (MISSP) at 2-M-6:

• ØB Window is **NOT** LIT.

\_\_\_\_\_

• CS Window is **NOT** LIT

\_\_\_\_\_

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#### NOTE

CSST Tap position indicators show position on left and right of top dead center N position. Readings below may be recorded as either Lx or Rx of N, with "x" representing tap number. For example, if tap position is on the left side and maximum deviation occurring reaches "16", tap position would be recorded as "L16".

- [15] **MONITOR** CSST C Load Tap Changer (LTC) positions for a period of approximately twenty (20) seconds following initiation of SI, **THEN**

**RECORD** from indicators [0-ECB-2], tap position corresponding to maximum deviation from neutral (N) which occurs during transient :

CSST C LTC-Y TAP POSITION	
CSST C LTC-X TAP POSITION	

- [16] **WHEN** 30 seconds from time recorded in Step 6.2.2[12.1] elapse, **THEN**

**VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINI FLOW valve [2-M-6] is CLOSED.

- [17] **RECORD** "POST-SI" status of components per Appendix L. (Acc Crit 5.7A, 5.7B, 5.7D, 5.7C, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7L, 5.7O)

- [18] **The following steps VERIFY** DG 1A-A returned to standby operation by observing the following indications [0-M-26]: (Acc Crit 5.1B.8.a(2), 5.1B.8.b(2), 5.4A)

- DG RUN Light (DG 1A-A) is LIT.
- 1-HS-57-46A, 1912-DG TO SD BD 1A-A, indicates breaker is OPEN.
- 1-HS-57-41B, 1716, NORMAL FROM CSST C, indicates breaker is CLOSED.

[19] **INITIATE** DG 1A-A removal from service using  
0-SOI-82.01, Section 8.3. \_\_\_\_\_

[20] **PLACE** 2-HS-57-47, DG SYNC SWITCH, in SYN position. \_\_\_\_\_

[21] **VERIFY** DG 2A-A in standby, ready to load operation by observing the  
following indications [0-M-26]: (**Acc Crit 5.8.1B**)

- DG 2A-A accelerated from Idle speed to rated speed by  
RUN Light (DG 2A-A) is LIT. \_\_\_\_\_
- 2-HS-57-46A, 1922-DG TO SD BD 2A-A, indicates  
Breaker OPEN. \_\_\_\_\_
- 2-HS-57-41B, 1816-NORMAL FROM CSST C indicates  
breaker is CLOSED. \_\_\_\_\_
- DG 2A-A achieved steady state voltage and frequency: \_\_\_\_\_

[21.1] Record DG 2A-A Voltage and Frequency \_\_\_\_\_

Description	Indicator	Value
Generator Voltage $\geq$ 6800 VAC	2-EI-82-64A	VAC
Generator Frequency $\geq$ 59.8 Hz	2-EI-82-62A	Hz

[22] **PLACE** 2-HS-57-47, DG SYNC SWITCH, in OFF position. \_\_\_\_\_

#### NOTE

If refueling cavity level is rising at a rate that precludes a full five minute vessel injection,  
Step 6.2.2[24] is performed in a timely manner to prevent water intrusion into duct work  
around top of cavity.

[23] **WHEN** a minimum of five minutes has elapsed from time stop watch started  
in Step 6.2.2[12.2], **THEN**:

[23.1] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

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[23.2] **CALCULATE** DG 2A-A run time as determined from clock times recorded in Step 6.2.2[12.1] and 6.2.2[23.1]:

\_\_\_\_\_

\_\_\_\_\_

CV

-	=	mins	secs
Clock Time Step 6.2.2[23.1]	Clock Time Step 6.2.2[12.1]	DG 2A-A Runtime	

[23.3] **VERIFY** DG 2A-A run time as calculated in Step 6.2.2[23.2] is greater than or equal to five minutes. (Acc Crit 5.3A.3)

[23.4] **VERIFY** offsite power connected to 6.9KV SD BD 2A-A: (Acc Crit 5.3A.4, 5.3A.5)

- **CHECK** Breaker 1816-NORMAL FROM CSST C is CLOSED.
- **CHECK** 1922 - DG TO SD BD 2A-A breaker is OPEN.

[24] **PLACE** handswitches [2-M-6] in CLOSE position **AND** **VERIFY** by indicating lights valves are CLOSED:

[24.1] 2-HS-63-93A, RHR TO CL 2 & 3

[24.2] 2-HS-63-94A, RHR TO CL 1 & 4

[24.3] 2-HS-63-22A, SIS PMPS TO RCS LP'S 1,2,3,4 CL'S

[25] **CLOSE**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL.

\_\_\_\_\_

\_\_\_\_\_

CV

[26] **VERIFY** by indicating lights at 2-HS-74-12A RHR PMP A MINI FLOW, [2-M-6], valve is OPEN.

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[27] **PERFORM** the following:

- [27.1] **VERIFY** by indicating lights at 2-HS-3-164A, SG 1  
SUPPLY LCV-3-164 CNTL [2-M-4], Level Bypass  
Control Valve LCV-3-164A is **NOT** CLOSED  
(Modulating/Open) \_\_\_\_\_
- [27.2] **VERIFY** by indicating lights at 2-HS-3-156A, SG 2  
SUPPLY LCV-3-156 CNTL [2-M-4] Level Bypass Control  
valve LCV-3-156A is **NOT** CLOSED (Modulating/Open) \_\_\_\_\_
- [27.3] **ROTATE** 2-HS-3-164A, SG 1 SUPPLY LCV-3-164  
CNTL to ACC RESET MODULATE, **THEN**  
  
**ROTATE** to CLOSE, **AND**  
  
**PLACE** in PULL-TO-LOCK position. \_\_\_\_\_
- [27.4] **ROTATE** 2-HS-3-156A, SG 2 SUPPLY LCV-3-156  
CNTL to ACC RESET MODULATE, **THEN**  
  
**ROTATE** to CLOSE, **AND**  
  
**PULL** in PULL-TO-LOCK position. \_\_\_\_\_
- [27.5] **VERIFY** by indicating lights associated Level Bypass  
Control Valves are CLOSED:
- 2-LCV-3-164A CLOSED (2-HS-3-164A) \_\_\_\_\_
  - 2-LCV-3-156A CLOSED (2-HS-3-156A) \_\_\_\_\_

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[28] **WHEN** greater than or equal to 10 minutes has elapsed from time recorded in Step 6.2.2[12.1], **THEN**

**PERFORM** the following:

[28.1] **STOP** DG 2A-A Chart Recorder(s) \_\_\_\_\_

[28.2] **RECORD** CSST C Load Tap Changer (LTC) positions from each indicator at 0-ECB-2: \_\_\_\_\_

Description	Value
CSST C LTC-Y TAP POSITION	
CSST C LTC-X TAP POSITION	

[28.3] **RECORD** 6.9KV Shutdown Board 1A-A and 2A-A voltages:

Description	Value (VAC)	ACC - CRIT	INITIALS
1-EI-57-39, 6.9 SDB 1A-A VOLTS (1-M-1)		(6928 to 7214 VAC)	
2-EI-57-39, 6.9 SDB 2A-A VOLTS (2-M-1)			

[28.4] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[29] **WHEN** Appendix L, "POST SI" status is completed, **THEN**

**PLACE** 2-HS-74-10A, RHR PMP A, [2-M-6], in STOP PULL-TO-LOCK position. \_\_\_\_\_



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#### NOTES

- 1) Step 6.2.2[30] actuates Train 2A Containment Sump Auto Swapover.
- 2) Once accident signals are reset in Step 6.2.2[31], Step 6.2.2[32], realignment of containment sump back to RHR normal suction, should be accomplished expeditiously to minimize voiding in containment sump RHR suction lines.

#### [30] **INITIATE** Cntmt Sump Swapover:

- [30.1] **PLACE** 2-HS-63-1A, RWST TO RHR ECCS SUCTION, [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights valve is CLOSED. \_\_\_\_\_

- [30.2] **VERIFY** by indicating lights at 2-HS-74-3A, RHR PMP A SUCTION valve [2-M-6] is OPEN. \_\_\_\_\_

- [30.3] **VERIFY** by indicating lights at 2-HS-63-72A, CNTMT SUMP TO RHR PMP A SUCT, [2-M-6], valve is CLOSED. \_\_\_\_\_

#### NOTE

Some leakage is expected into Containment Sump following performance of the following step.

- [30.4] **MANUALLY ACTUATE** Relay K648 at Train A SSPS Cabinet 2-R-48 to simulate RWST low-level and Containment Sump high-level. \_\_\_\_\_

- [30.5] **VERIFY** by indicating lights at 2-HS-74-3A, RHR PMP A SUCTION valve is CLOSED (**Acc Crit 5.1A.1.a(3)**) \_\_\_\_\_

- [30.6] **VERIFY** by indicating lights at 2-HS-63-72A, CNTMT SUMP TO RHR PMP A SUCT [2-M-6], valve is OPEN. (**Acc Crit 5.1A.1.a(3)**) \_\_\_\_\_

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[31] **RESET** ESF actuation signals:

[31.1] **PRESS** RESET pushbuttons [2-M-6]:

- [31.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_
- [31.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_
- [31.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_
- [31.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_
- [31.1.5] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_
- [31.1.6] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_
- [31.1.7] 2-HS-63-72D, RWST-CNTMT SUMP  
SWITCHOVER SI SIG TO FCV-63-72 \_\_\_\_\_

[31.2] **PLACE** handswitches in RESET position [2-M-6]

- [31.2.1] 2-HS-31-177A, MCR ISOL TR-A \_\_\_\_\_
- [31.2.2] 2-HS-30-101A, AUX BLDG ISOL TR-A \_\_\_\_\_

[31.3] **VERIFY** status of Train A MASTER ISOL SIGNAL  
STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6]  
as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI Window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_
- CS Window is **NOT** LIT \_\_\_\_\_

[31.4] **VERIFY** status of Train A MASTER ISOL SIGNAL  
STATUS PNL, 2-XX-55-6C, (MISSP) window for MFW  
is LIT [2-M-6] \_\_\_\_\_

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[32] **PERFORM** the following:

[32.1] **VERIFY** by indicating lights at 2-HS-74-3A, RHR PMP A SUCTION, [2-M-6], valve remains CLOSED.  
**(Acc Crit 5.1A.3.d)**

[32.2] **VERIFY** by indicating lights at 2-HS-63-72A, CNTMT SUMP TO RHR PMP A SUCT, [2-M-6], valve remains OPEN. **(Acc Crit 5.1A.3.d)**

[32.3] **PLACE** 2-HS-63-72A, CNTMT SUMP TO RHR PMP A SUCT, [2-M-6] in CLOSE position, **AND**

**VERIFY** by indicating lights valve is CLOSED.

[32.4] **PLACE** 2-HS-74-3A, RHR PMP A SUCTION, [2-M-6], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN.

[32.5] **PLACE** 2-HS-63-1A, RWST TO RHR ECCS SUCTION, [2-M-6], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN.

[33] **INITIATE** recording "POST-RESET" status of components using Appendix L.

[34] **VERIFY** by indicating lights at 1-M-9 handswitches, associated fan is STOPPED:

- 0-HS-31-64A, SD BD ROOM A PRESS FAN A-A
- 0-HS-31-62A, SD BD ROOM B PRESS FAN B-A

[35] **VERIFY** by indicating lights at 1-M-9 handswitches, associated damper is CLOSED:

- 0-HS-30-122, CASK LOAD AREA EXHAUST
- DAMPER 0-XI-31-3, FCO-31-3
- DAMPER 0-XI-31-10 FCO-31-10
- DAMPER 0-XI-31-17, FCO-31-17

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- [36] **STOP** CB EMERG PRESS FAN A-A & SUCT FCV-31-6, using 0-HS-31-6A, **AND**

**VERIFY** green indicating light is LIT. \_\_\_\_\_

- [37] **STOP** CB EMERG CLEANUP FAN A-A & SUCT FCO-31-8, using 0-HS-31-8A, **AND**

**VERIFY** green indicating light is LIT. \_\_\_\_\_

- [38] **STOP** the following pumps **AND**

**PLACE** handswitches in the required position:

LOCATION	DESCRIPTION	HANDSWITCH	Required Position	INITIALS
2-M-4	AFW PMP A-A	2-HS-3-118A	A-AUTO	
2-M-5	CCP A-A (ECCS)	2-HS-62-108A	A-AUTO	
2-M-6	SI PMP A (ECCS)	2-HS-63-10A	A-AUTO	
2-M-6	RHR PMP A (ECCS)	2-HS-74-10A	A-AUTO	

- [39] **RESET** DG 2A-A to restore DG controls:

[39.1] **CHECK** 2-RLY-82-86LOR1, DG 2A-A EMERGENCY START LOCKOUT (red) indicating light is **NOT** illuminated. [2-ARB-82-A/1, Diesel Generator 2A-A Relay Board] \_\_\_\_\_

[39.2] **RESET** 2-RLY-82-86LOR1, DG 2A-A EMERGENCY START LOCKOUT, [2-ARB-82-A/1, Diesel Generator 2A-A Relay Board] \_\_\_\_\_

- [40] **SYNCHRONIZE and LOAD** DG 2A-A using 0-SOI-82.03 to obtain a nominal loading of 4200 kW, (4.2MW) 3960kW to 4400kW, on 2-EI-82-70A. \_\_\_\_\_

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- [41] **RECORD** DG 2A-A loading as indicated on 2-EI-82-70A.  
(ACC Crit 5.5B.1)

2-EI-82-70A	MW
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- [42] **ADJUST** DG 2A-A reactive loading to obtain greater than or equal to 2970kVar to less than or equal to 3300kVar, OUTGOING, on 2-EI -82 -71A. (Acc Crit 5.5B.2)

2-EI-82-71A	kVARs
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- [43] **ENSURE** 0-XS-67-285, ERCW PMP A-A/C-A DG POWER SEL, at 0 -M -27A in pump C-A position.

- [44] **ENSURE** 0-XS-67-286, ERCW PMP B-A/D-A DG POWER SEL, at 0 -M -27A in pump B-A position.

- [45] **VERIFY** by GREEN indicating light at 2-HS-74-12A, (2-M-6) RHR PMP A MINI FLOW, valve is CLOSED.

- [46] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in MANUAL **AND**

**LOWER** controller output to 0% to allow BACKUP HEATERS A-A (2-HS-68-341A) and CONTROL HEATER D (2-HS-68-341F) to ENERGIZE.

- [47] **VERIFY** 2-HS-68-341A, BACKUP HEATERS A-A, indicates breaker closed by RED light LIT.

- [48] **CLOSE** control group 2D breaker using 2-HS-68-341F, CONTROL HEATER D, **AND**

**VERIFY** breaker indicates closed by RED light LIT.

- [49] **ENSURE** U2 Condensate Storage Tank (CST) level is greater than or equal to 200,000 gallons as indicated on the following [2-M-2] indicator:

2-LI-2-233D, CST B LEVEL	gals.
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- [50] **ENSURE** all REACTOR TRIP FIRST OUT alarms on 2-XA-55-4D are **NOT** LIT. \_\_\_\_\_
- [51] **ENSURE** 2-XA-55-4A-70A, SI ACTUATED, is **NOT** LIT. \_\_\_\_\_
- [52] **ENSURE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, is OPEN providing CS Pump recirc flow to the RWST. \_\_\_\_\_
- [53] **ENSURE** the following alignment:

PUMP	HANDSWITCH	STOPPED	INITIALS	HANDSWITCH POSITION	INITIALS
AFW PMP A-A	2-HS-3-118A [2-M-4]	STOP		A-P AUTO	
CCP A-A (ECCS)	2-HS-62-108A [2-M-5]	STOP		A AUTO	
RHR PMP A (ECCS)	2-HS-74-10A [2-M-6]	STOP		A AUTO	
SI PMP A (ECCS)	2-HS-63-10A [2-M-6]	STOP		A AUTO	
CNTMT SPRAY PMP A	2-HS-72-27A [2-M-6]	STOP		A AUTO	
ERCW PMP B-A (2)	0-HS-67-32A [0-M-27A]	STOP		A AUTO	
ERCW PMP C-A (2)	0-HS-67-36A [0-M-27A]	STOP		A AUTO	
CCS PMP 2A-A (1)	2-HS-70-59A [0-M-27B]	STOP		A-P AUTO	
CCS PMP C-S (1)	1-HS-70-51A [0-M-27B]	STOP		A-P AUTO	

- (1) Loads on CCS may have to be adjusted so that 2A-A CCS pump does NOT restart on low HDR pressure.
- (2) Other ERCW pumps should be started and pressure adjusted as needed to allow stopping of B-A and C-A pumps.

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- [54] **ENSURE** the following room cooler fans are **NOT** running and breakers are aligned in PRE-TEST positions as shown:

DESCRIPTION	BREAKER/ COMPT NUMBER	PRE-TEST POSITION	1st	CV
<b>C&amp;A VENT BD 2A1-A</b>				
RHR PUMP 2A-A RM COOLER (2-PMCL-30-175)	2-BKR-30-175 C/9A	BREAKER: ON RED LIGHT: OFF		
SIS PUMP 2A-A RM CLR (2-PMCL-30-180)	2-BKR-30-180 C/8A	BREAKER: ON RED LIGHT: OFF		
CENT CHG PUMP 2A-A RM CLR (2-PMCL-30-183)	2-BKR-30-183 C/10A	BREAKER: ON RED LIGHT: OFF		
CS PUMP 2A-A RM CLR (2-PMCL-30-177)	2-BKR-30-177 C/3C	BREAKER: ON RED LIGHT: OFF		

- [55] **ENSURE** appropriate Operations personnel are stationed, and briefed, for performance of Steps 6.2.2[58] and 6.2.2[66].

- [56] **ANNOUNCE** to plant personnel the following:

Attention all plant personnel - Unit 2 is preparing to initiate a Safety Injection coincident with a Phase B Containment Isolation signal as part of Unit 2 Integrated Safeguards Tests. Plant equipment will be automatically starting. Unit 2 Diesel Generator 2A-A and Emergency Core Cooling equipment as well as Unit 2 Containment Spray will be starting and operating. There will be Auxiliary Building ventilation changes occurring and all personnel should use caution when opening and closing any doors. (repeat)

- [57] **PERFORM** the following to start recorders:

[57.1] **OBTAIN** a SER status summary printout.

[57.2] **ENSURE** SER is in Standby Mode.

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[57.3] **ANNOTATE** DG 2A-A chart recorder for performance of Step 6.2.2[58] **THEN**

**START** DG 2A-A Chart Recorder(s). \_\_\_\_\_

[57.4] **REQUEST** feedback that DG 2A-A Chart Recorder is running. \_\_\_\_\_

[58] **PERFORM** a five second countdown over paging system, **THEN**

**PLACE SIMULTANEOUSLY** each handswitch in ACTUATE position to initiate Train 2A Safety Injection (SI) coincident with Containment Isolation Phase B (CIØB):

[58.1] 2-HS-63-133B, SI ACTUATE TR A & B [2-M-4] \_\_\_\_\_

[58.2] 2-HS-30-68A, ØB-CNTMT VENT ISOL [2-M-5] \_\_\_\_\_

[58.3] 2-HS-30-68B, ØB-CNTMT VENT ISOL [2-M-5] \_\_\_\_\_

[59] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows: (**Acc Crit 5.7B, 5.7D, 5.7H, 5.7K, 5.7L**)

[59.1] ØA Window is LIT \_\_\_\_\_

[59.2] CVI Window is LIT \_\_\_\_\_

[59.3] ØB Window is LIT \_\_\_\_\_

[59.4] MFW Window is LIT \_\_\_\_\_

[59.5] ABI Window is LIT \_\_\_\_\_

[59.6] CRI Window is LIT \_\_\_\_\_

[59.7] CS Window is LIT \_\_\_\_\_

[60] **PLACE** 2-HS-57-47, DG SYNC SWITCH, in SYN position. \_\_\_\_\_



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[61] **VERIFY** DG 2A-A returned to standby operation by observing the following indications [0-M-26]:  
(Acc Crit 5.1B.8.a(1), 5.1B.8.b(1))

- DG RUN Light (DG 2A-A) is LIT. \_\_\_\_\_
- 2-HS-57-46A, 1922-DG TO SD BD 2A-A, indicates Breaker OPEN. \_\_\_\_\_
- 6.9KV SD BD 2A-A, 2-HS-57-41B, 1816 Normal From CSST-C, breaker indicates CLOSED. \_\_\_\_\_
- DG 2A-A achieved minimum voltage and frequency: \_\_\_\_\_

Description	Indicator	Value
Generator Voltage $\geq$ 6800 VAC	2-EI-82-64A	VAC
Generator Frequency $\geq$ 59.8 Hz	2-EI-82-62A	Hz

[62] **PLACE** 2-HS-57-47, DG SYNC SWITCH, in OFF position. \_\_\_\_\_

- [63] **VERIFY** by indicating lights at handswitches for associated pumps below are **RUNNING**: (**Acc Crit 5.3C**)

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-118A	AFW PMP A-A	
2-M-5	2-HS-62-108A	CCP A-A (ECCS)	
2-M-6	2-HS-63-10A	SI PMP A (ECCS)	
2-M-6	2-HS-74-10A	RHR PMP A (ECCS)	
2-M-6	2-HS-72-27A	CNTMT SPRAY PMP A	
0-M-27A	0-HS-67-32A	ERCW PMP B-A	
0-M-27A	0-HS-67-36A	ERCW PMP C-A	
0-M-27B	2-HS-70-59A	CCS PMP 2A-A	
0-M-27B	1-HS-70-51A	CCS PMP C-S	

- [64] **VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINI FLOW valve, [2-M-6], is **OPEN**. \_\_\_\_\_

**NOTE**

Air Return Fan starts approximately nine minutes after ØB signal initiated.

- [65] **RECORD** "POST-CIØB" status of components per Appendix M. (**Acc Crit 5.7J, 5.7M, 5.7N, 5.7P**) \_\_\_\_\_
- [66] **STOP** ERCW PMP B-A [0-M-27A] using 0-HS-67-32A. \_\_\_\_\_
- [67] **VERIFY** 0-HS-67-32A, ERCW PMP B-A, in **PULL TO LOCK** position, **AND**  
**VERIFY** by indicating lights pump **STOPPED**. \_\_\_\_\_
- [68] Verify K644 relay contacts for operation of 2-FCV-72-39A are closed by performing the following: (2-TSD-63-1)

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- Locate TB641 , terminals 1 and 2, in 2-R-48 in The Aux Instrument Room \_\_\_\_\_
- Verify wires 13E04 (BK) is landed on terminal 1 and 13E05 (W) is landed on terminal 2. \_\_\_\_\_
- Verify continuity between points 1 & 2 on TB641 \_\_\_\_\_

[69] **ROTATE** 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL to ACC RESET MODULATE, **THEN**

**ROTATE** to CLOSE, **AND**

**PLACE** in PULL-TO-LOCK position. \_\_\_\_\_

[70] **ROTATE** 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** to CLOSE, **AND**

**PLACE** in PULL-TO-LOCK position. \_\_\_\_\_

[71] **VERIFY** by indicating lights associated Level Bypass Control Valves are CLOSED:

- LCV-3-164A CLOSED (2-HS-3-164A) \_\_\_\_\_
- LCV-3-156A CLOSED (2-HS-3-156A) \_\_\_\_\_

[72] **WHEN** "POST-CIØB" status of components per Appendix M is COMPLETE, **THEN:**

[72.1] **PRESS** RESET pushbuttons at [2-M-6]:

[72.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_

[72.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_

[72.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_

[72.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_

[72.1.5] 2-HS-30-64D, ØB CNTMT ISOL RESET TR-A \_\_\_\_\_

[72.1.6] 2-HS-30-64E, ØB CNTMT ISOL RESET TR-B \_\_\_\_\_

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[72.1.7] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_

[72.1.8] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_

[72.1.9] 2-HS-72-43, CNTMT SPRAY A RESET \_\_\_\_\_

[72.1.10] 2-HS-72-42, CNTMT SPRAY B RESET \_\_\_\_\_

[72.2] **PLACE** handswitches in RESET position [2-M-6]:

[72.2.1] 2-HS-31-177A, MCR ISOL TR-A \_\_\_\_\_

[72.2.2] 2-HS-30-101A, AUX BLDG ISOL TR-A \_\_\_\_\_

[73] **WHEN** Step 6.2.2[72], RESET of ACCIDENT signals is COMPLETE, **THEN**

**RECORD** "POST-RESET" status of components per Appendix M. \_\_\_\_\_

[74] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL (MISSP) windows [2-M-6] as follows:

[74.1] ØA Window is **NOT** LIT \_\_\_\_\_

[74.2] CVI Window is **NOT** LIT \_\_\_\_\_

[74.3] ØB Window is **NOT** LIT \_\_\_\_\_

[74.4] ABI Window is **NOT** LIT \_\_\_\_\_

[74.5] CRI Window is **NOT** LIT \_\_\_\_\_

[74.6] CS Window is **NOT** LIT \_\_\_\_\_

[75] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL (MISSP) windows for MFW is LIT [2-M-6]. \_\_\_\_\_

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- [76] **PLACE** handswitches in STOP position **AND** return to A  
AUTO position **AND**

**VERIFY** by indicating lights pumps are STOPPED:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-118A	AFW PMP A-A	
2-M-5	2-HS-62-108A	CCP A-A (ECCS)	
2-M-6	2-HS-63-10A	SI PMP A (ECCS)	
2-M-6	2-HS-74-10A	RHR PMP A (ECCS)	
2-M-6	2-HS-72-27A	CNTMT SPRAY PMP A	
2-M-9	2-HS-30-38A	Air Return Fan 2A-A	

- [77] **WHEN** "POST-RESET" status of components per Appendix M  
is COMPLETE, **THEN**

**ALIGN** components to "POST-TEST" REQUIRED positions  
per Appendix M.

- [78] **ALIGN** components to "POST-TEST" REQUIRED positions  
per Appendix L.

- [79] **REMOVE** DG 2A-A from service using 0-SOI-82.03, Section  
8.3.

- [80] **IF** DG 2A-A has operated for greater than one hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 2A1 & 2A2 for  
condensate.

- [81] **IF** DG 1A-A has operated for greater than one hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 1A1 & 1A2 for  
condensate.

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[82] **WHEN** 2-FCV-63-26, BIT OUTLET has been closed in Appendix L, **THEN**

**OPEN**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL.

CV

[83] **PLACE** 2-HS-74-16, RHR HX A OUTLET FCV SI SIGNAL RESET, [2-M-6], in RESET position.

[84] **COMPLETE** Appendix P using Sequence of Events Recorder (SER) printout(s).

#### NOTES

- 1) Remaining steps in this subsection are data reduction steps and need NOT be completed prior to beginning another test subsection.
- 2) Remaining steps in this subsection may be performed in any order with Test Director's permission.

[85] **VERIFY** "ACTUAL" POST SI component status recorded on Appendix L matches "Required" status specified by Appendix L. (Acc Crit 5.1A.1.a(1), 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7L, 5.7O)

[86] **VERIFY** "ACTUAL" Post-Reset component status recorded on Appendix L matches "Required" status specified by Appendix L. (Acc Crit 5.1A.3.a)

[87] **VERIFY** "ACTUAL" Post-CIØB component status recorded on Appendix M matches "Required" status specified by Appendix M. (Acc Crit 5.1A.1.b(1), 5.7J, 5.7M, 5.7P, 5.7N)

[88] **VERIFY** "ACTUAL" Post-Reset component status recorded on Appendix M matches "Required" status specified by Appendix M. (Acc Crit 5.1A.3.b)

[89] **REVIEW** Elapsed Time calculations performed on Appendix P and **PERFORM** the following:

[89.1] **VERIFY** "SI-SEQ" calculated times are within Acceptable ranges specified by Appendix P. (Acc Crit 5.1A.1.a(2))

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[89.2] **VERIFY** "CIØB-SEQ" calculated times are within Acceptable ranges specified by Appendix P.  
(Acc Crit 5.1A.1.b(2))

[90] **REVIEW** DG 2A-A chart Recorder trace(s) for DG "standby" run following receipt of SI Train 2A start signal **AND**

**PERFORM** the following:

[90.1] **RECORD** time required for DG 2A-A voltage and frequency to achieve equal to or greater than 6800 VAC and 58.8 Hz respectively: (Acc Crit 5.1B.1.a & 5.3A.1)

Description	Value (seconds)	Acceptance Criteria
Generator Voltage $\geq$ 6800 VAC		$\leq$ 10 seconds
Generator Frequency $\geq$ 58.8 Hz		

[90.2] **RECORD** minimum and maximum steady state DG 2A-A voltage and frequency which occurred during run (minimum period of five minutes):  
(Acc Crit 5.1B.6.a(1) & (5.3A.2))

Description	Value	Acceptance Criteria
Generator Minimum Voltage	VAC	$\geq$ 6800 VAC
Generator Maximum Voltage	VAC	$\leq$ 7260 VAC
Generator Minimum Frequency	Hz	$\geq$ 59.8 Hz
Generator Maximum Frequency	Hz	$\leq$ 60.1 Hz

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- [91] **REVIEW** DG 2A-A Chart Recorder trace(s) for 6.9KV Shutdown Board 2A-A voltage response following SI **AND**

**PERFORM** the following:

**NOTE**

For purposes of the following step, "steady state" is defined as the period subsequent to return of Shutdown Board voltage to within below listed limits following block load sequencing.

- [91.1] **RECORD** minimum and maximum steady state 6.9KV SD BD 2A-A voltage which occurred during the five minute recording period: **(Acc Crit 5.1B.6.a(1))**

Description	Value	Acceptance Criteria
Minimum Voltage	VAC	$\geq 6800$ VAC
Maximum Voltage	VAC	$\leq 7260$ VAC

- [91.2] **RECORD** minimum and maximum steady-state 6.9KV SD BD 2A-A frequency which occurred during the five minute recording period: **(Acc Crit 5.1B.6.a(1))**

Description	Value	Acceptance Criteria
Minimum Frequency	Hz	$\geq 59.8$ Hz
Maximum Frequency	Hz	$\leq 60.1$ Hz



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#### NOTES

- 1) A single LTC tap position change (step) results in a 6.9KV Shutdown Board voltage increase/decrease of approximately 86 VAC.
- 2) If the Shutdown Board Post-SI voltage transient was insufficient to induce LTC operation (i.e. Shutdown Board voltage did **NOT** decrease below 6928 VAC for at least 2.33 seconds) the following step is marked "N/A".

[91.3] **RECORD** time required for Load Tap Changer CSST C LTC-X to complete one step following SI, as indicated by a 6.9KV SD BD 2A-A voltage step increase following block load sequencing: \_\_\_\_\_

Description	Value (seconds)	Acceptance Criteria
Tap Changer CSST C LTC-X		≥ 3.5 seconds

#### NOTE

If Shutdown Board voltage remains above 6672 VAC, "0" seconds is to be recorded in the following step.

[91.4] **RECORD** time required for 6.9KV SD BD 2A-A voltage to be restored to greater than or equal to 6672 VAC following SI: \_\_\_\_\_

Description	Value (seconds)	Acceptance Criteria
6.9KV SD BD 2A-A VAC		≤ 5.5 seconds

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[91.5] **RECORD** maximum DG 2A-A voltage which occurred during performance of Step 6.2.2[58.1] following a load rejection of:

- Greater than or equal to 3960 kW and less than or equal to 4400kW
- Greater than or equal to 2970 kVAR and less than or equal to 3300 kVAR:

Description	Value	Acceptance Criteria
Maximum Voltage	VAC	≤ 8880 VAC

[92] **VERIFY** DG 2A-A proper response following full load rejection during performance of Step 6.2.2[58.1].

[92.1] DG 2A-A running RED light LIT  
(Acc Crit 5.1B.10.a(1)), (5.5B.2.a(1))

[92.2] DG 2A-A voltage is maintained less than or equal to 8880 VAC. (Acc Crit 5.1B.10.a(2)), (5.5B.2.a(2))

#### NOTE

The remaining steps in this section may be performed concurrently or as directed by the Test Director.

[93] **RETURN** Refueling Cavity and Reactor Vessel level to desired level to accommodate performance of Section 6.3:

[93.1] **PERFORM** 2-SOI-74.01 to place Train 2A RHR in service on recirc with suction from RCS.

[93.2] **THROTTLE** 2-HCV-74-34, RWST RETURN, as required to pump Refueling Cavity and Reactor Vessel level to between EL 722 and EI 724 level, **THEN**

**CLOSE AND LOCK** 2-HCV-74-34.

CV

[94] **PLACE** Train 2A RHR in alignment specified in Appendix C, Section 5.0 for further testing as required.

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**NOTE**

A review of Appendix N should help in restoration of equipment for performance of Section 6.3 while completing Steps 6.2.2[95] through 6.2.2[98].

- [95] **INITIATE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS, Section 8.8. \_\_\_\_\_
- [96] **INITIATE** recovery from CRI using 0-SOI-31.01. \_\_\_\_\_
- [97] **EVALUATE** restoration of Ice Condenser chillers and pumps. \_\_\_\_\_
- [98] **PERFORM** 0-SOI-65.02, Sections 7.1, and 5.1 to restore EGTS and Annulus Vacuum System. \_\_\_\_\_
- [99] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL output to 25-30% to allow BACKUP HEATERS A-A (2-HS-68-341A) and Control Group 2D (2-HS-68-341F) to DEENERGIZE. \_\_\_\_\_
- [100] **PLACE** 2-HS-68-341A, BACKUP HEATERS A-A, in OFF. \_\_\_\_\_
- [101] **PLACE** 2-HS-68-341F, CONTROL HEATERS D, in OFF. \_\_\_\_\_
- [102] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% by draining Steam Generators using 2-SOI-41 series instructions. \_\_\_\_\_
- [103] **GO TO** Section 6.3. \_\_\_\_\_

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### 6.3 Coincident LOOP/Safety Injection (SI)/Containment Isolation (CI) ØB. Train 2A

#### NOTES

1) This Section will initiate the following evolutions:

- Simultaneous Safety Injection Signal, ØB actuation, Train 2A Loss of Offsite Power;
- Both ESF pump full flow and ESF pump recirc flow DG loading information;
- Largest single load rejection by stopping running ERCW pump (B-A);
- Ability of DG 2A-A to accept a random load by manual starting of 2A-A HPFP;
- Transfer DG 2A-A emergency loads to Offsite power source.
- B-A ERCW pump to strip and auto load sequence following a loss of offsite power coincident with an SI signal.

#### 6.3.1 Preliminary Actions Required for Subsection 6.3

#### CAUTION

During this test, there will be ERCW pump starts and stops with potential to lift ERCW relief valves on lower Auxiliary Building areas requiring Operators to take actions to adjust header flows to maintain normal ERCW header pressures.

- [1] **ENSURE** all prerequisites listed in Section 4.0 met for performance of this section. \_\_\_\_\_
- [2] **ALIGN** components to "PRE-TEST" REQUIRED positions per Appendix N. \_\_\_\_\_
- [3] **ENSURE** component breakers in "TEST" per Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_

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**NOTE**

If 2A DG requires rolling in the next step, ENSURE the SRO evaluates LCO 3.8.1 applicability.

- [4] **IF** DG 2A-A has **NOT** been operated within past 12 hours,  
**THEN:**
- [4.1] **ROLL** DG 2A-A to check for water in cylinders using  
0-SOI-82.03, Section 8.2. \_\_\_\_\_
- [4.2] **RECORD** DG 2A-A information in 0-SI-82-9. \_\_\_\_\_
- [5] **PERFORM** 0-SOI-82.03, Section 5.2, Verification of Standby  
Alignment, for DG 2A-A. \_\_\_\_\_
- [6] **ENSURE** 0-XS-67-286, ERCW PMP B-A/D-A DG POWER  
SEL, at [0-M-27A] is in PUMP B-A position. \_\_\_\_\_
- [7] **ENSURE** Handswitch 0-HS-67-32A, ERCW PMP B-A, at  
[0-M-27A] is in A AUTO position. \_\_\_\_\_
- [8] **VERIFY** DG Recorder(s) installation and connection  
COMPLETED:
- Appendix G, DG 2A-A Chart Recorder Connections \_\_\_\_\_
  - Appendix H, DG 2A-A Chart Recorder Hookup \_\_\_\_\_
- [9] **VERIFY** SER recorders installation and connection  
COMPLETED:
- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
  - Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_
- [10] **ENSURE** 6.9KV SD BD 1A-A is ENERGIZED from Normal  
(Breaker 1716) using 0-SOI-211.01. \_\_\_\_\_
- [11] **ENSURE** 6.9KV SD BD 1B-B is ENERGIZED from Normal  
(Breaker 1728) using 0-SOI-211.02. \_\_\_\_\_

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[12] **ENSURE** 6.9KV SD BD 2A-A is ENERGIZED from Normal (Breaker 1816) using 2-SOI-211.03. \_\_\_\_\_

[13] **ENSURE** 6.9KV SD BD 2B-B is ENERGIZED from Normal (Breaker 1828) using 2-SOI-211.04. \_\_\_\_\_

[14] **ENSURE** breakers at 2-L-116 are available, racked into CONNECTED position, and OPEN:

- Reactor Trip Breaker A (2-BKR-99-L116/1B) \_\_\_\_\_
- Reactor Trip Breaker B (2-BKR-99-L116/1C) \_\_\_\_\_

[15] **RACK** in 2-BKR-99-L116/2C, B RX TRIP BYPASS BKR (BYB) \_\_\_\_\_

[16] **ENSURE** all REACTOR TRIP FIRST OUT alarms, 2-XA-55-4D are **NOT** LIT. \_\_\_\_\_

[17] **ENSURE** Window 2-XA-55-4A/70A, SI ACTUATED, is **NOT** LIT. \_\_\_\_\_

[18] **ENABLE** U2 Train A Solid State Protection System (SSPS) by performing the following:

[18.1] **ENSURE** Mode SELECTOR switch at SSPS Train A [2-R-48] in OPERATE position. \_\_\_\_\_

CV

[18.2] **ENSURE** Mode SELECTOR switch at SSPS Train B [2-R-51] in TEST position. \_\_\_\_\_

CV

[19] **ENSURE** 2-PDIC-3-122A, AFW PMP A-A DISCH PRESS CONTROL [2-M-4], is in AUTO. \_\_\_\_\_

[20] **CONDUCT** a pretest briefing with Test and Operations personnel using SMP-9.0 at Test Director discretion. \_\_\_\_\_

[21] **ENSURE** DG 2A-A CES2AY relay fuses remain pulled to prevent starting other diesel generators in performance of this test section. \_\_\_\_\_

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[22] **ENSURE** Handswitch CSST C LTC-Y REMOTE CONTROL,  
[0-ECB-2], is in OFF (PULL FOR AUTO) position. \_\_\_\_\_

[23] **ENSURE** Handswitch CSST C LTC-X REMOTE CONTROL,  
[0-ECB-2], is in OFF (PULL FOR AUTO) position. \_\_\_\_\_

[24] **ENSURE** U2 Ice Condenser chillers and pumps are out of  
service. \_\_\_\_\_

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### 6.3.2 Performance - Coincident LOOP/SI/CIΦB - Train 2A

[1] **PLACE** 2-RT-1, REACTOR TRIP, [2-M-4], in CLOSE position, **AND**

**VERIFY** the following:

- RX TRIP BKR A, 2-52RTA, [2-M-4], is CLOSED, red light LIT. \_\_\_\_\_
- RX TRIP BKR B, 2-52RTB, [2-M-4], is CLOSED, red light LIT. \_\_\_\_\_

[2] **CLOSE** 2-BKR-99-L116/2C, B RX TRIP BYPASS BKR (BYB) \_\_\_\_\_

[3] **VERIFY** 2-BKR-99-L116/2C, B RX TRIP BYPASS BKR red light LIT [2-M -4] \_\_\_\_\_

[4] **PLACE** handswitches [2-M-3] in RESET position **AND RELEASE**:

- 2-HS-3-99A1, MFW ISOL ACT RESET TR-A \_\_\_\_\_
- 2-HS-3-99B1, MFW ISOL ACT RESET TR-B \_\_\_\_\_

[5] **PRESS AND RELEASE** MFW ISOL RESET pushbuttons [2-M-3]:

- 2-HS-3-99A2, RESET TR-A MFW ISOL \_\_\_\_\_
- 2-HS-3-99B2, RESET TR-B MFW ISOL \_\_\_\_\_

[6] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI Window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- MFW Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_



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- CS Window is **NOT** LIT

[7] **VERIFY** the following Feedwater valves position:

DESCRIPTION	COMPONENT	LOCATION	POSITION	INITIALS
MFW REG FCV 3-35	2-FCV-3-35	2-XX-3-35	OPEN	
MFW REG FCV 3-48	2-FCV-3-48	2-XX-3-35	OPEN	
MFW REG FCV 3-90	2-FCV-3-90	2-XX-3-35	OPEN	
MFW REG FCV 3-103	2-FCV-3-103	2-XX-3-35	OPEN	
BYP REG FCV 3-48A	2-FCV-3-48A	2-XX-3-35A	OPEN	
BYP REG FCV 3-103A	2-FCV-3-103A	2-XX-3-35A	OPEN	
2-FCV-3-236 SG 1 MFW BYP ISOL	2-FCV-3-236	2-XI-3-236	OPEN	
2-FCV-3-239 SG 2 MFW BYP ISOL	2-FCV-3-239	2-XI-3-239	OPEN	
2-HS-3-33A, SG 1 MFW ISOL VLV	2-FCV-3-33-A	2-M-3	OPEN	
2-FCV-3-242, SG 3 MFW BYP ISOL	2-FCV-3-242	2-XI-3-242	OPEN	
2-FCV-3-245, SG 4 MFW BYP ISOL	2-FCV-3-245	2-XI-3-245	OPEN	
2-HS-3-87A, SG 3 MFW ISOL VLV	2-FCV-3-87-A	2-M-3	OPEN	
FCV 3-186, CKV BYP-REV FLUSH	2-FCV-3-186	2-XX-3-235	OPEN	
FCV 3-188, CKV BYP-REV FLUSH	2-FCV-3-188	2-XX-3-235	OPEN	

- [8] **VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINI FLOW, [2-M-6] valve is CLOSED.
- [9] **MAKE** a plant announcement for the following pump starts in Step 6.3.2[12].
- [10] **ENSURE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, is CLOSED for CS Pump 2A-A recirc.
- [11] **VERIFY**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL, is OPEN.

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**CAUTION**

Pump damage may occur for any pump not meeting minimum flow requirements.

[12] **PLACE** handswitches in START position **AND**

**VERIFY** by indicating lights associated pumps are RUNNING:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-118A	AFW PMP A-A	
2-M-5	2-HS-62-108A	CCP A-A (ECCS)	
2-M-6	2-HS-63-10A	SI PMP A (ECCS)	
2-M-6	2-HS-74-10A	RHR PMP A (ECCS)	
2-M-6	2-HS-72-27A	CNTMT SPRAY PMP A	
0-M-27B	2-HS-70-59A	CCS PMP 2A-A	

[13] **VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINI FLOW [2-M-6] valve is OPEN. \_\_\_\_\_

**NOTE**

No power will be transmitted to pressurizer heater elements because all individual heater element breakers are opened in preliminary actions, Step 4.4[16] and 4.4[19].

[14] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in MANUAL **AND**

**LOWER** controller output to 0% to allow BACKUP HEATERS A-A (2-HS-68-341D) and CONTROL HEATER D (2-HS-68-341F) to **ENERGIZE**. \_\_\_\_\_

[15] **VERIFY** 2-HS-68-341A, BACKUP HEATERS A-A, indicates breaker closed by RED light LIT. \_\_\_\_\_

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- [16] **CLOSE** control heater D breaker using 2-HS-68-341F,  
CONTROL HEATER D, **AND**

**VERIFY** breaker indicates closed by RED light LIT. \_\_\_\_\_

- [17] **ENSURE** appropriate Operations personnel are stationed, and  
briefed, for performance of Steps 6.3.2[21], 6.3.2[24],  
6.3.2[36], and 6.3.2[41]. \_\_\_\_\_

**NOTE**

Steps 6.3.2[18] through 6.3.2[22] may be performed concurrently or in any order.

- [18] **PERFORM** the following for Sequence of Events Recorder (SER):

[18.1] **OBTAIN** a SER status summary printout. \_\_\_\_\_

[18.2] **ENSURE** SER is in Standby Mode. \_\_\_\_\_

**NOTE**

Evaluate LCO 3.8.9 for entry conditions when Step 6.3.2[19] is completed.

- [19] **ENSURE** 2-XS-57-43, 6.9 SD BD 2A-A XFER SELECTOR, at  
2-M-1, is in MAN position. \_\_\_\_\_

- [20] **ANNOUNCE** over paging system Unit 2, Train A, Safety  
Injection and Containment Isolation Phase B coincident with a  
Unit 2 Train A Loss of Offsite Power will be initiated. \_\_\_\_\_

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**NOTE**

To minimize gravity fill of the reactor vessel from the RWST, the following step should be performed as close as practical to performance of step 6.3.2[24].

[21] **PLACE** handswitches at [2-M-6] in OPEN position **AND**

**VERIFY** by indicating lights associated valves are OPEN:

[21.1] 2-HS-63-93A, RHR TO CL 2 & 3 \_\_\_\_\_

[21.2] 2-HS-63-94A, RHR TO CL 1 & 4 \_\_\_\_\_

[21.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4 \_\_\_\_\_

[22] **PLACE** 2-HS-62-136A, RWST TO CHARGING PMPS  
SUCTION, [2-M-5], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

[23] **NOTIFY** personnel to start the following recorders:

- DG Recorder \_\_\_\_\_
- Sequence of Events Recorder \_\_\_\_\_

[23.1] **REQUEST** feedback BOTH recorders are running. \_\_\_\_\_

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#### NOTE

Steps 6.3.2[24] through 6.3.2[36] are time critical and require careful coordination of personnel. Manual start of HPFP Pump 2A-A is performed to demonstrate Diesel Generator capability to start and carry random loads.

[24] **PERFORM** a five second countdown over paging system, **THEN**  
**INITIATE SIMULTANEOUSLY** the following: \_\_\_\_\_

- Train 2A Safety Injection (SI) **AND**
- Containment Isolation Phase B (CIØB) **AND**
- Train 2A Loss of Offsite Power (LOOP)

[24.1] **PLACE** handswitches in ACTUATE position at 2-M-6: \_\_\_\_\_

- 2-HS-63-133A, SI ACTUATE TR A & B \_\_\_\_\_
- 2-HS-30-64A, ØB & CNTMT VENT ISOL \_\_\_\_\_
- 2-HS-30-64B, ØB & CNTMT VENT ISOL \_\_\_\_\_

[24.2] **PLACE** Breaker 2714, NORM FEEDER FOR 6.9KV  
SHDN BD 2A-A & ALT FEEDER FDR 6.9KV SHDN BD  
1B-B, [0-ECB-2], in TRIP. \_\_\_\_\_

[25] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[26] **VERIFY** 6.9 kV SD BD 2A-A voltage reduces to ZERO on  
2-EI-57-39, 6.9 SDB 2A-A VOLTS. [2-M-1] **(Acc Crit 5.6A.1)** \_\_\_\_\_

[27] **VERIFY** Annunciator Window, 70-A, SI ACTUATED, Panel  
2-XA-55-4A, is LIT. **(Acc Crit 5.3B)** \_\_\_\_\_

[28] **VERIFY** by indicating lights at 2-HS-57-41B, 1816 - Normal  
from CSST C [0-M-26] breaker is OPEN. \_\_\_\_\_

[29] **VERIFY** by indicating lights at 2-HS-57-46A, 1922 - DG to SD  
BD 2A-A, [0-M-26] breaker is CLOSED \_\_\_\_\_

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[30] **VERIFY** Reactor Trip Breakers are OPEN. (Acc Crit 5.3B)

<b>Description</b>	<b>Required Position</b>	<b>Actual Position</b>	<b>Initials</b>
2-52RTA RX TRIP BKR A	OPEN		
2-52RTB RX TRIP BKR B	OPEN		
2-52 BYB BYPASS BKR B	OPEN		

[31] **VERIFY** status of Train A Master Isolation Signal Status Panel (MISSP) windows at 2-M-6 as follows: (Acc Crit 5.7B, 5.7D, 5.7H, 5.7K, 5.7L)

- ØA Window is LIT
- CVI Window is LIT
- ØB Window is LIT
- MFW Window is LIT
- ABI Window is LIT
- CRI Window is LIT
- CS Window is LIT

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[32] **VERIFY** 1922-DG TO SD BD 2A-A RED light is LIT.  
(Acc Crit 5.1C.5.a, 5.7E)

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[33] **VERIFY** by indicating lights at 0-HS-26-9A, HPFP PMP 2A-A  
[1-M-15] pump is STOPPED. (Acc Crit 5.7E)

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- [34] **WHEN** 60 seconds elapsed from time recorded in Step 6.3.2[25], **THEN**

**RECORD** RHR System Injection flow rates as indicated by [2-M-6] indicators:

2-FI-63-91B, RHR TO CL 2 & 3 WR FLOW	GPM
2-FI-63-92B RHR TO CL 1 & 4 WR FLOW	GPM

- [35] **PERFORM** the following:

[35.1] **VERIFY** by GREEN indicating light LIT at 2-HS-74-12A, RHR PMP A MINI FLOW, [2-M-6], valve is CLOSED.

[35.2] **VERIFY** by both RED and GREEN indicating lights LIT at 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL [2-M-4], Level Bypass Control Valve LCV-3-164A is **NOT** CLOSED (Modulating/Open)

[35.3] **VERIFY** by both RED and GREEN indicating lights LIT at 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL [2-M-4] Level Bypass Control Valve LCV-3-156A is **NOT** CLOSED (Modulating/Open)

- [36] **WHEN** 2-HS-72-27A, CNTMT SPRAY PMP A, indicates Pump RUNNING [2-M-6] (approximately three minutes after DG 2A-A Breaker closure) **THEN**

**PLACE** 0-HS-26-9A, HPFP PMP 2A-A, at [1-M-15] in START position **AND**

**VERIFY** by indicating lights pump is RUNNING.  
(Acc Crit 5.8.1A)

- [37] **OPEN** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, to place CS Pump 2A-A on RWST recirc.

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#### NOTE

Air Return Fan starts approximately 9 minutes after ØB signal initiated.

[38] **WHEN** all loads have sequenced on **AND** step [36] above has been completed, **THEN**

**START** stopwatch to time five minute DG 2A-A run. \_\_\_\_\_

[39] **RECORD** clock time. \_\_\_\_\_

Clock Time \_\_\_\_\_

[40] **RECORD** "POST-EVENT" status of components per Appendix N. (Acc Crit 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7K, 5.7L, 5.7M, 5.7N, 5.7O, 5.7P) \_\_\_\_\_

#### CAUTION

If refueling cavity level is rising at a rate that precludes a full five minute run, Step 6.3.2[41] should be performed in a timely manner to prevent water intrusion into duct work around the cavity.

[41] **WHEN** five minutes elapsed on stopwatch, **THEN**

**PERFORM** the following:

[41.1] **RECORD** DG 2A-A load indicated by 2-EI-82-70A, DG MEGAWATTS. (Acc Crit 5.8.2) \_\_\_\_\_

DG 2A-A	MW
---------	----

[41.2] **STOP** DG 2A-A Chart Recorder(s) \_\_\_\_\_

[41.3] **RECORD** clock time: \_\_\_\_\_



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Clock Time \_\_\_\_\_

- [41.4] **CALCULATE** DG 2A-A run time as determined from clock times recorded in Step 6.3.2[39] and 6.3.2[41.3]:

\_\_\_\_\_

CV

-	=	mins	secs
Clock Time Step 6.3.2[41.3]	Clock Time Step 6.3.2[39]	DG 2A-A Runtime	

- [41.5] **ENSURE** DG 2A-A run time as determined in Step 6.3.2[41.4] is greater than or equal to five minutes. (Acc Crit 5.6A.3.e)

- [42] **VERIFY** DG 2A-A load recorded in Step 6.3.2[41.1] is less than or equal to 4400 kW. (Acc Crit 5.1B.7.b(1))

**NOTE**

Steps 6.3.2[43] and 6.3.2[44] are performed concurrently.

- [43] **CLOSE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, to place CS Pump 2A-A on recirc.

- [44] **PLACE** handswitches [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights associated valves are CLOSED:

- [44.1] 2-HS-63-93A, RHR TO CL 2 & 3

- [44.2] 2-HS-63-94A, RHR TO CL 1 & 4

- [44.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4

- [45] **CLOSE**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL.

- [46] **VERIFY** by indicating lights at 2-HS-74-12A, RHR PMP A MINIFLOW, [2-M-6], valve is OPEN.

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- [47] **ROTATE** 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL, to CLOSE **THEN**

**PLACE** 2-HS-3-164A, SG 1 SUPPLY LCV-3-164 CNTL, in PULL-TO-LOCK position. \_\_\_\_\_

- [48] **ROTATE** 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL, to CLOSE **THEN**

**PLACE** 2-HS-3-156A, SG 2 SUPPLY LCV-3-156 CNTL, in PULL-TO-LOCK position. \_\_\_\_\_

- [49] **VERIFY** by indicating lights, [2-M-4] associated Level Bypass Control Valve is CLOSED:

- 2-LCV-3-164A CLOSED (2-HS-3-164A) \_\_\_\_\_
- 2-LCV-3-156A CLOSED (2-HS-3-156A) \_\_\_\_\_

- [50] **RECORD** DG 2A-A load indicated by 2-EI-82-70A, DG MEGAWATTS, with ESF pumps on recirc. (**Acc Crit 5.8.2**) \_\_\_\_\_

DG 2A-A	MW
---------	----

- [51] **ANNOTATE** DG 2A-A recorder for logging largest single load rejection response. \_\_\_\_\_

- [52] **NOTIFY** personnel to start DG 2A-A Recorder \_\_\_\_\_

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#### **NOTE**

The B-A ERCW Pump must be placed in PULL TO LOCK in the next step because of Blackout start signal. It will restart if released to mid position. Placing ERCW Pump B-A in PULL TO LOCK simulates largest single load rejection.

[53] **STOP** ERCW Pump B-A using 0-HS-67-32A, ERCW PMP B-A, [0-M-27A], **AND**  
**PLACE** in PULL-TO-LOCK position. \_\_\_\_\_

[54] **NOTIFY** DG-DAQ Operator to STOP DG-DAQ **AND**  
**ANNOTATE** recorder with completion of single largest load rejection test. \_\_\_\_\_

[55] **RESET** ESF actuation signals:

[55.1] **PRESS** RESET pushbuttons at 2-M-6:

[55.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_

[55.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_

[55.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_

[55.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_

[55.1.5] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_

[55.1.6] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_

[55.1.7] 2-HS-30-64D, ØB CNTMT ISOL RESET TR-A \_\_\_\_\_

[55.1.8] 2-HS-30-64E, ØB CNTMT ISOL RESET TR-B \_\_\_\_\_

[55.1.9] 2-HS-72-43, CNTMT SPRAY PMP A RESET \_\_\_\_\_

[55.2] **TURN** 2-HS-74-16, RHR HX A OUTLET FCV SI  
SIGNAL RESET [2-M-6], to RESET position. \_\_\_\_\_

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[55.3] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT
- CVI Window is **NOT** LIT
- ØB Window is **NOT** LIT
- CS Window is **NOT** LIT

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[55.4] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows: (**Acc Crit 5.7B, 5.7D, 5.7H**)

- MFW Window is LIT
- ABI Window is LIT
- CRI Window is LIT

---

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[56] **VERIFY** by indicating light at [1-M-9] handswitchs, fan is STOPPED:

- 0-HS-31-62A, SD BD ROOM B PRESS FAN B-A
- 0-HS-30-122 CASK LOAD AREA EXHAUST

---

---

[57] **VERIFY** by [1-M-9] indicating light, damper is CLOSED:

- DAMPER 0-XI-31-3, FCV-31-3
- DAMPER 0-XI-31-10, FCO-31-10
- DAMPER 0-XI-31-17, FCO-31-17

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[58] **PLACE** handswitch in RESET position at 2-M-6:

- 2-HS-31-177A, MCR ISOL TR-A
- 2-HS-30-101A, AUX BLDG ISOL TR-A

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[59] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) windows [2-M-6] as follows:

- ABI Window is **NOT** LIT
- CRI Window is **NOT** LIT

[60] **VERIFY** status of Train A MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6C, (MISSP) Window, [2-M-6], MFW Window is LIT

[61] **RECORD** "POST-RESET" status of components per Appendix N.

[62] **VERIFY** by indicating lights the following breakers are OPEN:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
0-M-26	1-HS-57-98B	1934-ALTERNATE FROM CSST C	
0-M-26	2-HS-57-41B	1816-NORMAL FROM CSST C	

[63] **PLACE** Breaker 2714 Handswitch, NORM FEEDER FOR 6.9KV SHDN BD 2A-A & ALT FEEDER FOR 6.9KV SHDN BD 1B-B, [0-ECB-2], in CLOSED position, **THEN**

**VERIFY** by indicating lights breaker is CLOSED.

[64] **PRESS** BLACK-OUT RELAYS BO-RESET pushbutton resetting BO Relays on SD BD 2A-A Logic Relay Panel.

[65] **CHECK** Window 213-E, DIESEL GEN 2A-A (0-XA-55-26C), LOGIC PANEL 2A-A LOAD STRIP RELAYS OUT OF SYNC OR UV TEST, **NOT** LIT.

[66] **RESTORE** offsite power to 6.9KV SD BD 2A-A from 1816-NORMAL FROM CSST C using 0-SOI-82.03. (Acc Crit 5.1B.9, (5.2C.1) & (5.2C.2))

[67] **REMOVE** DG 2A-A from service **AND PLACE** DG 2A-A in STANDBY ALIGNMENT using 0-SOI-82.03. (Acc Crit 5.1B.9) & (5.2C.3)

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**NOTE**

Performance of Step 6.3.2[68] Shall NOT begin until DG 2A-A is disconnected from 2A-A 6.9kV Shutdown Board.

[68] **WHEN** Step 6.3.2[66] is completed, **THEN:**

**PLACE** handswitches in STOP PULL-TO-LOCK.

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-118A	AFW PMP A-A	
2-M-5	2-HS-62-108A	CCP A-A (ECCS)	
2-M-6	2-HS-63-10A	SI PMP A (ECCS)	
2-M-6	2-HS-74-10A	RHR PMP A (ECCS)	
2-M-6	2-HS-72-27A	CNTMT SPRAY PMP A	
2-M-9	2-HS-30-38A	Air Return Fan A-A	

[69] **IF** DG 2A-A has operated for greater than 1 hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 2A1 & 2A2 for condensate.

[70] **ALIGN** components to their "POST-TEST" REQUIRED positions per Appendix N.

[71] **NOTIFY** Electrical support to remove jumper in 2-R-76 from relay CPD5 by performing Appendix W, Step 4.0[2]

[72] **NOTIFY** Electrical support to remove jumper in 1-R-73 affecting SD BD Rm pressurizing fans by performing Appendix W, Step 3.0[2]

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**NOTE**

Steps 6.3.2[73] through 6.2.2[78] may be performed concurrently or in any order.

- [73] **WHEN** 2-FCV-63-26, BIT OUTLET, has been closed in Appendix N, **THEN:**

**OPEN**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL.

\_\_\_\_\_

\_\_\_\_\_

CV

- [74] **INITIATE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS, Section 8.8.

- [75] **INITIATE** recovery from CRI using 0-SOI-31.01.

- [76] **INHIBIT** Train A Solid State Protection System (SSPS) by placing Mode SELECTOR switch at 2-R-48 in TEST position.

- [77] **PLACE** CSST C LTC-Y REMOTE CONTROL, [0-ECB-2], in OFF (PULL FOR AUTO) position.

- [78] **PLACE** CSST C LTC-X REMOTE CONTROL, [0-ECB-2], in OFF (PULL FOR AUTO) position.

- [79] **PLACE** 0-HS-26-9A, HPFP PMP 2A-A, in STOP, **AND**

**RETURN** handswitch to one of the following positions clearing annunciator WINDOW 171-B, TR A HPFP PMP CNTL SWITCH MISALIGNED:

- A Auto (STANDBY)

\_\_\_\_\_

\_\_\_\_\_

CV

- Pull A-P AUTO

\_\_\_\_\_

\_\_\_\_\_

CV

- [80] **COMPLETE** Appendix Q using sequence of Events Recorder (SER) printout(s).

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**NOTE**

Remaining steps in this subsection are data reduction steps and need NOT be completed prior to beginning another test subsection.

- [81] **VERIFY** "Actual" POST-EVENT component status recorded on Appendix N matches "required" status specified by Appendix N. (Acc Crit 5.1A.2.b(1), 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7K, 5.7L, 5.7M, 5.7N, 5.7O, 5.7P) \_\_\_\_\_
  
- [82] **VERIFY** "Actual" Post-Reset component status recorded on Appendix N matches "Required" status specified by Appendix N. (Acc Crit 5.1A.3.c) \_\_\_\_\_
  
- [83] **REVIEW** Elapsed Time calculations performed on Appendix Q and **PERFORM** the following:
  - [83.1] **VERIFY** "2A-A BUS STRIP" components properly STOPPED (load-shed) as specified by Appendix Q (Acc Crit 5.6A.2) & (5.1A.2.b(2)) \_\_\_\_\_
  
  - [83.2] **VERIFY** "DG 2A-A BKR 1922" CLOSED in less than or equal to ten (10) seconds following receipt of LOOP/SI start signal. (Acc Crit 5.1B.2.a), (5.2A.3.a) & (5.6A.3.a) \_\_\_\_\_
  
  - [83.3] **VERIFY** "2A-A LOOP/SI/CIØB-SEQ" calculated times are within Acceptable ranges specified by Appendix Q (Acc Crit 5.1A.2.b(3)) & (5.6A.3.b) \_\_\_\_\_



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- [84] **REVIEW** DG 2A-A chart Recorder trace(s) for diesel response following LOOP/SI/CIØB, **AND**

**RECORD** minimum DG 2A-A voltage and frequency which occurred during load sequencing.

Generator Minimum Voltage	VAC	≥5213 VAC
Generator Minimum Frequency	Hz	≥57 Hz

- [85] **VERIFY** data recorded in Step 6.3.2[84] meets Generator Minimum Voltage and Frequency required response of DG 2A-A during sequencing of LOOP/SI/CIØB loads by performing the following: **(Acc Crit 5.1B.4.b(1))**

- [86] **VERIFY** Voltage and Frequency Recovery Times recorded on Appendix S for LOOP/SI/CIØB loading sequence meet the following for each step load increase: **(Acc Crit 5.1B.5.b(1))**

Generator Voltage Recovery MIN/MAX	6255	7645
Generator Voltage Recovery		≤ 3 secs
Generator Frequency Recovery		≤ 3 secs
Generator Frequency Recovery MIN/MAX	58.8	61.2

- [87] **REVIEW** DG 2A-A Chart Recorder trace(s) for diesel response following LOOP/SI/CIØB **AND**

**RECORD** minimum and maximum steady state DG 2A-A voltage and frequency which occurred during run (minimum period of five minutes): **(Acc Crit 5.1B.6.c(1)) & (5.6A.3.c) & (5.6A.3.d)**

Parameter	Acceptance Criteria	Actual Value	Initials
Minimum Voltage	≥ 6800 VAC	VAC	

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Maximum Voltage	≤ 7260 VAC	VAC	
Minimum Frequency	≥ 59.8 Hz	HZ	
Maximum Frequency	≤ 60.1 Hz	HZ	

[88] **VERIFY** DG 2A-A proper response following load rejection of largest single load during performance of Step 6.3.2[53].

[88.1] DG 2A-A running RED light LIT \_\_\_\_\_

[88.2] DG 2A-A speed is maintained ≤ 1001 RPM.  
(Acc Crit 5.1B.10.b(3)) \_\_\_\_\_

[88.3] Frequency is less than or equal to 66.75 Hz.  
(Acc Crit 5.5A.1.a) \_\_\_\_\_

[88.4] DG 2A-A voltage is greater than or equal to 6555V and less than or equal to 7260V within 3 seconds of load rejection. (Acc Crit 5.1B.10.b(1)), (AC 5.5A.1.b) \_\_\_\_\_

[88.5] DG 2A-A frequency is greater than 58.8 and less than 61.2 Hz within 4 seconds of load rejection.  
(Acc Crit 5.1B.10.b(2)), (Acc Crit 5.5A.1.c) \_\_\_\_\_

[89] **VERIFY** DG 2A-A frequency restored to between 58.8 to 61.2 Hz in less than 60% time of each load-sequence interval for each step load increase. \_\_\_\_\_

[90] **REVIEW** DG 2A-A Chart Recorder trace(s) for RHR Pump 2A response following initiation of LOOP/SI/CIØB **AND**

**RECORD** time required for RHR Pump 2A to reach maximum (peak) flow: \_\_\_\_\_

RHR Maximum Flow \_\_\_\_\_ seconds

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- [91] **CALCULATE** total RHR Pump 2A flow by summing injection flow rates recorded in Step 6.3.2[34]:

IV

gpm	+	gpm	=	gpm
2-FI-63-91B		2-FI-63-92B		Total Flow

- [92] **RETURN** Refueling Cavity and Reactor Vessel level to desired level:

[92.1] **PERFORM** 2-SOI-74.01 to place Train 2A RHR in service on recirc with suction from RCS.

[92.2] **THROTTLE** 2-HCV-74-34, RWST RETURN, as required to pump Refueling Cavity and Reactor Vessel level to desired level, **THEN**

**CLOSE AND LOCK** 2-HCV-74-34.

CV

- [93] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL output to 25-30% to de-energize BACKUP HEATERS A-A using 2-HS-68-341A.

- [94] **PLACE** 2-HS-68-341A, BACKUP HEATERS A-A, in OFF.

- [95] **PLACE** 2-HS-68-341F, CONTROL HEATERS D, in OFF.

- [96] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% by draining Steam Generators as necessary per applicable portion(s) of 2-SOI-41.02 or 41.03 as appropriate.

- [97] **RESTORE** Ice Condenser system to normal operation using 0-SOI-61-01.

- [98] **RETURN** Train 2A RHR to alignment specified in Appendix C, Section 5.0.

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#### 6.4 Common Station Service Transformer (CSST) Capacity Verification

- [1] **RECORD** power readings taken from each CSST Secondary winding as recorded during U-1 entry into RFO 10 in WO \_\_\_\_\_
- [2] **RECORD** power reading taken from each CSST Secondary winding as recorded in WO \_\_\_\_\_ during performance of this instruction.
- [3] **DETERMINE** that Unit 1 hot standby power recorded does not exceed CSST Secondary winding rated capacity as follows:  
(Acc Crit 5.1D.1)

CSST	SEC. WINDING	RMS MEASURED LOADING	RATED CAPACITY	RATING > MEASURED LOADING
A	X		48MVA	
A	Y		48MVA	
B	X		48MVA	
B	Y		48MVA	
C	X		40MVA	
C	Y		40MVA	
D	X		40MVA	
D	Y		40MVA	

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- [4] **DETERMINE** that Unit 2 ESF loads under accident conditions power recorded on associated transformers does not exceed CSST Secondary winding rated capacity as follows:  
(Acc Crit 5.1D.2)

<b>CSST</b>	<b>SECONDARY. WINDING</b>	<b>RMS MEASURED LOADING</b>	<b>RATED CAPACITY</b>	<b>RATING &gt; MEASURED LOADING</b>
<b>A</b>	<b>X</b>		48MVA	
<b>A</b>	<b>Y</b>		48MVA	
<b>B</b>	<b>X</b>		48MVA	
<b>B</b>	<b>Y</b>		48MVA	
<b>C</b>	<b>X</b>		40MVA	
<b>C</b>	<b>Y</b>		40MVA	
<b>D</b>	<b>X</b>		40MVA	
<b>D</b>	<b>Y</b>		40MVA	

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## 7.0 POST PERFORMANCE ACTIVITY

- [1] **ENSURE** U2 glycol system has been restored to service using 0-SOI-61-01. \_\_\_\_\_
- [2] **ENSURE** POST-TEST calibration of M&TE used to record quantitative acceptance criteria has been satisfactorily performed and results RECORDED on M&TE Log, Appendix E of SMP-9.0. \_\_\_\_\_
- [3] **ENSURE** POST-TEST calibration of permanent plant instruments used to record quantitative acceptance criteria has been satisfactorily performed and results RECORDED on Appendix B, Permanent Plant Instrumentation Log. \_\_\_\_\_
- [4] **REMOVE** the following Recorders:
  - [4.1] DG Chart Recorder(s) 2A-A per Appendix G \_\_\_\_\_
  - [4.2] Sequence of Events Recorder (SER) per Appendix I, Test Equipment Connections (SER). \_\_\_\_\_
- [5] **REMOVE** temporary equipment modifications per Appendix E. \_\_\_\_\_
- [6] **RESTORE** component breakers per Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_
- [7] **PERFORM** systems restoration per Appendix U. \_\_\_\_\_
- [8] **PERFORM** Appendix W, Section 6.0, Restoration. \_\_\_\_\_
- [9] **REALIGN** Containment Spray System by performing the following:
  - [9.1] **PLACE** 2-HS-72-27A, CNTMT SPRAY PMP A, in STOP PULL-TO-LOCK. \_\_\_\_\_
  - [9.2] **PLACE** 2-HS-72-10A, CNTMT SPRAY PMP B, in STOP PULL-TO-LOCK. \_\_\_\_\_
- [10] **ATTACH** DG 2A-A chart recorder traces to this procedure, with date, recorder ID, parameters monitored, chart speed, and procedure step reference annotated on recordings. \_\_\_\_\_

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- [11] **ATTACH** Sequence of Events Recorder (SER) printouts to this procedure, with date, and procedure step references annotated on printouts. \_\_\_\_\_
- [12] **RESTORE** TR 2B SSPS per Appendix D, Section 2.0 \_\_\_\_\_
- [13] **NOTIFY** U2 WCC that ERCW valve and breakers in Steps 4.4[24] and 4.4[24.3] (AFW pump ERCW suction) are no longer required tagged by this test. \_\_\_\_\_
- [14] **NOTIFY** Fire Ops of completion of testing for Train 2A **AND**  
**EVALUATE** any outstanding configuration changes and Fire Impairment Permits that need to be closed out. \_\_\_\_\_

**NOTE**

Step [16] and [17] may be performed concurrently to position components and remove tags

- [15] **PERFORM** component realignment per Appendix X, Electrical Isolation Alignment, and inform Test Director when completed. \_\_\_\_\_
- [16] **REMOVE** from plant equipment any sequentially numbered labels used to denote equipment under control of this Instruction, **AND**  
**ACCOUNT** for each numbered disc prior to closing out this Instruction. \_\_\_\_\_
- [17] **IF** 2-PTI-262-02, Train 2B, test is completed, **THEN**  
**NOTIFY** maintenance personnel that Ice Condenser Lower Inlet Door blocks are NO longer required to be installed for this test. \_\_\_\_\_
- [18] **ENSURE** pressurizer heater interlocks for 2-BKR-68-341A and 2-BKR-68-341F are restored in Appendix E, Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_
- [19] **ENSURE** 6.9kV Breakers are OPEN and Racked Down:  
  - 2-BKR-68-341A, 6.9kV SD BD 2A-A, Compt C20 \_\_\_\_\_

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- 2-BKR-68-341F, 6.9kV SD BD 2A-A, Compt. C21 \_\_\_\_\_

[20] **WHEN** Step 7.0[18] is COMPLETE, **THEN**

**ENSURE** breakers at 2-DPL-68-341A, PZR BACKUP HTR GRP 2A-A  
DISTRIBUTION PANEL, are **CLOSED**:

[20.1] 2-BKR-68-341A/A1, PRESSURIZER HTR  
(2-HTR-68-341A/A1-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.2] 2-BKR-68-341A/A2, PRESSURIZER HTR  
(2-HTR-68-341A/A2-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.3] 2-BKR-68-341A/A3, PRESSURIZER HTR  
(2-HTR-68-341A/A3-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.4] 2-BKR-68-341A/A4, PRESSURIZER HTR  
(2-HTR-68-341A/A4-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.5] 2-BKR-68-341A/A5, PRESSURIZER HTR  
(2-HTR-68-341A/A5-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.6] 2-BKR-68-341A/A6, PRESSURIZER HTR  
(2-HTR-68-341A/A6-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[20.7] 2-BKR-68-341A/A7 PRESSURIZER HTR  
(2-HTR-68-341A/A7-A)

\_\_\_\_\_  
\_\_\_\_\_  
CV



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[21] **WHEN** Step 7.0[18] is COMPLETE, **THEN**

**ENSURE** breakers at 2-DPL-68-341F, PZR CONTROL HTR GRP 2D DISTRIBUTION PANEL, are **CLOSED**:

[21.1] 2-BKR-68-341F/D1, PRESSURIZER HTR  
(2-HTR-68-341F/D1)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.2] 2-BKR-68-341F/D2, PRESSURIZER HTR  
(2-HTR-68-341F/D2)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.3] 2-BKR-68-341F/D3, PRESSURIZER HTR  
(2-HTR-68-341F/D3)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.4] 2-BKR-68-341F/D4, PRESSURIZER HTR  
(2-HTR-68-341P/D4)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.5] 2-BKR-68-341F/D5, PRESSURIZER HTR  
(2-HTR-68-341F/D5)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.6] 2-BKR-68-341F/D6, PRESSURIZER HTR  
(2-HTR-68-341F/D6)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22] **ENSURE** the following:

[22.1] **TRANSFER** C-S CCS pump from ALTERNATE to  
NORMAL power supply using 0-SOI-70.01, Section 8.7,  
**THEN**

**PLACE** pump in service on Train B CCS header.

\_\_\_\_\_

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- [22.2] **REALIGN** 1B-B CCS pump to provide backup to Train 1A CCS using 0-SOI-70.01, Section 8.2. \_\_\_\_\_
- [22.3] **NOTIFY** Operations to review ERCW system and **ENSURE** that ERCW pumps are aligned as required using 0-SOI-67.01. \_\_\_\_\_
- [23] **ENSURE** each of the following breakers at 2-L-116 are in racked OUT and DISCONNECTED position:
- [23.1] Reactor Trip Breaker A \_\_\_\_\_
- [23.2] Reactor Trip Breaker B \_\_\_\_\_
- [23.3] B Reactor Trip Bypass Breaker (BYB) \_\_\_\_\_
- [24] **WALK DOWN** all Main Control Boards, U1, Electrical Distribution, and U2, **AND** **REPORT** any abnormal component or equipment configurations to Unit SRO and Test Director for resolution. \_\_\_\_\_
- [25] **ENSURE** that all Appendixs are complete. \_\_\_\_\_
- [26] **ENSURE** all temporary tags placed for this test are removed from plant components. (Tags are numbered from 2 to 399) \_\_\_\_\_

#### NOTE

Procedures or documents that are attached to this test package include any procedure used outside of this test that provides support for this test or that documents any plant configuration change in the plant.

- [27] **ATTACH** all procedures and other supporting documents utilized in the performance of this test. \_\_\_\_\_
- [28] **NOTIFY** maintenance personnel that RCPs are no longer required to be uncoupled and backseated for this procedure. \_\_\_\_\_

\_\_\_\_\_  
Contact

\_\_\_\_\_  
Date

- [29] **NOTIFY** SM of test completion and system alignment. \_\_\_\_\_

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- [30] **NOTIFY** U1 US/SRO of test completion and system alignment. \_\_\_\_\_
- [31] **NOTIFY** U2 US/SRO of test completion and system alignment. \_\_\_\_\_
- [32] **NOTIFY** WCC SRO of test completion and system alignment. \_\_\_\_\_
- [33] **NOTIFY** chemistry of test completion and system alignment. \_\_\_\_\_
- [34] **NOTIFY** RP of test completion and system alignment. \_\_\_\_\_
- [35] **NOTIFY** Load Dispatcher of test completion and system alignment. \_\_\_\_\_

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## **8.0 RECORDS**

### **A. QA Records**

Completed Test Package (PTI) and all appendixs

1. Appendix A, Test Procedure Reference Review
2. Appendix B, Permanent Plant Instrumentation Log
3. Appendix C, Equipment Alignment
4. Appendix D, Removal and Restoration of SSPS TRAIN 2B
5. Appendix E, Temporary Wire Lift and Jumper Equipment Modifications
6. Appendix F, Breaker Test Configuration Lineup
7. Appendix G, DG 2A-A Chart Recorder Connections
8. Appendix H, DG 2A-A Chart Recorder Hookup
9. Appendix I, Sequence of Events Recorder (SER) Connections
10. Appendix J, Sequence of Events Recorder (SER) Hookup
11. Appendix K, Loss of Offsite Power - Train 2A, Section 6.1
12. Appendix L, Safety Injection (SI) - Train 2A, Section 6.2
13. Appendix M, Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2
14. Appendix N, Coincident LOOP/SI/CIØB - Train 2A, Section 6.3
15. Appendix O, SER Timing - Subsection 6.1
16. Appendix P, SER Timing - Subsection 6.2
17. Appendix Q, SER Timing - Subsection 6.3
18. Appendix R, Transient Load Response - Subsection 6.1
19. Appendix S, Transient Load Response - Subsection 6.3

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20. Appendix T, Potential Technical specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose Calculation Manual (ODCM), Applications
21. Appendix U, Systems and Components Return To Normal
22. Appendix V, Radiation Monitors Which Lose Power During Integrated Safeguards Tests on Train 2A
23. Appendix W, Electrical Support
24. Appendix X
25. Appendix Y

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**Appendix A  
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**Test Procedure Reference Review**

PROCEDURE/INSTRUCTION	REVISION/ CHANGES	IMPACT Yes/NO	INITIAL & DATE (N/A for no change)	
FSAR:				
Section 6.3	12			
Section 7.3	11			
Section 8.1.5.3	12			
Section 8.3	12			
Section 14.2.7	11			
Table 14.2-1:				
Sheet 26	8			
Sheet 27	1			
Sheet 44	1			
Sheet 45	1			
Sheet 46	1			
Sheet 47	1			
Sheet 48	1			
Sheet 49	1			
Reg. Guide 1.9	3			
Reg. Guide 1.41	3/16/73			
Reg. Guide 1.68	2			
IE Bulletin No. 80-06				
Tech. Spec. Section 3.8.1	H			
2-TSD-63-1	3			
2-TSD-262-01	1			

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**Appendix B  
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**Permanent Plant Instrumentation Log**

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	INITIAL	DATE	YES	NO		INITIAL	DATE
2-LI-3-174										
2-LI-3-173										
2-LI-3-172										
2-LI-3-175										
2-LI-3-164										
2-LI-3-156										
2-LI-3-148										
2-LI-3-171										
2-LI-2-230D										
2-LI-2-233D										
2-LI-63-50										
2-LI-63-51										
2-LI-63-52										
2-LI-63-53										
1-EI-82-10A										

(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 N/A if instrument was NOT used to verify/record quantitative acceptance criteria data.

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**Permanent Plant Instrumentation Log**

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	INITIAL	DATE	YES	NO		INITIAL	DATE
1-EI-82-40A										
2-EI-82-70A										
0-EI-82-100A										
2-FI-63-91B										
2-FI-63-92B										
2-EI-57-39										
2-EI-57-66										
2-EI-57-39										
2-EI-57-66										

**(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 N/A if instrument was NOT used to verify/record quantitative acceptance criteria data.



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 195 of 591</b>
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**Appendix C  
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**Equipment Alignment**

**NOTES**

- 1) Sections of this appendix may be performed in any sequence with Test Director approval.
- 2) Any questions concerning alignment of plant components should be addressed with the Test Director and Unit 2 SRO.

**1.0 AFW 2A RECIRC ALIGNMENT**

[1] **ENSURE** the following valves are in the required position:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
AUX FEEDWATER PUMP CST B SUP HDR ISOL	T15N/718	LOCKED OPEN	2-ISV-2-505		CV
CONDENSATE SUPPLY ISOL TO AUX FEEDWATER	A15Q/723	LOCKED OPEN	2-ISV-3-800		CV
AUX FEEDWATER PMP 2A-A SUCTION ISOL	A12S/713	LOCKED OPEN	2-ISV-3-803		CV
AUX FEEDWATER PMP 2A-A RECIRC ISOL	A13S/713	LOCKED OPEN	2-ISV-3-816		CV
AUX FEEDWATER PMP 2A-A 2-ISV-3-827 BYPASS	A13T/737	CLOSED	2-BYV-3-839		CV
AUX FEEDWATER PMP 2A-A 2-ISV-3-828 BYPASS	A13T/737	CLOSED	2-BYV-3-840		CV

[2] **ENSURE** the following valves in position required to allow flow to SGs 1 and 2 from MDAFWP 2A-A:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
MD AFW PUMP 2A-A SG 2 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-827		CV
MD AFW PUMP 2A-A SG 1 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-828		CV
MD AFW PUMP 2A-A SG 2 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-835		CV
MD AFW PUMP 2A-A SG 1 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-836		CV

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**Equipment Alignment**

**[3] ENSURE HS position in the following position:**

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
AFW PMP A-A	2-M-4	STOP PULL TO LOCK	2-HS-3-118A		CV

**[4] VERIFY step 1.0[3] alignment above is signed complete,  
THEN**

**ENSURE the following:**

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
<b>6.9KV SHUTDOWN BOARD 2A-A</b>					
AFW PUMP 2A-A (2-PMP-3-118)	C/10	RACKED UP & OPERABLE	2-BKR-3-118		CV
<b>480V REACTOR MOV BOARD 2A1-A</b>					
AFW PMP 2A-A LUBE OIL PMP (2-PMP-3-118D)	C/4E	ON	2-BKR-3-118D		CV

**[5] VERIFY CST B level >200,000 GALLONS, 2-LI-2-233D,  
[2-M-2]**

**[6] VERIFY the following breakers are ON to allow T-D  
AFWP T&TV to open during test:**

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
<b>125V VITAL BATTERY BOARD I</b>					
NORM FDR FOR UNIT 2 AFWT PUMP	PANEL 3	ON	0-BKR-236-1/321		CV
<b>125V VITAL BATTERY BOARD II</b>					
ALT FDR FOR UNIT 2 AFWT PUMP	PANEL 3	ON	0-BKR-236-2/321		CV

**[7] ENSURE 2-HS-46-56A-S, [2-M-4] T-D AFWP T&T VLV, is  
indicating CLOSED. (GREEN light ON, RED light OFF)**

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 197 of 591</b>
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**Appendix C  
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Equipment Alignment**

[8] **ENSURE** the following:

[8.1] 2-FCV-1-51, T-D AFWP T&T VLV, Mechanical  
Overspeed Trip Device is LATCHED. \_\_\_\_\_

[8.2] Valve motor drive is LATCHED to valve stem. \_\_\_\_\_

[8.3] 2-FCV-1-51, T-D AFWP T&T VLV, is CLOSED. \_\_\_\_\_

**2.0 CCP 2A RECIRC ALIGNMENT**

**NOTES**

- 1) CCP 2A-A will be started on recirc flow in the body of the Instruction, when required.
- 2) 2-FCV-62-90 & 91 are closed to prevent flowing water to the Reactor Vessel through the normal charging line.

[1] **ENSURE** HS in the following position:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CCP A-A (ECCS)	2-M-5	STOP PULL TO LOCK	2-HS-62-108A		CV

[2] **ENSURE** the following CVCS/SIS valve alignments:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
BIT OUTLET	2-M-6	CLOSED	2-HS-63-25A		CV
BIT OUTLET	2-M-6	CLOSED	2-HS-63-26A		CV
CHARGING LINE ISOL	2-M-6	CLOSED	2-HS-62-90A		CV

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Equipment Alignment**

CHARGING LINE ISOL	2-M-6	CLOSED	2-HS-62-91A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-132A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-133A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-135A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-136A		CV

- [3] **VERIFY** the following valves are in required position for recirc operation.

<b>NOTE</b>					
2-FCV-62-39 and 2-FCV-62-40 requires manual operation. Power has been removed.					

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>U2 BIT ROOM</b>					
CCP 2A-A/2B-B MIN FLOW	A11U/715	LOCKED OPEN	2-FCV-62-98		CV
CCP 2A-A/2B-B MIN FLOW	A11U/715	LOCKED OPEN	2-FCV-62-99		CV
BORON INJ TNK IN ISOL	A11U/715	LOCKED OPEN	2-FCV-63-39		CV
BORON INJ TNK IN ISOL	A11U/715	LOCKED OPEN	2-FCV-63-40		CV
<b>CCP ROOM 2A</b>					
CCP 2A-A SUCTION ISOL	A12U/692	LOCKED OPEN	2-ISV-62-509		CV
CCP 2A-A MINIFLOW ISOL	A12U/699	LOCKED OPEN	2-ISV-62-524		CV
CCP 2A-A DISCH 2-FCV-62-93 BYPASS	A12U/702	CLOSED	2-ISV-62-526		CV
CCP 2A-A DISCHARGE ISOL	A12U/692	LOCKED OPEN	2-ISV-62-527		CV

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**Equipment Alignment**

<b>AB EL 713</b>					
CVCS SEAL WATER HX INLET ISOL	A11U/713	LOCKED OPEN	2-ISV-62-647		CV
CVCS SEAL WATER HX OUTLET ISOL	A11U/713	LOCKED OPEN	2-ISV-62-650		CV
CVCS SEAL WTR RETURN CHARGING PMP SUCTION	A11U/713	LOCKED OPEN	2-BYV-62-653		CV

- [4] **ENSURE** 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, is in AUTO. [EL 692, COL A12U, 2-JB-292-1191-A]

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [5] **ENSURE** the following:

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POSITION</b>	<b>UNID</b>	<b>PERF INITIAL</b>	<b>VERIF INITIAL</b>
<b>6.9KV SHUTDOWN BOARD 2A-A</b>					
CENT CHARGING PUMP 2A-A (2-PMP-62-108)	C/18	RACKED UP & SPRING CHARGED	2-BKR-62-108		CV
<b>480V REACTOR MOV BOARD 2A1-A</b>					
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	C/11D	ON	2-BKR-63-26		CV
CCP AUX OIL PMP 2A (2-PMP-62-247)	C/3E	ON	2-BKR-62-247		CV

**NOTE**

The level band set forth in Step 2.0[6] is only a suggested operating band for starting the Charging Pump. Guidance for pump operations is provided in 2-SOI-62.01.

- [6] **ENSURE** sufficient VCT level for CCP pump run (25% - 40%) using 2-SOI-62.01.

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Equipment Alignment**

**NOTE**

Placing NOR/AUX handswitches in AUX position will cause an alarm in the control room.

**3.0 SAFETY INJECTION SYSTEM ALIGNMENTS**

**3.1 SIP 2A ALIGNMENT**

[1] **ENSURE** the following SIP alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
SI PMP A (ECCS)	2-M-6	STOP PULL-TO -LOCK	2-HS-63-10A		CV
RWST TO SI PMPS SUCTION	2-M-6	OPEN	2-HS-63-5A		CV
SI PMP A SUCTION	2-M-6	OPEN	2-HS-63-47A		CV
SI PMP A RECIRC TO RWST	2-M-6	OPEN	2-HS-63-4A		CV
SI PMPS RECIRC HDR TO RWST	2-M-6	OPEN	2-HS-63-3A		CV
SI PMP B RECIRC TO RWST	2-M-6	CLOSED	2-HS-63-175A		CV
SI PUMP A TO HL 1 & 3	2-M-6	CLOSED	2-HS-63-156A		CV
SI PMP A TO CL 1-2-3-4	2-M-6	OPEN	2-HS-63-152A		CV
SI PMP B TO CL 1-2-3-4	2-M-6	CLOSED	2-HS-63-153A		CV
SI PMPS TO CL 1-2-3-4	2-M-6	CLOSED	2-HS-63-22A		CV
<b>SI PUMP ROOM 2A</b>					
SI PUMP 2A-A DISCHARGE ISOLATION	A10V/692	LOCKED OPEN	2-ISV-63-525		CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 201 of 591</b>
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**Equipment Alignment**

- [2] **ENSURE** 2-HS-30-180, SIS PUMP 2A-A ROOM COOLER, is in AUTO. [EL 692, COL A10V, 2-JB-292-1197-A]

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [3] **WHEN** 3.1[1] complete **THEN**  
**ENSURE** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>6.9KV SHUTDOWN BD 2A-A</b>					
SAFETY INJECTION PUMP 2A-A (2-PMP-63-10)	C/15	RACKED UP, CLOSING SPRING CHARGED	2-BKR-63-10		CV

- [4] **ENSURE** RWST filled to  $\geq 370,000$  gals.

**3.2 OTHER SYSTEM 63 ALIGNMENTS**

- [1] **ENSURE** the following CLA MOVs are CLOSED by light indication on [2-M-6]:

NOMENCLATURE	POS	UNID	PERF INIT	VERIF INIT
CL ACCUM 1 OUTLET	CLOSED	2-HS-63-118A		CV
CL ACCUM 2 OUTLET	CLOSED	2-HS-63-98A		CV
CL ACCUM 3 OUTLET	CLOSED	2-HS-63-80A		CV
CL ACCUM 4 OUTLET	CLOSED	2-HS-63-67A		CV

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**Equipment Alignment**

- [2] **VERIFY** the following breaker positions to support the SI actuation:

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
<b>480V REACTOR MOV BOARD 2A1-A</b>					
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	C/3F2	OFF	2-BKR-63-118A		CV
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	C/8D	ON	2-BKR-63-118B		CV
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	C/17F2	OFF	2-BKR-63-80A		CV
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	C/7D	ON	2-BKR-63-80B		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	C/11D	ON	2-BKR-63-26		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	C/3F2	OFF	2-BKR-63-98A		CV
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	C/16F2	OFF	2-BKR-63-67A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	C/11E	OFF	2-BKR-63-25		CV

- [3] **ENSURE** the SI Accumulator outlet valves and BIT outlet valve breakers (listed above as OFF) are tagged with a Hold Order. \_\_\_\_\_

- [4] **ENSURE** RWST level is greater than or equal to 370,000 gals. \_\_\_\_\_



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**4.0 CONTAINMENT SPRAY PUMP 2A RECIRC ALIGNMENT:**

[1] **ENSURE** the following System 72 valve alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CNTMT SPRAY PMP A	2-M-6	STOP PULL-TO- LOCK	2-HS-72-27A		CV
RWST TO CS PMP A SUCTION	2-M-6	OPEN	2-HS-72-22A		CV
RWST TO CS PMP B SUCTION	2-M-6	CLOSED	2-HS-72-21A		CV
CNTMT SUMP TO CS PMP A SUCTION	2-M-6	CLOSED	2-HS-72-44A		CV
CNTMT SPRAY PMP A MINI FLOW	2-M-6	(PULL) P AUTO	2-HS-72-34A		CV
CNTMT SPRAY HDR A TO CNTMT	2-M-6	CLOSED	2-HS-72-39A		CV
RHR SPRAY HDR A TO CNTMT	2-M-6	CLOSED	2-HS-72-40A		CV

[2] **PLACE** the following in the required position:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CNTMT SPRAY HDR B TEST LINE ISOLATION	A11V/719 U2 BIT Rm	LOCKED CLOSED	2-ISV-72-504		CV

[3] **PLACE** the following in the required position:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CNTMT SPRAY HDR A TEST LINE ISOLATION	A11V/719 U2 BIT Rm	UNLOCK & OPEN	2-ISV-72-503		CV
CNTMT SPRAY TEST LINE ISOLATION	A11U/715 U2 BIT Rm	OPEN	2-ISV-72-502		CV
CNTMT SPRAY PMP 2A-A DISCH ISOLATION	A11V/718 U2 Hx Rm A	LOCKED OPEN	2-ISV-72-528		CV

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- [4] **ENSURE** room cooler handswitch, 2-HS-30-177, CS PUMP 2A-A ROOM COOLER, is in AUTO. [EL 676, COL A10U, 2-JB-292-2502-A]

CV

- [5] **PERFORM** the following alignment;

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>6.9KV SHUTDOWN BOARD 2A-A</b>					
CONTAINMENT SPRAY PUMP 2A-A (2-PMP-72-27)	C/13	RACKED UP & OPERABLE	2-BKR-72-27		CV
<b>480V REACTOR MOV BOARD 2A1-A</b>					
CSP 2A-A MINIFLOW (2-FCV-72-34)	C/10F	ON	2-BKR-72-34		CV
CS HDR A ISOL (2-FCV-72-39)	C/13E	OFF	2-BKR-72-39		CV
CNTMT SUMP TO CSP 2A-A SUCTION (2-FCV-72-44)	C/13B	OFF	2-BKR-72-44		CV
RHR SPRAY HDR A ISOL (2-FCV-72-40)	C/14A	OFF	2-BKR-72-40		CV
<b>480V C&amp;A BLDG VENT BOARD 2A1-A</b>					
RWST TO CSP 2A-A (2-FCV-72-22)	C/7E	ON	2-BKR-72-22		CV

- [6] **IF** a U2 Refueling Water Purification Pump(s) (RWPP) is in service to RWST, **THEN**  
**STOP** RWPP(s); otherwise, **N/A** steps below:

NOMENCLATURE	LOC	POS	UNID	PERF INIT
REFUELING WATER PURIFICATION PUMP A	A5W/692	STOP	0-HS-78-19	
REFUELING WATER PURIFICATION PUMP B	A5W/692	STOP	0-HS-78-20	

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**5.0 RHR 2A RECIRC ALIGNMENT:**

[1] **ENSURE** the following RHR alignment:

<b>NOTE</b>					
RHR spray valve 2-FCV-72-40 is verified closed with power off in previous Section for Containment Spray Recirc Alignment.					

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
RHR PMP A (ECCS)	2-M-6	STOP PULL-TO LOCK	2-HS-74-10A		CV
RHR PMP A MINI FLOW	2-M-6	P-AUTO	2-HS-74-12A		CV
RHR PMP B SUCTION	2-M-6	CLOSED	2-HS-74-21A		CV
LOOP 4 HL TO RHR SUCTION	2-M-6	CLOSED	2-HS-74-1A		CV
LOOP 4 HL TO RHR SUCTION	2-M-6	CLOSED	2-HS-74-2A		CV
RHR TO CL 2&3	2-M-6	CLOSED	2-HS-63-93A		CV
RHR TO HL 1&3	2-M-6	CLOSED	2-HS-63-172A		CV
RHR TO CL 1&4	2-M-6	CLOSED	2-HS-63-94A		CV
RHR PMP A SUCTION	2-M-6	OPEN	2-HS-74-3A		CV
RHR HX A OUTLET XTIE	2-M-6	OPEN	2-HS-74-33A		CV
RHR HX B OUTLET XTIE	2-M-6	OPEN	2-HS-74-35A		CV

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**[2] VERIFY** the following RHR pump 2A-A alignment:

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
RHR PUMP 2A-A DISCHARGE ISOLATION	A10V/676 Pmp Rm 2A	LOCKED OPEN	2-ISV-74-520		CV
RHR HEAT EXCHANGER 2A INLET ISOLATION	A9W/713 Hx Rm 2A	LOCKED OPEN	2-ISV-74-524		CV
RHR HEAT EXCHANGER 2A MANUAL BYPASS	A9W/713 Hx Rm 2A	CLOSED	2-HCV-74-36		CV
RHR HEAT EXCHANGER 2B MANUAL BYPASS	A7W/713 Hx Rm 2B	CLOSED	2-HCV-74-37		CV
RHR HX 2A OUTLET TO CVCS	A9W/713 Hx Rm 2A	CLOSED	2-SPV-74-530		CV
RHR HX 2B OUTLET TO CVCS	A7W/713 Hx Rm 2B	CLOSED	2-SPV-74-531		CV
RHR RWST RETURN	A7W/713 Hx Rm 2B	LOCKED CLOSED	2-HCV-74-34		CV

**[3] ENSURE** room cooler handswitch, 2-HS-30-175, RHR PUMP 2A-A ROOM COOLER, is in AUTO. [EL 676, COL A10W, 2-JB-292-2506-A]

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CV

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**CAUTIONS**

- 1) If seal-in on 2-FCV-63-1 is in service, actuating the valve will result in full travel from current position to opposite position.
- 2) 2-FCV-63-1 will allow a large volume of water to pass when actuated in the open direction should there be a flow path available.
- 3) Personnel stationed at the valve breaker to open the breaker and break the seal in would be advantageous to stop undesired valve travel and enable the valve to be returned to a closed position.

- [4] **ENSURE** 2-HS-63-1A, RWST TO RHR ECCS SUCTION,  
indicates OPEN.

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\_\_\_\_\_  
CV

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**NOTE**

If required, for 2-FCV-74-8 and -9, breakers may be temporarily turned ON to check valve position and then returned to OFF position.

- [5] **ENSURE** Steps 5.0[1] through 5.0[3] completed, **THEN**  
**PERFORM** following RHR power alignment:

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
<b>6.9KV SHUTDOWN BOARD 2A-A</b>					
RHR PUMP 2A-A (2-PMP-74-10)	C/14	RACKED UP & OPERABLE	2-BKR-74-10		CV
<b>480V REACTOR MOV BOARD 2A1-A</b>					
RHR PMP 2A-A MINIFLOW (2-FCV-74-12)	C/14D	ON	2-BKR-74-12		CV
<b>480V REACTOR MOV BOARD 2A2-A</b>					
2-FCV-74-2 BYPASS RHR SUCTION (2-FCV-74-8)	C/5C	CLOSED POWER OFF	2-BKR-74-8		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
2-FCV-74-1 BYPASS RHR SUCTION (2-FCV-74-9)	C/5C	CLOSED POWER OFF	2-BKR-74-9		CV
<b>480V C&amp;A BLDG VENT BOARD 2A1-A</b>					
RHR PUMP 2A-A SUCTION (2-FCV-74-3)	C/7D	ON	2-BKR-74-3		CV

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**6.0 FIRE OPERATIONS ALIGNMENTS**

**NOTE**

The following steps are usually done by Fire Operations or with their assistance. Unit 2 (alternate) power supply to 0-DPL-13-1 will be interrupted during blackout in this test.

- [1] **ENSURE** 120V Fire Protection Power Distribution  
Panel 0-DPL-13-1 is aligned with its normal supply breaker, 0-BKR-13-1A, CLOSED, powered from Train 1A. \_\_\_\_\_
- [2] **ENSURE** an NPG-SPP-18.4.6 FPIP has been secured to address loss of alternate power to fire protection panel, defeat of 0-FCV-26-320, -3145, and -3146, and loss of 2A Electric Fire Pump during blackout. \_\_\_\_\_
- [3] **IF** RSW/DI Process water isolation to Makeup Water Treatment Building is **NOT** desired, **THEN**  
  
**PLACE** breaker HC (0-SW-26-0320) for 0-FCV-26-320 in OFF position. (Located in compartment HC of 0-MCC-281-1 in MWTP Control Room). \_\_\_\_\_  
\_\_\_\_\_
- [4] **ENSURE** the following handswitches are in TEST position:
  - [4.1] 0-HS-26-3145A [MOB Chiller Room, north wall, EI 725 0-JB-294-6889] \_\_\_\_\_
  - [4.2] 0-HS-26-3146A [Service Bldg, Mech Equip Rm, S4/SM, EI 741, 0-JB-295-6890] \_\_\_\_\_
- [5] **NOTIFY** Test Director that this Section 6.0 of Appendix C is complete. \_\_\_\_\_

CV

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**7.0 MISCELLANEOUS SYSTEM ALIGNMENTS:**

[1] **PERFORM** the following:

[1.1] **PLACE** Thermal Barrier Booster Pump 2A in service using 0-SOI-70.01.

[1.2] **ENSURE** 2-HS-70-131A, TBBP 2A, [0-M-27B] in A-P AUTO.

CV

[1.3] **RECORD** AS FOUND position for Thermal Barrier Booster Pump 2B-B handswitch.

NOMENCLATURE	LOC	UNID	AS FOUND POSITION	INITIAL
THRM BAR BSTR PMP 2B (TBBP)	0-M-27B	2-HS-70-130A		

[1.4] **PLACE** 2-HS-70-130A THRM BAR BSTR PMP 2B (TBBP) in STOP Pull-To-Lock.

[2] **ENSURE** MG set breakers are disconnected and open on 480V Unit Boards 2A and 2B:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>480V UNIT BOARD 2A</b>					
CRD MG SET 2A (2-GEN-85-A)	C/4D	OPEN	2-BKR-85-A		CV
<b>480V UNIT BOARD 2B</b>					
CRD MG SET 2B (2-GEN-85-B)	C/3B	OPEN	2-BKR-85-B		CV



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**NOTE**

The common line blow down valves in Turbine Building have been closed. With individual SG blowdown valves open, there may be some movement of water. Closing valves in Step 7.0[3] should prevent any level movement from one SG to another.

[3] **IF** desired, **THEN**

**CLOSE** the following SG-BD throttle valves:

- SG 1, 2-THV-1-828.
- SG 2, 2-THV-1-829.
- SG 3, 2-THV-1-830.
- SG 4, 2-THV-1-831.

[4] **ENSURE** pressure in RCDT is close to 0 psig and tank has been pumped down to minimum on 0-L-2.

[5] **ENSURE** Reactor Coolant Drain Tank Pump 2B is available for service. (0-L-2).

[6] **REMOVE** Lower Containment Rad Monitor 2-RM-90-106 from service using 0-SOI-90.02.

[7] **REMOVE** Upper Containment Rad Monitor 2-RM-90-112 from service using 0-SOI-90.02.

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**NOTE**

Train A essential air and non-essential air isolation valves to containment will close during ØB testing. This step will keep control air in service to containment during testing.

- [8] **UNLOCK AND OPEN** the following Train A control air bypass valve in the annulus:

<b>NOMENCLATURE</b>	<b>LOC IN ANNULUS</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
ESSENT CONTROL AIR 2-FCV-32-81 BYPASS	EI 728 AZ 301	OPEN	2-BYV-32-328		CV

- [9] **RECORD** as found status of computer trend recorders, 2-UDR-278-760 thru 765 for use in restoration of computer trend recorders by performing the following with UO assistance:

- [9.1] **SELECT** "TREND MENU" on any control room computer monitor. \_\_\_\_\_
- [9.2] **SELECT** "ASSIGN POINTS TO STRIP CHART RECORDER". This displays STRIP CHART ASSIGNMENT TEMPLATE. \_\_\_\_\_
- [9.3] **PRINT** Screen. \_\_\_\_\_
- [9.4] **PAGE** down to page 2 and **PRINT SCREEN** again. \_\_\_\_\_
- [9.5] **SAVE** these two pages with the test to restore after testing is complete. \_\_\_\_\_

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**8.0 SPENT FUEL PIT COOLING**

**NOTE**

The following is to prevent a loss of SFP cooling during test. SFP A-A pump and CCS pump 2A-A will lose power if in service, and CCS may need re-alignment to an alternate SFP Heat Exchanger.

- [1] **ENSURE** C-S SFP pump is in service and aligned to a SFP heat exchanger which can be supported by CCS flow using 0-SOI-78.01.

**9.0 CONTAINMENT PURGE AND INCORE INSTRUMENT ROOM A/C**

- [1] **NOTIFY** Chemistry and Radiation Protection that one Train of Containment Purge will be placed in service for Train 2A testing **AND**

**REQUEST** a purge package.

---

Chemistry Contact

Date

---

RADPROT Contact

Date

- [2] **When** Chemistry has Purge package ready, **THEN:**

- [2.1] **PLACE** Train 2A Containment Purge in service to both upper and lower containment including Annulus using 2-SOI-30.02.

- [2.2] **PLACE** Incore Instrument Room Purge in service using 2-SOI-30.02.

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- [3] **PLACE** Train 2A Incore Instrument Room A/C in service using 2-SOI-30.04. \_\_\_\_\_

**10.0 MAIN FEEDWATER**

- [1] **ENSURE** handswitch 2-HS-3-945, HANDSWITCH FOR CONTROL BLDG ISOLATION, 2-JB-292-8205-A, 125V Vital Battery Board Room III is in the ON position. \_\_\_\_\_

**11.0 BATTERY CHARGER ALIGNMENT**

- [1] **ENSURE** 250V Battery Charger III is on its NORMAL feed. \_\_\_\_\_
- [2] **VERIFY** the following aligned to NORMAL supply:

UNID	DESCRIPTION	INITIALS
0-XSW-236-3-S	480V AC VITAL TRANSFER SWITCH III	
0-XSW-236-4-S	480V AC VITAL TRANSFER SWITCH IV	
0-BD-236-3-F	125V VITAL BATTERY BOARD III	
INST PWR A RACK TRANS SW	120V AC INST POWER RACK A (2-M-7)	

- [3] **ENSURE** Annunciation System is in service and aligned to inverter. \_\_\_\_\_

\_\_\_\_\_  
CV

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**12.0 ABGTS**

**NOTES**

- 1) For Train A ABGTS to run, U2 shield building exhaust flow FCV must be set in MANUAL, and flow set for a combination of ABGTS and EGTS to allow exit of Action G of ODCM 1.1.2 when power is restored.
- 2) Unit 1 shield building vent monitor is not affected by this test.

[1] **ENSURE** Train B ABGTS is operable. \_\_\_\_\_

**NOTES**

- 1) A flow rate of 13,000 scfm will likely result from running both ABGTS and EGTS when an ESF signal is initiated in the test. This flow rate represents 9,000 scfm of A ABGTS fan plus 4,000 scfm of A EGTS fan.
- 2) Both Train A EGTS and ABGTS will be running in this test.
- 3) The FCV does NOT have to be adjusted if flow is expected to remain below 7,000 scfm.
- 4) If this controller is set, there should be no planned releases out of Unit 2 shield building vent until initiated in this test.

[2] **PERFORM** the following due to BOTH Train A EGTS and Train A ABGTS will be running periodically during the test:

[2.1] **NOTIFY** Chemistry group to install a sample cart at 2-RM-90-400. \_\_\_\_\_

[2.2] **NOTIFY** MIG to place 2-FCV-90-452 flow control for Unit 2 Shield Building Vent Monitor on 2-L-708 in MANUAL VALVE POSITION function **AND**

**SET** display to SAMPLE FLOW RATE using manual valve toggle switch to obtain 10.45 on display. \_\_\_\_\_

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**NOTE**

Operations keeps a copy of Appendix C's of TI-215 for hydrocarbon use permits.

- [3] **ENSURE** that no hydrocarbon use permits are outstanding for Auxiliary Building, U1 and U2 Annulus or any areas that are open to EGTS and ABGTS. \_\_\_\_\_
- [4] **ENSURE** Unit 2 annulus vacuum is broken (vacuum is less than 0.812 inches of water) with Train 2A Annulus Vac Fan in service. \_\_\_\_\_
- [5] **ENSURE** 2-HS-65-81/86, U2 EGTS-ANN  $\Delta$ P CNTLR A ISOL, [0-M-27B], in A AUTO. \_\_\_\_\_
- [6] **ENSURE** 2-HS-65-83/87, U2 EGTS-ANN  $\Delta$ P CNTLR B ISOL, [0-M-27B], in A AUTO. \_\_\_\_\_

**13.0 PZR HEATER SETUP**

- [1] **ENSURE** the following:
  - AS FOUND position of PZR heater Groups A and D are recorded in Appendix K. \_\_\_\_\_
  - Required PZR breaker modifications (jumpers/lifted leads) performed per Appendix E completed prior to performing the following step. \_\_\_\_\_

CV

CV

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**[2] ENSURE Step 13.0[1] is COMPLETE, THEN  
PERFORM the following:**

- [2.1] ENSURE 2-PIC-68-340A, [2-M-4], PZR PRESS  
MASTER CONTROL output set to approximately  
25 to 30% (no controller output calling for heater  
breakers to close).**
- [2.2] ENSURE 2-BKR-68-341A, PZR BACKUP HTR GRP  
2A-A XFMR, (2-OXF-68-341A) [6.9KV SD Bd 2A-A/C20]  
in OPEN and RACKED UP position.**
- [2.3] ENSURE 2-XS-68-341A-A, 125-V DC CONTROL  
BUS TRANSFER SWITCH PZR HTR BACKUP HTR  
A-A, [6.9KV SD Bd 2A-A/C20] in NOR position.**
- [2.4] ENSURE 2-XS-68-341F, 125-V DC CONTROL  
BUS TRANSFER SWITCH PZR HTR CONT HTR,  
[6.9KV SD Bd 2A-A/C21] in NOR position.**
- [2.5] ENSURE 2-BKR-68-341F, PZR CONTROL HTR GRP  
2D XFMR, [6.9KV SD Bd 2A-A/C21] in OPEN and  
RACKED UP position.**

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CV

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CV

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CV

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CV

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Equipment Alignment**

**NOTE**

The following alignment will INOP B Train chiller (prevents B Train chiller from auto starting on loss of A Train chiller), so that A Train chiller will start back after Blackouts and provide a load on the diesel.

**14.0 EBR CHILLER ALIGNMENT**

- [1] **ENSURE** EBR Chiller A-A is in service and 0-HS-31-30A EBR CHLR & AHU SYS A-A in PULL STANDBY. [1-M-9] \_\_\_\_\_
- [2] **NOTIFY** US/SRO to enter LCO 3.7.11 tracking for placing 0-HS-31-31A EBR CHLR & AHU SYS B-B in STOP PULL-TO-LOCK in the next step. \_\_\_\_\_
- [3] **PLACE** 0-HS-31-31A EBR CHLR & AHU SYS B-B in STOP PULL-TO-LOCK. [1-M-9] \_\_\_\_\_

**15.0 SD BD RM CHILLER ALIGNMENT**

- [1] **ENSURE** 6.9 KV SD BD RM A/C Train A in service and 0-HS-31-400A, SD BD ROOM A & B A/C SYS A-A, in PULL STANDBY position. \_\_\_\_\_
- [2] **ENSURE** 6.9 KV SD BD RM A/C Train B in standby alignment with 0-HS-31-49A, SD BD ROOM A & B A/C SYS B-B, in mid-position pushed in. \_\_\_\_\_



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**16.0     2-RM-90-400**

- [1]    **NOTIFY** US /SRO to enter ODCM Actions associated with Shield Building Vent Rad Monitor 2-RM-90-400. \_\_\_\_\_
- [2]    **IMPLEMENT** Data Sheet 10 of 2-SI-0-2-00 to estimate flow every 4 hrs for Unit 2 Shield Building Vent rad monitors. \_\_\_\_\_
- [3]    **REMOVE** Shield Building Vent Rad Monitor 2-RM-90-400 from service using 0-SOI-90.05. Chemistry and RP notified from the SOI. \_\_\_\_\_

**17.0     SUMPS**

- [1]    **ENSURE** Reactor Building Floor & Equipment Drain Sump is pumped down. [2-M-15] \_\_\_\_\_

**NOTE**

The next step is to prevent this sump pump from running during test when its flow path is isolated by containment isolations. It would stop on a Train B SI signal but only a Train A signal will be initiated. The pump can be used prior to SI actuations.

- [2]    **ENSURE** 2-HS-77-125B1, [2-M-15], RX BLDG F & EQ SUMP PMP B, in STOP PULL-TO-LOCK. \_\_\_\_\_

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**18.0 STEAM GENERATOR MISCELLANEOUS ALIGNMENT**

**[1] PERFORM** the following alignment:

<b>VALVE NUMBER</b>	<b>DESCRIPTION</b>	<b>LOCATION EL/COL</b>	<b>AS FOUND</b>	<b>REQUIRED POSITION</b>	<b>PERFORMER</b>	<b>CV</b>
2-ISV-15-876	SG BLOWDOWN HX 2A INLET	T10F/708		CLOSED		
2-BYV-15-916	SG BLOWDOWN 2-ISV-15-876 BYPASS	T10F/708		CLOSED		
2-ISV-15-920	SG BLOWDOWN FLASH TANK SUP ISOL	T12F/708		CLOSED		
2-FCV-3-250	STEAM GENERATOR 1 FW REG VALVE ISOLATION	T14P/729		CLOSED		
2-FCV-3-251	STEAM GENERATOR 2 FW REG VALVE ISOLATION	T14P/729		CLOSED		
2-FCV-3-252	STEAM GENERATOR 3 FW REG VALVE ISOLATION	T14P/729		CLOSED		
2-FCV-3-253	STEAM GENERATOR 4 FW REG VALVE ISOLATION	T14P/729		CLOSED		
2-IBV-3-532	STEAM GENERATOR 3 FW BYPASS REG ISOLATION	T14M/729		CLOSED		
2-IBV-3-533	STEAM GENERATOR 2 FW BYPASS REG ISOLATION	T15P/729		CLOSED		

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<b>VALVE NUMBER</b>	<b>DESCRIPTION</b>	<b>LOCATION EL/COL</b>	<b>AS FOUND</b>	<b>REQUIRED POSITION</b>	<b>PERFORMER</b>	<b>CV</b>
2-IBV-3-534	STEAM GENERATOR 1 FW BYPASS REG ISOLATION	T15P/729		CLOSED		
2-IBV-3-535	STEAM GENERATOR 4 FW BYPASS REG ISOLATION	T15Q/729		CLOSED		
2-FCV-3-191	MFW DEAERATION LINE LOOP 1 ISOL VLV	YARD		CLOSED		
2-FCV-3-192	MFW DEAERATION LINE LOOP 2 ISOL VLV	YARD		CLOSED		
2-FCV-3-193	MFW DEAERATION LINE LOOP 3 ISOL VLV	YARD		CLOSED		
2-FCV-3-194	MFW DEAERATION LINE LOOP 4 ISOL VLV	YARD		CLOSED		

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**19.0 AUXILIARY BUILDING GENERAL VENTILATION**

[1] **ENSURE** Aux Building ventilation in service as follows using 0-SOI-30.05:

- U2 General Supply Fan 2A.
- U2 General Exhaust Fan 2A.
- U1 General Supply Fan 1A.
- U1 General Exhaust Fan 1A.
- Fuel Handling Fan A.

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[2] **ENSURE** Aux Building ventilation fans in standby alignment using 0-SOI-30.05:

- U2 General Supply Fan 2B.
- U2 General Exhaust Fan 2B.
- U1 General Supply Fan 1B.
- U1 General Exhaust Fan 1B.
- Fuel Handling Fan B.

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**Equipment Alignment**

**20.0 TRAIN B ESF COMPONENTS**

**NOTE**

The following Train 2B components are placed in a non-functioning condition to ensure Train 2A components only respond to Train 2A testing.

- [1] **ENSURE** the following Train B Equipment Breakers on 6.9KV Shutdown Board 2B-B are OPEN and RACKED DOWN:

- 2-BKR-68-341H-B, PRESSURIZER HEATER BACKUP GROUP 2C, Compt. 21

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-74-20-B, RHR PUMP 2B, Compt. 14

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-63-15-B, SAFETY INJECTION PUMP 2B, Compt. 15

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-62-104-B, CENTRIFUGAL CHARGING PUMP 2B, Compt. 18

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-128-B, AUX FEEDWATER PUMP 2B, Compt. 10

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-72-10-B, CONTAINMENT SPRAY PUMP 2B, Compt. 13

\_\_\_\_\_  
\_\_\_\_\_  
CV

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**Equipment Alignment**

- 2-BKR-68-341D-B, PRESSURIZER HEATER BACKUP  
GROUP 2B-B, Compt. 20

\_\_\_\_\_  
\_\_\_\_\_  
CV

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**Removal and Restoration of SSPS TRAIN 2B**

**CAUTION**

Carefully read and perform each step below to ensure the correct train and cabinet is located since both trains are involved in this process.

**NOTES**

- 1) SSPS Train B is removed in the following step to prevent actuating protected Train B equipment.
- 2) All references to U2 TS LCOs are intended as information only until U2 implements the requirements of TS/TR/ODCM.

**1.0 TRAIN 2B SSPS REMOVAL**

[1] **WHEN** notified by Test Director in Step 4.4[1], **THEN**

**REMOVE** SSPS Train B from service by the following:

- [1.1] **VERIFY** a GENERAL WARNING does **NOT** exist in the opposite Train by observing A108 card edge LEDs [2-R-47] (Train A) and verifying the bottom five LEDs are **NOT** LIT. \_\_\_\_\_
- [1.2] **VERIFY** SSPS Train A [2-R-47] GENERAL WARNING red lamp is **NOT** LIT. \_\_\_\_\_
- [1.3] **VERIFY** GENERAL WARNING does **NOT** exist on Train B by observing A108 card edge LEDs [2-R-50] (Train B) and verifying the bottom five LEDs are **NOT** LIT. \_\_\_\_\_
- [1.4] **VERIFY** SSPS Train B [2-R-50] GENERAL WARNING TEST green lamp is LIT. \_\_\_\_\_

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**Removal and Restoration of SSPS TRAIN 2B**

- [1.5]     **VERIFY** at [2-R-50] OPPOSITE TRAIN (Amber)  
GENERAL WARNING TEST light is LIT. \_\_\_\_\_
- [1.6]     **PLACE** Train A MULTIPLEXER TEST Switch in  
NORMAL [2-R-47]. \_\_\_\_\_

**NOTE**

The following Step may be NA if SR Neutron Flux Monitors are not required operable.

- [2]     **IF** any part of this test will be performed while in U2 Mode 6,  
**THEN**

**VERIFY** a jumper is installed at TB 607 -9 (PSCBP) and 10  
(PSCB4) in 2-R-51 to maintain SR Neutron Flux Monitors  
operable (LCO 3.9.3. Hi Flux at Shutdown alarm). \_\_\_\_\_

\_\_\_\_\_  
CV

**NOTE**

LCO entries are listed in Appendix T of this instruction which should have been given to the  
SM/Unit SRO by the Test Director.

- [3]     **COORDINATE** Train removal from service and entry into  
applicable LCO with U2 UO and Unit 2 SRO, **AND**

**RECORD** date and time: \_\_\_\_\_

\_\_\_\_\_

Date

\_\_\_\_\_

Time

**NOTE**

An SSPS GENERAL WARNING will be received during performance of the following step.

- [4]     **PLACE** Train B MULTIPLEXER TEST switch to INHIBIT  
[2-R-50]. \_\_\_\_\_



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**Removal and Restoration of SSPS TRAIN 2B**

- [5] **PLACE** INPUT ERROR INHIBIT switch in INHIBIT [2-R-50], **AND**  
**VERIFY** the following:

[5.1] GENERAL WARNING RED lamp [2-R-50] LIT. \_\_\_\_\_

[5.2] 2-XA-55-6A/115A, SSPS-B GEN WARNING LIT. \_\_\_\_\_

- [6] **PLACE** MODE SELECTOR switch in TEST [2-R-51], **AND**  
**VERIFY** green **OPERATE** lamp [2-R-51] **NOT** LIT. \_\_\_\_\_

**NOTE**

This next step enables an AUTOMATIC SI from Train 2A of SSPS. Note change in cabinets.

- [7] **IF** jumper is installed from A216 UNIVERSAL TP1 to logic ground [2-R-47] Train A SSPS to block auto SI actuation,  
**THEN**

**REMOVE** jumper. \_\_\_\_\_

CV

- [8] **NOTIFY** TD (test director) that removal of Train 2B SSPS is complete and auto SI block for Train 2A has been removed. \_\_\_\_\_

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**Removal and Restoration of SSPS TRAIN 2B**

**2.0 RESTORATION OF TRAIN 2B SSPS**

- |       |   |                   |
|-------|---|-------------------|
| [1]   | <b>ENSURE</b> all accident signals on Master Isolation Signals Status Panel, 2-M-6, lights are <b>NOT</b> LIT.  | <hr/>             |
| [2]   | <b>PLACE</b> MODE SELECTOR Switch [2-R-51] in OPERATE,<br><b>AND</b><br><b>VERIFY</b> OPERATE Lamp [2-R-51] is LIT.   | <hr/> <hr/> <hr/> |
|       |   | CV                |
| [3]   | <b>REQUEST</b> UO to momentarily turn the following handswitches [2-M-4] to BLOCK:  | <hr/>             |
| [3.1] | 2-HS-63-135B, LO STEAM PRESS SI BLOCK.  | <hr/>             |
| [3.2] | 2-HS-63-136B, LO PZR PRESS SI BLOCK P-11.   | <hr/>             |
| [4]   | <b>REQUEST</b> UO to momentarily turn the following handswitches [2-M-4] to BLOCK:  | <hr/>             |
| [4.1] | 2-N33B, SR TRIP TR A RESET-BLOCK P-6.   | <hr/>             |
| [4.2] | 2-N38B, IR TRIP BLOCK P-10.   | <hr/>             |
| [4.3] | 2-N47B, PR LO POWER TRIP BLOCK P-10.  | <hr/>             |
| [5]   | <b>IF</b> Auto SI Block jumper was removed in this Appendix Section 1, Step 7, <b>THEN</b><br><b>REINSTALL</b> jumper from A-216 UNIVERSAL TP1 to logic ground [2-R-47] to block auto SI actuation. | <hr/> <hr/> <hr/> |
|       |   | CV                |
| [6]   | <b>NOTIFY</b> UO to expect annunciator windows 2-XA-55-4A-64C, 64D and 65C to alarm when INPUT ERROR INHIBIT Switch is placed in NORMAL.  | <hr/>             |

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**Removal and Restoration of SSPS TRAIN 2B**

- [7] **PLACE AND HOLD** 2-HS-3-99A1, MFW ISOL ACT RESET TR-A, and 2-HS-3-99B1, MFW ISOL ACT RESET TR-B [2-M-3], in RESET UNTIL next step is complete. \_\_\_\_\_
- [8] **PLACE** INPUT ERROR INHIBIT Switch [2-R-50] in NORMAL. \_\_\_\_\_  
CV
- [9] **RELEASE** 2-HS-3-99A1, MFW ISOL ACT RESET TR-A, and 2-HS-3-99B1, MFW ISOL ACT RESET TR-B, [2-M-3]. \_\_\_\_\_
- [10] **NOTIFY** UO of the following:
  - [10.1] Status lights and annunciators may flash when Multiplexer test switch is placed through "NORMAL" to "A + B" position. \_\_\_\_\_
  - [10.2] 2-XA-55-4D/77G, SI PZR PRESS LO and 2-XA-55-4D/79G, SI STM PRESS LO will alarm if plant conditions warrant but an actuation will **NOT** occur. \_\_\_\_\_
- [11] **PLACE** Train 2B MULTIPLEXER TEST Switch [2-R-50] in NORMAL. \_\_\_\_\_  
CV
- [12] **NOTIFY** UO that Placing multiplexer test switch to A + B in next step may momentarily generate a Train A SSPS General Warning as switch is rotated through INHIBIT position. \_\_\_\_\_
- [13] **PLACE** Train A MULTIPLEXER TEST Switch [2-R-47] in A + B. \_\_\_\_\_  
CV
- [14] **ENSURE** general warning lamp on 2-R-47 Train A SSPS **NOT** LIT. \_\_\_\_\_
- [15] **NOTIFY** US/SRO of return of SSPS Train B for possible LCO exits. \_\_\_\_\_

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**Temporary Wire Lift, Jumper and Equipment Modifications**

COMPONENT	MODIFICATION INSTALLED			MODIFICATION LOCATION	MODIFICATION RESTORATION		
	INITIAL	CV	DESCRIPTION		DESCRIPTION	INITIAL	CV
SIS PUMP 2A-A ROOM COOLER TEMP 2-TS-30-180-A SIP 2A-A PUMP ROOM			LIFT & TAPE BLACK wire 8A2, Cable 2PL2985A	2-JB 292-1197-A TB	LAND BLACK wire 8A2, Cable 2PL2985A		
CCP 2A-A RM COOLER TEMP 2-TS-30-183-A CCP 2A-A ROOM			LIFT & TAPE BLACK wire 10A2, Cable 2PL3006A	2-JB-292-1191-A TB	LAND BLACK wire 10A2, Cable 2PL3006A		
MDAFWP A-A RELAY TTAB 2-R-74			LIFT internal side wire.	TB 429 PT 1	LAND internal side wire.		
THERMAL BARRIER BOOSTER PUMP 2A-A 2-HS-70-81EA 2-M-23A			TBBP Diff Sig Interrupt 2-HS-70-81EA Place to BLOCK	2-M-23A	TBBP Diff Sig Interrupt 2-HS-70-81EA Place to NORMAL		
THERMAL BARRIER BOOSTER PUMP 2A-A 2-FIS-70-81 CPC RELAY 2-L-10			FUSES REMOVED	2-FU-278-L10/K1 2-FU-278-L10/K2	FUSES INSTALLED		
SD BD ROOM A&B A/C SYS A-A 737/A3R			JUMPER	1-TR TIMER 0-IIQ-31-1607-A WIRES 39 & 40	REMOVE JUMPER		

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**Temporary Wire Lift, Jumper and Equipment Modifications**

COMPONENT	MODIFICATION INSTALLED			MODIFICATION LOCATION	MODIFICATION RESTORATION		
	INITIAL	CV	DESCRIPTION		DESCRIPTION	INITIAL	CV
ELEC BD RM CHLR A-A 692/C12N			JUMPER	TERMINAL BD PT 17 TO PT 30 (0-TB-31-12812-A) 6921C12 P	REMOVE JUMPER		
AFW AND BA CLR FAN A-A 2-HS-30-184 713/A14T			LIFT & TAPE 5E3(BK) Cable 2PL3155A	TB TA PT 3 (5E3) 2-JB-292-1508-A	LAND 5E3 (BK) Cable 2PL3155A		
PEN RM EL 692 CLR 2A-A 2-HS-30-186 692/A12U			LIFT & TAPE 2C3 (R) Cable 2PL3135A	TB TA PT 5 (2C3) 2-JB-292-1553-A	LAND 2C3 (R) Cable 2PL3135A		
RHR PUMP 2A-A ROOM COOLER 2-HS-30-175 RHR PMP 2A-A RM			LIFT & TAPE 9A3 (W) Cable 2PL3036A	TB TA PT 3 (9A3) 2-JB-292-2506-A	LAND 9A3 (W) Cable 2PL3036A		
PEN RM EL 713 CLR 2A-A 2-HS-30-196 713/A14U			LIFT & TAPE 10B2 (BL) Cable 2PL3115A	TB TA PT 5 (10B3) 2-JB-292-1503-A	LAND 10B2 (BL) Cable 2PL3115A		

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**Temporary Wire Lift, Jumper and Equipment Modifications**

<b>COMPONENT</b>	<b>MODIFICATION INSTALLED</b>			<b>MODIFICATION LOCATION</b>	<b>MODIFICATION RESTORATION</b>		
	<b>INITIAL</b>	<b>CV</b>	<b>DESCRIPTION</b>		<b>DESCRIPTION</b>	<b>INITIAL</b>	<b>CV</b>
AB EL 692 PIPE CHASE COOLER 2A-A 2-HS-30-201 692/A14U			LIFT & TAPE 10C3 (R) Cable 2PL3075A	TB TA PT 5 (10C3) 2-JB-292-1555-A	LAND 10C3 (R) Cable 2PL3075A		
PEN RM CLRS EL 737 FAN A-A 2-HS-30-194 737/A12V			LIFT & TAPE 8B3 (BL) Cable 2PL3096A	TB TA PT 5 (8B3) 2-JB-292-1550-A	LAND 8B3 (BL) Cable 2PL3096A		
2-FCV-3-186 FW INTERLOCKS 2-R-74			JUMPER	TB 432 PT 4 (1A5) TB 432 PT 5 (1A4)	REMOVE JUMPER		
2-FCV-3-188 FW INTERLOCKS 2-R-74			JUMPER	TB 438 PT 9 (3A5) TB 438 PT 12 (3A4)	REMOVE JUMPER		
0-FCV-77-240 RELAY FWA 2-R-73			JUMPER	TB 339 PT 1 (FWAX) TB 339 PT 2 (FWA1)	REMOVE JUMPER		

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**Temporary Wire Lift, Jumper and Equipment Modifications**

COMPONENT	MODIFICATION INSTALLED			MODIFICATION LOCATION	MODIFICATION RESTORATION		
	INITIAL	CV	DESCRIPTION		DESCRIPTION	INITIAL	CV
CNTMT FL & EQ SUMP PUMP 2A LEVEL INTERLOCKS 480V RX VENT BD 2A-A COMPT 2A			JUMPER	TB PT 14 (2AA7) TB PT 15 (2AA3) (2PL660, R & BK WIRES)	REMOVE JUMPER		
RCDT TO GAS ANAL CIV-ØA OUT CNTMT 2- FCV-77-17 RELAY 9I59BXA 2-R-54			JUMPER	2-R-54 TB 117 PT 1 (WCH3) TB 117 PT 5 (WCH7)	REMOVE JUMPER		
FWI AUX RELAY HWP 2-R-75			INSTALL VOM (200 VAC Range) M&TE ID # _____	TB 513 PT 7 (HWPAY) TB 513 PT 9 (HWP2)	REMOVE VOM		
2-FSV-46-9A JB 1996 729/T16J			INSTALL VOM (200 VDC Range) M&TE ID # _____	CABLE 2SG82, (TVAA2) (W) (+), (TVAAN) (BK) (-)	REMOVE VOM		

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COMPONENT	MODIFICATION INSTALLED			MODIFICATION LOCATION	MODIFICATION RESTORATION		
	INITIAL	CV	DESCRIPTION		DESCRIPTION	INITIAL	CV
2-FSV-46-36A JB 1996 729/T16J			INSTALL VOM (200 VDC Range) M&TE ID # _____	CABLE 2SG92, (TVBA2) (W) (+), (TVBAN) (BK) (-)	REMOVE VOM		
TURBINE TRIP BUS A 2-R-71			FUSES REMOVED	2-FU-275-R71/R1 2-FU-275-R71/R2 2-FU-275-R71/R3 2-FU-275-R71/R4	FUSES INSTALLED		
2-FSV-47-24 JB 1321 755/T13J			INSTALL VOM (300 VDC Range) M&TE ID # _____	CABLE 2G227, (TTRB) (BK) (+), (TTRN) (W) (-)	REMOVE VOM		
2-FSV-47-26A JB 1501 755/T12J			INSTALL VOM (300 VDC Range) M&TE ID # _____	CABLE 2G232, (TTB2) (W) (+), (TTRN) (BK) (-)	REMOVE VOM		



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**Temporary Wire Lift, Jumper and Equipment Modifications**

<b>COMPONENT</b>	<b>MODIFICATION INSTALLED</b>			<b>MODIFICATION LOCATION</b>	<b>MODIFICATION RESTORATION</b>		
	<b>INITIAL</b>	<b>CV</b>	<b>DESCRIPTION</b>		<b>DESCRIPTION</b>	<b>INITIAL</b>	<b>CV</b>
2-FCO-30-294-A RELAY CPD 3 2-R-73			JUMPER	TB 330 PT 10 (2128VL) TB 330 PT 11 (CPD6A)	REMOVE JUMPER		
CS PUMP 2A-A RM CLR 2-HS-30-177 CS PMP 2A-A RM			LIFT & TAPE 3C3 (W)	2-TS-30-177	LAND 3C3 (W)		
Pressurizer Level Interlocks 2-BKR-68-341A 2-BKR-68-341F (LB459CX/LB460DX) 2-R-58			LIFT AND TAPE TB316, Pt 7 TB316, Pt 9	2-R-58 TB316, PT 7, 9	LAND TB316, Pt 7 TB316, Pt 9		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 236 of 591</b>
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**Appendix F  
(Page 1 of 1)**

**Breaker Test Configuration Lineup**

LOCATION	COMPONENT DESCRIPTION	PRE-TEST LINEUP			RESTORATION ALIGNMENT				
		AS FOUND CONFIG	REQUIRED CONFIG CHANGE	PERFORMED BY	RETURNED TO AS FOUND CONFIG	PERFORMED BY		VERIFICATION	
				INITIAL		INITIAL	DATE	INITIAL	DATE
480V RX VENT BD 2A-A COMPT 2A	RB FLR/EQ SUMP PUMP 2A (2-PMP-77-125A)		(1) BKR CLOSED, OVERLOADS REMOVED						
480V RX VENT BD 2A-A COMPT 11D	RCDT PUMP 2A (2-PMP-77-4)		(1) BKR CLOSED, OVERLOADS REMOVED						

(1) Pumps must be turned on by the pump control handswitch to obtain the red light required by Step 6.2.1[34]. Removing the breaker overloads allows the breaker contactor to pick up without running the pump.

**WBN  
Unit 2**

**Unit 2 Integrated Safeguards Test -  
Train 2A**

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**Appendix G  
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**DG 2A-A Chart Recorder Connections**

DG 2A-A CHART 1 CHANNEL	DESCRIPTION	SCALING	FIELD CONNECTIONS		WIRE INSTALLED		WIRE REMOVED			
							PERFORMED BY		VERIFIED BY	
			CABINET	TB-POINTS	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
1	2-SIA1 (NOTE 1)	0-125V DC	2-M-6	A1-44-1 (+)						
				A1-44-2 (-)						
2	6.9KV COM BKR 2714 (NOTE 1)	0-125V DC	ECB-248-2	RTF-5(+)						
				RTF-6 (-)						
3	6.9KV COM BKR 2814 (NOTE 1)	0-125V DC	ECB-248-3	LTZ-5(+)						
				LTZ-6 (-)						
4	ES2AY (NOTE 1)	0-125V DC	2-PNL-211-A-A	TB31-1 (+)						
				TB31-2 (-)						
5	DG 2A-A VOLTAGE (NOTE 2)	4-8KVAC 100V/DIV	2-BD-211-A-A COMPT 7	2-PK-211-A7/1 PT 1 (+)						
				2-PK-211-A7/1 PT 3 (-)						
6	DG 2A-A FREQUENCY (NOTE 4)	55-65HZ 0.25HZ/DIV	2-BD-211-A-A COMPT 7	2-PK-211-A7/1 PT 1 (+)						
				2-PK-211-A7/1 PT 3 (-)						
DG 2A-A CHART 2 CHANNEL	DESCRIPTION	SCALING	FIELD CONNECTIONS		WIRE INSTALLED		WIRE REMOVED			
							PERFORMED BY		VERIFIED BY	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 238 of 591</b>
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**Appendix G  
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**DG 2A-A Chart Recorder Connections**

			CABINET	TB-POINTS	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
1	2-SIA1 (NOTE 1)	0-125V DC	2-M-6	A1-44-1 (+)						
				A1-44-2 (-)						
2	6.9KV COM BKR 2714 (NOTE 1)	0-125V DC	ECB-248-2	RTF-5(+)						
				RTF-6 (-)						
3	6.9KV COM BKR 2814 (NOTE 1)	0-125V DC	ECB-248-3	LTZ-5(+)						
				LTZ-6 (-)						
4	ES2AY (NOTE 1)	0-125V DC	2-PNL-211-A-A	TB31-1 (+)						
				TB31-2 (-)						
5	SHUTDOWN BOARD 2A-A (NOTE 2)	4-8KVAC 50V/DIV	2-BD-211-A-A COMPT 9	WHDM-1 (H)						
				WHDM-2 (N)						
DG 2A-A CHART 2 CHANNEL	DESCRIPTION	SCALING	FIELD CONNECTIONS		WIRE INSTALLED		WIRE REMOVED			
							PERFORMED BY		VERIFIED BY	
			CABINET	TB-POINTS	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE

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DG 2A-A Chart Recorder Connections

6	RHR TO CL 2&3 2-FI-63-91B (NOTE 2)	1500-5500 gpm 0.1-0.5VDC	2-M-6	C1-16-4 (+)						
				NOTE 3						

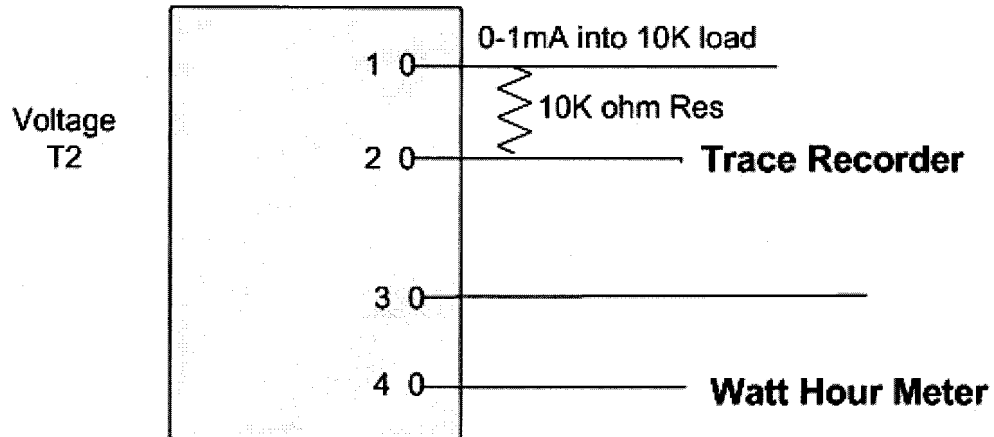
NOTES:

1. Test points may be piggybacked on the identical points for the SER
2. Voltage channel is to be scaled utilizing a Keithley 197 Digital Multimeter. See Appendix H.
3. Recorder connections are between lifted lead and terminal from which lead was removed (i.e., a series connection). Place a 10 ohm resistor across recorder input terminations. Proper RHR pump off indication is 1500 GPM (**NOT** pegged low) on indicator and  $\pm 0.1$  VDC across recorder input terminations.
4. Frequency channel is scaled utilizing Dranetz 325 Power System Polymeter and Keithley 197 Digital Multimeter. See Appendix H.

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -</b> <b>Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 240 of 591</b>
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**Appendix H**  
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**DG 2A-A Chart Recorder Hookup**



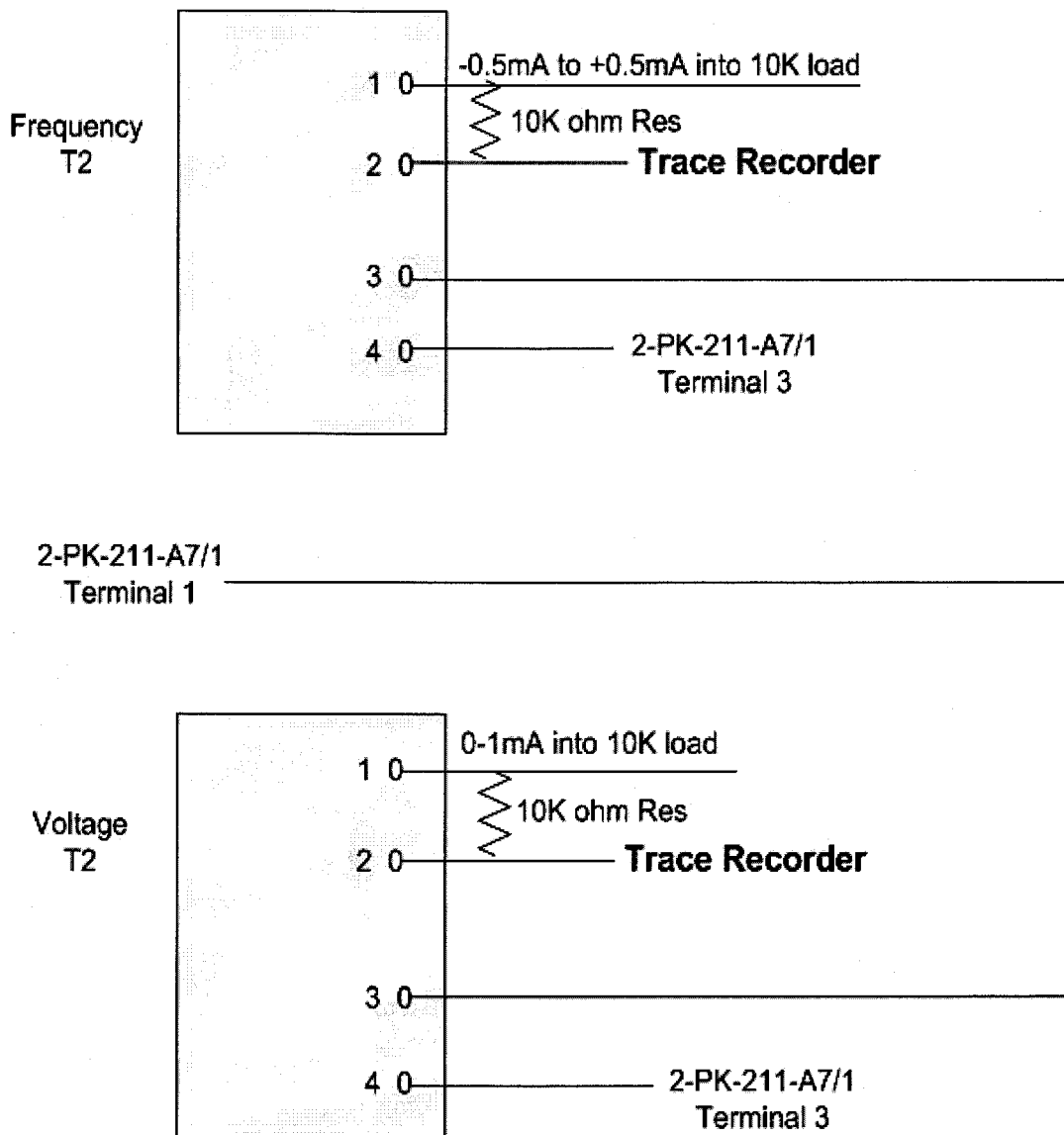
NOTE: This is typical for all four  
 Shutdown Board  
 Voltage Channels

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -</b> <b>Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 241 of 591</b>
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**Appendix H**  
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**DG 2A-A Chart Recorder Hookup**

**DG 2A-A – CHART 1**



NOTE: Link all terminals through on  
 2-PK-211-A7/1

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 242 of 591</b>
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**Test Equipment Connections (SER)**

DESCRIPTION	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
CCP PUMP 2A-A 2-MTR-62-108-A	2-45W760-62-1	125VDC	2-M-5	A-22-6	1	1-1 (+)						
	45N2644-6			A-22-7		1-1 (-)						
SI PUMP 2A-A 2-MTR-63-10-A	2-45W760-63-1	125VDC	2-M-6	A1-43-7	2	1-2 (+)						
	45N2645-4			A1-43-6		1-2 (-)						
RHR PUMP 2A-A 2-MTR-74-10-A	2-45W760-74-1	125VDC	2-M-6	A1-41-7	3	1-3 (+)						
	45N2645-4			A1-41-6		1-3 (-)						
ERCW PUMP A-A 0-MTR-67-28-A	1-45W760-67-1	125VDC	0-M-27A	4-4D-8	30	1-4 (+)						
	45N1660-5			4-4D-7		1-4 (-)						
ERCW PUMP B-A 0-MTR-67-32-A	1-45W760-67-1	125VDC	0-M-27A	4-4C-9	4	1-5 (+)						
	45N1660-5			4-4C-10		1-5 (-)						
ERCW PUMP C-A 0-MTR-67-36-A	1-45W760-67-1	125VDC	0-M-27A	4-4F-12	31	1-6 (+)						
	45N1660-5			4-4F-11		1-6 (-)						
ERCW PUMP D-A 0-MTR-67-40-A	1-45W760-67-1	125VDC	0-M-27A	4-4E-7	5	1-7 (+)						
	45N1660-5			4-4E-6		1-7 (-)						
CCS PUMP 2A-A 2-MTR-70-59-A	1-45W760-70-1	125VDC	0-M-27B	1-1A-7	6	2-1 (+)						
	45N1660-11			1-1A-6		2-1 (-)						
CCS PUMP C-S 0-MTR-70-51-S	1-45W760-70-2	125VDC	0-M-27B	1-1C-10	7	2-2 (+)						
	45N1660-11			1-1C-9		2-2 (-)						
CCS THERM BARR BSTR PUMP 2A-A 2-MTR-70-131-A	2-45W760-70-9	120VAC	0-M-27B	2-4D-3	8	9-1 (+)						
	45N1660-12			2-4D-2		9-1 (-)						



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**Test Equipment Connections (SER)**

DESCRIPTION	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
AFW PUMP 2A-A 2-MTR-3-118-A	2-45W760-3-1	125VDC	2-M-4	A-9-7	9	2-3 (+)						
	45N2643-4			A-9-6		2-3 (-)						
FIRE PUMP 2A-A 0-MTR-26-9A-A	1-45W760-26-1	125VDC	1-M-15	3-1G-7	10	2-5 (+)						
	45N1653-3			3-1G-8		2-5 (-)						
SD BD RM CHILLER A-A 0-MTR-31-36/2-A	1-45W760-31-18	125VDC	1-M-9	2-4G-6	11	2-6 (+)						
	45N1648-3			2-4G-7		2-6 (-)						
CRDM FANS 2A-A 2-MTR-30-83-A	2-45W760-30-8	125VDC	2-M-9	4-2B-8	12	2-7 (+)						
	45N2648-3			4-2A-12		2-7 (-)						
CRDM FANS 2C-A 2-MTR-30-88-A	2-45W760-30-8	125VDC	2-M-9	4-2D-8	13	2-8 (+)						
	45N2648-3			4-2C-12		2-8 (-)						
RX LWR CTMT CLR FANS 2A-A 2-MTR-30-74-A	2-45W760-30-9	125VDC	2-M-9	4-2F-8	14	3-1 (+)						
	45N2648-3			4-2F-6		3-1 (-)						
RX LWR CTMT CLR FANS 2C-A 2-MTR-30-77-A	2-45W760-30-9	125VDC	2-M-9	4-2H-8	15	3-2 (+)						
	45N2648-3			4-2H-6		3-2 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 244 of 591</b>
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**Test Equipment Connections (SER)**

DESCRIPTION	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
AFP FCV-1-51 2-FCV-1-51	2-45W600-46-6	125VDC	2-M-3	TB-6 AFP70 (MFRR JB)	16	4-8 (+)						
	TB-2 AFP74 (MFRR JB)			4-8 (-)								
PZR HTRS 2A-A 2-BKR-68-341A	2-45W760-68-3	125VDC	2-M-4	A-19-8	17	3-3 (+)						
	45N2643-4			A-19-6		3-3 (-)						
ØB ISOL CVI 2-HS-30-68 (A&B)	1082H70-20A	48VDC	2-M-5	A-16-1	18	3-4 (+)						
	2-45N2644-6			A-16-3		3-4 (-)						
CS PUMP 2A-A 2-MTR-72-27-A	2-45W760-72-1	125VDC	2-M-6	A1-40-6	19	3-5 (+)						
	45N2645-4			A1-40-11		3-5 (-)						
CNTMT AIR RTN FN 2A-A 2-MTR-30-38-A	2-45W760-30-13	125VDC	2-M-9	4-3C-5	20	3-6 (+)						
	45N2648-3			4-3C-4		3-6 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 245 of 591</b>
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**Test Equipment Connections (SER)**

DESCRIPTION	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
ELECT BD RM A/C A-A CPRSR 0-MTR-31-128/2-A	1-45W760-31-13	125VDC	SD BD 2A2-A C/5	A22CTP (+ load side FU-A22/21)	21	4-7 (+)						
	74-84647-6947D63 6947D66		SD BD 2A2-A C/2C	A22CTRL (Pin 29)		4-7 (-)						
ØB ISOL TRN B 2-HS-30-64 (A&B)	1082H70-20A	48VDC	2-M-6	A2-4-1	22	7-4 (+)						
	45N2645-5			A2-4-3		7-4 (-)						
2-SIA1 2-HS-63-133B	2-45W600-99-1	125VDC	2-M-6	A1-44-1	23	3-7 (+)						
	45N2645-4			A1-44-2		3-7 (-)						
6.9KV CSST BKR 2714 0-BD-200-C/B2	1-45W760-200-5	125VDC	0-ECB- 248-2	RTF-5	24	7-8 (+)						
	55W612-1			RTF-6		7-8 (-)						
6.9KV CSST BKR 2814 0-BD-200-D/A2	1-45W760-200-5	125VDC	0-ECB- 248-3	LTZ-5	25	8-1 (+)						
	55W613-5			LTZ-6		8-1 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 246 of 591</b>
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**Test Equipment Connections (SER)**

DESCRIPTION	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
DG EMERG START RLY ES2AY	1-45W760-82-6B	125VDC	2-PNL-211- A/3-A	(+)TB31-1	26	4-3 (+)						
	75K2-85354- E3619E-7			(-)TB31-2		4-3 (-)						
DG BKR 1912 (1A-A) 1-BKR-211-1912/6	1-45W760-211-4	125VDC	0-M-26 DG 1A-A	8-1F-7	27	4-4 (+)						
	45N1659-1			8-1F-6		4-4 (-)						
DG BKR 1922 (2A-A) 2-BKR-211-1922/6	1-45W760-211-4	125VDC	0-M-26 DG 2A-A	4-1F-7	28	4-5 (+)						
	45N1659-3			4-1F-6		4-5 (-)						
2-SIA2 2-HS-63-133A	2-45W600-99-1	125VDC	2-M-6	B2-15-1	29	7-7 (+)						
	45N2645-10			B2-15-2		7-7 (-)						

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**Test Equipment Connections (SER)**

<b>SER CHANNEL</b>	<b>COMPONENT</b>	<b>SET (HIGH)</b>	<b>RESET (LOW)</b>
1	CC PMP 2A-A	RUN	STOP
2	SI PMP 2A-A	RUN	STOP
3	RHR PMP 2A-A	RUN	STOP
4	ERCW PMP B-A	RUN	STOP
5	ERCW PMP D-A	RUN	STOP
6	CCS PUMP 2A-A	RUN	STOP
7	CCS PMP C-S TR 1A	RUN	STOP
8	THERM BAR BSTR PMP 2A-A	RUN	STOP
9	AFW PMP 2A-A	RUN	STOP
10	FIRE PMP 2A-A	RUN	STOP
11	SD BD RM CHLR A-A	RUN	STOP
12	CRDM FAN 2A-A	RUN	STOP
13	CRDM FAN 2C-A	RUN	STOP
14	RX LWR CTMT CLR FAN 2A-A	RUN	STOP
15	RX LWR CTMT CLR FAN 2C-A	RUN	STOP
16	AFWP 2-FCV-1-51	OPEN	CLOSED
17	PZR HTR 2A-A	ON	OFF
18	PHASE B ISOL TRN A	ACTUATE	NORMAL

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 248 of 591</b>
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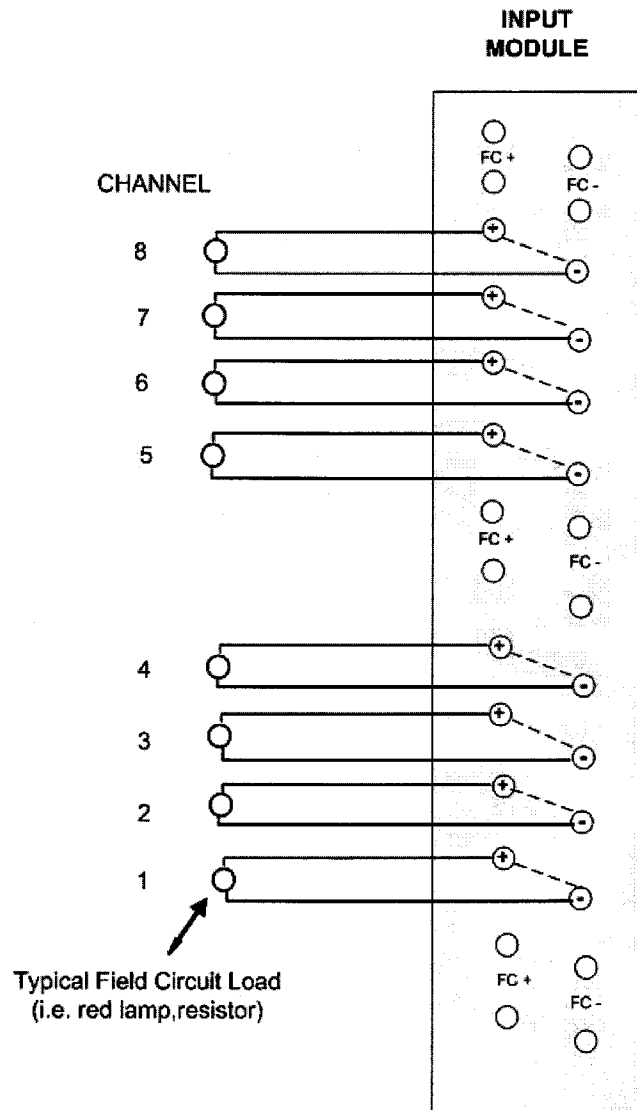
**Appendix I  
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**Test Equipment Connections (SER)**

<b>SER CHANNEL</b>	<b>COMPONENT</b>	<b>SET (HIGH)</b>	<b>RESET (LOW)</b>
19	CS PMP 2A-A	RUN	STOP
20	CNTMT AIR RET FAN 2A-A	RUN	STOP
21	ELECT BD RM AC CPRSR A-A	RUN	STOP
22	Ø B ISOL TRN B	ACTUATE	NORMAL
23	SAFETY INJECTION HS 1	NORMAL	ACTUATED
24	6900 CSST C BKR 2714	CLOSED	OPEN
25	6900 CSST D BKR 2814	CLOSED	OPEN
26	DG EMERG RLY ES2AY	NORMAL	ACTUATED
27	1A-A 6900DG BKR 1912	CLOSED	OPEN
28	2A-A 6900DG BKR 1922	CLOSED	OPEN
29	SAFETY INJECTION HS 2	NORMAL	ACTUATED
30	ERCW PMP A-A	RUN	STOP
31	ERCW PMP C-A	RUN	STOP
<b>NOTE:</b> SER Channel assignment is typical to all performance sections.			

**Appendix J**  
**(Page 1 of 1)**

**Sequence of Events Recorder (SER) Hookup**



2211-0-208D (115VAC) or  
 2211-0-203D (125VDC)  
 Input Module (Typical)  
 8 Channel





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**Appendix K  
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## Loss of Offsite Power - Train 2A, Section 6.1

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V SD BD 2A1-A      Aux Bldg EL 757									
C/ 7C 2-BKR-30-74 LOWER COMPT COOLER 2A-A (2-FAN-30-74) (1)	2-BKR-30-74	BREAKER  OPEN <input type="checkbox"/>  CLOSED <input type="checkbox"/>	NR	BREAKER CLOSED <input type="checkbox"/>	BREAKER OPEN/ STAYS OPEN <input type="checkbox"/>				
C/ 12D 2-BKR-212-A001/12D CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-A1/12D	BREAKER  OPEN <input type="checkbox"/>  CLOSED <input type="checkbox"/>	NR	BREAKER OPEN <input type="checkbox"/>	BREAKER CLOSED/ STAYS CLOSED <input type="checkbox"/>				

(1) LCC and CRDM Train 2A fans should ber placed in service at this time.

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V SD BD 2A2-A      Aux Bldg EL 757									
C/ 9C 2-BKR-212-A002/9C NORM FDR FOR C&A VENT BD 2A2-A (2-MCC-214-A2)	2-BKR-212-A2/9C	BREAKER  OPEN □  CLOSED □	NR	BREAKER CLOSED □	BREAKER OPEN/ STAYS OPEN □				
C/ 2C 0-BKR-31-128/2 ELEC BD RM CHLR A-A COMPR (0-COMP-31-128/2)	0-BKR-31-128/2	BREAKER  OPEN □  CLOSED □	NR	BREAKER CLOSED □	BREAKER TRIPS AND CLOSES BACK □				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V SD BD 2A2-A      Aux Bldg EL 757									
C/9D 0-BKR-78-12 SFP CIRC PUMP A-A	0-BKR-78-12	BREAKER  OPEN □  CLOSED □	NR	BREAKER CLOSED □	BREAKER OPEN/ Stays OPEN □				
C/ 12D 2-BKR-212-A2/12D CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-A2/12D	BREAKER  OPEN □  CLOSED □	NR	BREAKER OPEN □	BREAKER CLOSED/ STAYS CLOSED □				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 254 of 591</b>
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**Appendix K  
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V SD BD 2A2-A      Aux Bldg EL 757									
C/ 7A 2-BKR-30-88/1 CRDM CLR 2C-A MTR (2-FAN-30-88/1)	2-BKR-30-88/1	BREAKER  OPEN ☐  CLOSED ☐	NR	BREAKER CLOSED ☐	BREAKER OPEN ☐				
C/ 7D 2-BKR-30-77 LOWER COMPT COOLER 2C-A (2-FAN-30-77)	2-BKR-30-77	BREAKER  OPEN ☐  CLOSED ☐	NR	BREAKER CLOSED ☐	BREAKER OPEN ☐				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 255 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
C&A VENT BD 2A1-A      Aux Bldg EL 757									
C/ 10F1 0-BKR-40-3B VALVE & STRAINER ROOM SUMP PUMP 3B (0-PMP-40-3B)	0-PMP-40-3B	BREAKER OFF ☐ ON ☐	NR	BREAKER ON ☐	BREAKER OFF/ STAYS OFF ☐				
C/ 2D 2-BKR-81-3 PRIMARY WATER MAKEUP PUMP 2A (2-MTR-81-3)	2-BKR-81-3	BREAKER OFF ☐ ON ☐	NR	BREAKER ON ☐	BREAKER OFF/ STAYS OFF ☐				
C/13C 2-BKR-65-77 EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77)	2-BKR-65-77	BREAKER ON ☐ OFF ☐	NR	BREAKER ON ☐	BREAKER OFF/ STAYS OFF ☐				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 256 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V RX MOV BD 2A1-A Aux Bldg EL 772									
C/ 18F2 2-BKR-213-A001/18F2 POWER OUTLETS 2-PO-213-A1/6-A1/10	2-PO-213-A1/ 6,7,8,9,10	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 16F1 0-BKR-252-1/2 ALT FDR BATT CHGR 1 XFER SW (0-XSW-252-1)	0-CHGR-252-1	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 17A 2-BKR-62-228/4 BORIC ACID BATCH TANK HTR 4 (2-HTR-62-228/4)	2-BKR-62-228/4 (0-HS-62-228)	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	OFF <input type="checkbox"/>	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 257 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V RX MOV BD 2A1-A Aux Bldg EL 757									
C/ 17E 2-BKR-213-A001/17EP OWER OUTLETS 2-PO-213-A1/1-A1/5	2-PO-213-A1/ 1,2,3,4,5	BREAKER ON <input type="checkbox"/>  OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 16F2 2-BKR-31-303/2, INCORE INSTR RM CHLR 2A COMPR (2-COMP-31-303/2)	2-MTR-31-303/2	BREAKER ON <input type="checkbox"/>  OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V DIESEL AUX BD 2A1-A      Diesel Bldg EL 760									
C/ 2C 2-BKR-82-A1/2 DG ENG 2A1 IMMERSION HTR (2-HTR-82-A1)	2-BKR-82-A1/2	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 5F1 0-BKR-30-480 DGB CORRIDOR EL 742 HTR 2A (0-HTR-30-480)	0-BKR-30-480	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	NR	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 5A 2-BKR-82-241 DG ENG 2A2 AIR COMPR (2-COMP-82-241)	2-BKR-82-241 (2-HS-82-241)	BREAKER ON <input type="checkbox"/> OFF <input type="checkbox"/>	AUTO	BREAKER ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 259 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V DIESEL AUX BD 2A1-A Diesel Bldg EL 760									
C/ 5F2 2-BKR-215-A001/5F2 POWER OUTLETS (2-PO-215-1/2/3/4)	2-BKR-215-A001/5F2	BREAKER ON ☐ OFF ☐	NR	BREAKER ON ☐	BREAKER OFF/ STAYS OFF ☐				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V DIESEL AUX BD 2A2-A      Diesel Bldg EL 760									
C/ 2C 2-BKR-82-A2/2 DG ENG 2A2 IMMERSION HTR (2-HTR-82-A2)	2-BKR-82-A2/2	BREAKER  ON ☐  OFF ☐	NR	BREAKER  ON ☐	BREAKER OFF/ STAYS OFF ☐				
C/ 3E1 2-BKR-30-488 DG 2A-A ELEC BD RM HTR (2-HTR-30-488)	2-BKR-30-488	BREAKER  ON ☐  OFF ☐	NR	BREAKER  ON ☐	BREAKER OFF/ STAYS OFF ☐				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 261 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V DIESEL AUX BD 2A2-A Diesel Bldg EL 760									
C/ 3F1 2-BKR-30-475 DG 2A-A ROOM HTR 2A (2-HTR-30-475)	2-BKR-30-475	BREAKER  ON <input type="checkbox"/>  OFF <input type="checkbox"/>	NR	BREAKER  ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				
C/ 3F2 2-BKR-30-476 DG 2A-A ROOM HTR 2B (2-HTR-30-476)	2-BKR-30-476	BREAKER  ON <input type="checkbox"/>  OFF <input type="checkbox"/>	NR	BREAKER  ON <input type="checkbox"/>	BREAKER OFF/ STAYS OFF <input type="checkbox"/>				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V DIESEL AUX BD 2A2-A Diesel Bldg EL 760									
C/ 5A 2-BKR-82-240 DG ENG 2A1 AIR COMPR (2-COMP-82-240)	2-BKR-82-240	BREAKER  ON ☐  OFF ☐	NR	BREAKER  ON ☐	BREAKER  OFF/ STAYS OFF ☐				
C/ 6D 2-BKR-82-100 DIESEL GENERATOR 2A-A HEATER (2-HTR-82-100)	2-BKR-82-100	BREAKER  ON ☐  OFF ☐	NR	BREAKER  ON ☐	BREAKER  OFF/ STAYS OFF ☐				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 263 of 591</b>
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## Unit 2 Integrated Safeguards Test - Train 2A

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COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-4									
2-HS-3-118A AFW PMP A-A	2-MTR-3-118-A	HS	A-P AUTO (1)	NR					
		PMP	NR	RUNNING (1) □	STOPPED/ RESTART AFTER 25 SEC. □				

(1) This equipment will be verified in the body of this instruction.

TESTED  
COMPONENT(S)

## PRE-TEST

(AC)

INITIAL

POST-LOOP

AS-FOUND

REQ'D HS  
POS

REQ'D POS  
OR CONDPOST  
LOOP POS

(AC) VERIFIED

1st

CV

RETURNED TO  
AS-FOUND

1st

CV

**MCR 2-M-4**

2-HS-3-118A  
AFW PMP A-A

2-MTR-3-118-A

HS

A-P AUTO  
(1)

NR

**PMP**

NR

**RUNNING**  
**(1)**  
**□**

STOPPED/  
RESTART  
AFTER 25  
SEC.  
□

(1) This equipment will be verified in the body of this instruction.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 264 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-4									
2-FIC-46-57A-S TD AFWP FLOW CONTROLLER	2-FIC-46-57A-S	HS	MANUAL	NR					
		PMP	NR	STOPPED □	RUNNING				
2-HS-46-56A-S TD AFWP T&TV	2-FCV-1-51-S	HS	NORMAL	NR					
		VLV	NR	CLOSED □	OPEN				



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 266 of 591</b>
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## Loss of Offsite Power - Train 2A, Section 6.1

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
<b>MCR 2-M-4</b>									
CONTROL HEATERS D	2-HS-68-341F	HS	P AUTO (1)	NR					
C/21 6.9KV SD BD 2A-A PZR CONTROL HTR GRP 2D XFMR	2-XS-68-341F 6.9KV SD BD 2A-A C/21	XS (1)	NOR (1)	NR					
	2-BKR-68-341F	BKR (1)	NR	CLOSED □	OPEN □				
(1) Verify the AS FOUND positions locally at the 6.9kv SD BD. During the test, breaker positions may be verified from 2-M-4 HS lights.									



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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-5									
2-HS-81-3A PRIMARY WATER PMP A	2-BKR-81-3	HS	IN MANUAL	NR	NR	NR	NR		
		BKR	NR	VERIFY GREEN LIGHTS ON <input type="checkbox"/>	RED & GREEN LIGHTS OFF <input type="checkbox"/>				
2-HS-62-108A CCP A-A (ECCS)	2-MTR-62-108-A	HS	A AUTO (1)	NR	NR	NR	NR		
		PMP	NR	RUNNING <input type="checkbox"/> (1)	RUNNING (5 SEC. DELAY) <input type="checkbox"/>				

(1) The equipment will be aligned and verified in the body of the Instruction.

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-6									
2-HS-63-10A  SI PMP A (ECCS)	2-HS-63-10A  2-MTR-63-10-A	HS	A AUTO (1)	NR					
		PMP	NR	RUNNING □(1)	STOPPED □				
2-HS-72-27A  CNTMT SPRAY PMP A	2-HS-72-27A  2-MTR-72-27A	HS	A AUTO (1)	NR					
		PMP		RUNNING □(1)	STOPPED □				
2-HS-74-10A  RHR PMP A (ECCS)	2-HS-74-10A  2-MTR-74-10A	HS	A AUTO (1)	NR					
		PMP		RUNNING □(1)	STOPPED □				

(1) The equipment will be aligned in the body of the instruction.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 269 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 1-M-9									
(1), (2) 0-HS-31-30A EBR CHLR & AHU SYS A-A 0-COMP-31-128/2	0-MTR-31-128/2-A	HS	PULL STANDBY □	NR					
		FAN	NR	RUNNING RED LIGHT □	RUNNING RED LIGHT □				
(1), (3) 0-HS-31-400A SD BD ROOM A & B A/C SYS A-A	0-MTR-31-36/2-A	HS	PULL STANDBY □	NR					
		FAN	NR	RUNNING RED LIGHT □	RUNNING RED LIGHT □				

- (1) Appendix C, Section 10 aligns Train A EBR and Train A SD BD RM cooling for test.  
(2) 0-SOI-31.01 restores EBR chiller. 0-HS-31-30A is placed to STOP then released to MID position during restoration.  
(3) 0-SOI-30.07 restores SD BD RM chillers.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 270 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 1-M-9									
0-HS-31-64A SD BD ROOM A PRESS FAN A-A	0-MTR-31-64-A	HS	P-AUTO ☐	NR					
		FAN	NR	RUNNING ☐	RUNNING ☐				
0-HS-31-62A SD BD ROOM B PRESS FAN B-A	0-MTR-31-62-A	HS	P-AUTO ☐	NR					
		FAN	NR	RUNNING ☐	RUNNING ☐				
0-HS-31-67A SD BD ROOM A PRESS FAN C-B	0-MTR-31-67-B	HS	P-AUTO ☐	NR					
		FAN	NR	STOPPED ☐	NR				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 1-M-9									
0-HS-31-68A SD BD ROOM B PRESS FAN D-B	0-MTR-31-68-B	HS	P-AUTO □	NR					
		FAN	NR	STOPPED □	NR				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-9									
2-HS-30-95A UPR CNTMT CLR A	2-MTR-30-95	HS	IN A-P AUTO	NR					
		FAN	NR	RUNNING □	STOPPED □				
2-HS-30-97 UPR CNTMT CLR B	2-MTR-30-97	HS	STOP PULL TO LOCK □	NR					
		FAN	NR	STOPPED □	STOPPED □				
2-HS-30-99 UPR CNTMT CLR C	2-MTR-30-99	HS	IN A-P AUTO	NR					
		FAN	NR	RUNNING □	STOPPED □				
2-HS-30-100A UPR CNTMT CLR D	2-MTR-30-100	HS	STOP PULL TO LOCK □	NR					
		FAN	NR	STOPPED □	STOPPED □				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-9									
2-HS-30-83A CRDM CLR A-A	2-MTR-30-83-A	HS	IN A AUTO	NR					
		FAN	NR	RUNNING RED LIGHT LIT □	GREEN LIGHT LIT □				
2-HS-30-92A CRDM CLR B-B	2-MTR-30-92-B	HS	STOP PULL TO LOCK □	NR					
		FAN	NR	GREEN LIGHT LIT □	NR				

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-9									
2-HS-30-88A CRDM CLR C-A	2-MTR-30-88-A	HS	IN A AUTO	NR					
		FAN	NR	RUNNING RED LIGHT LIT □	GREEN LIGHT LIT □				
2-HS-30-80A CRDM CLR D-B	2-MTR-30-80-B	HS	STOP PULL TO LOCK □	NR					
		FAN	NR	GREEN LIGHT LIT □	NR				



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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP		
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND		
						1st	CV	1st	CV	
MCR 2-M-9										
2-HS-30-74A LWR CNTMT CLR A-A	2-MTR-30-74-A	HS	IN A AUTO <input type="checkbox"/>	NR						
		FAN	NR	RUNNING RED LIGHT LIT <input type="checkbox"/>	STOPPED GREEN LIGHT LIT <input type="checkbox"/>					
2-HS-30-75A LWR CNTMT CLR B-B	2-MTR-30-75-B	HS	STOP PULL TO LOCK <input type="checkbox"/>	NR						
		FAN	NR	GREEN LIGHT LIT <input type="checkbox"/>	NR					

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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-9									
2-HS-30-77A LWR CNTMT CLR C-A	2-MTR-30-77-A	HS	IN A AUTO <input type="checkbox"/>	NR					
		FAN	NR	RUNNING RED LIGHT LIT <input type="checkbox"/>	STOPPED GREEN LIGHT LIT <input type="checkbox"/>				
2-HS-30-78A LWR CNTMT CLR D-B	2-MTR-30-78-B	HS	PULL TO LOCK <input type="checkbox"/>	NR					
		FAN	NR	GREEN LIGHT LIT <input type="checkbox"/>	NR				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 277 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
MCR 2-M-9									
2-HS-31-265A INSTR ROOM CLG A AHU, CIRC PMP & FCO	2-MTR-31-265	HS	A AUTO <input type="checkbox"/>	NR					
		FAN	NR	RUNNING RED LIGHT LIT <input type="checkbox"/>	STOPPED (NO AUTO START) GREEN LIGHT LIT <input type="checkbox"/>				
2-HS-31-266A INSTR ROOM CLG B AHU, CIRC PMP & FCO	2-MTR-31-266	HS	STOP PULL TO LOCK <input type="checkbox"/>	NR					
		FAN	NR	STOPPED	NR				



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 279 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP		
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND		
						1st	CV	1st	CV	
0-M-26										
2-HS-57-41B 1816 - NORMAL FROM CSST C	2-BKR-211-1816/16-A		NR	CLOSED RED LIGHT LIT □	OPEN GREEN LIGHT LIT □					
2-HS-57-46A 1922 - DG TO SD BD 2A-A	2-BKR-211-1922/16-A		NR	OPEN GREEN LIGHT LIT □	CLOSED RED LIGHT LIT □					
0-M-27A										
0-HS-67-32A ERCW PMP B-A	0-MTR-67-32-A	HS	A AUTO □	NR						
		PMP	NR	STOPPED □	STOPPED □					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 280 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
0-M-27A									
0-HS-67-40A ERCW PMP D-A	0-MTR-67-40-A	HS	A AUTO □	NR					
		PMP	NR	RUNNING □	RUNNING □				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 281 of 591</b>
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**Loss of Offsite Power - Train 2A, Section 6.1**

COMPONENT DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
0-M-27B									
2-HS-65-77A ANN VAC FAN 2A & SUCT FCO	2-MTR-65-77	HS	A-P AUTO □	NR					
		FAN	NR	RUNNING □	STOPPED LIGHTS OFF □				
2-HS-65-74A ANN VAC FAN 2B & SUCT FCO	2-MTR-65-74	HS A-P AUTO □	NR						
		FAN	NR	STOPPED LIGHTS OFF □	NR				





<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 283 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1A1-A, Compt. 2C 1-BKR-30-186 PENT RM EL 692 CLR 1A-A (Note 21)	1-MTR-30-186-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 1A1-A, Compt. 5A 0-BKR-30-192 SFP PMP/TBBP AREA CLR A-A (Note 21)	0-MTR-30-192-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 1A1-A, Compt. 5E 1-BKR-30-190 CCS/AFW PMP SPACE CLR 1A-A (Note 21)	1-MTR-30-190-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
INITIAL				1st /CV		1st /CV		1st /CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 284 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

**LOCATION: SWGR/MCC**

**SUBSECTION 6.2**

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1A1-A, Compt. 8B 1-BKR-30-194 PENT RM EL 737 CLR 1A-A (Note 21)	1-MTR-30-194-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 1A1-A, Compt. 10B 1-BKR-30-196 PENT RM EL 713 CLR 1A-A (Note 21)	1-MTR-30-196-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 1A1-A, Compt. 10C 1-BKR-30-201 AB EL 692 PIPE CHASE CLR 1A-A (Note 21)	1-MTR-30-201-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 2C 2-BKR-30-186 PENT RM EL 692 CLR 2A-A	2-MTR-30-186-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 285 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 4A 2-BKR-30-200 EGTS ROOM CLR 2A-A (Note 21)	2-MTR-30-200-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 5E 2-BKR-30-184 AFW/BA XFER PMP SPACE CLR 2A-A (Note 21)	2-MTR-30-184-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 8A 2-BKR-30-180 SIS PUMP 2A-A RM CLR	2-MTR-30-180-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 286 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 8B 2-BKR-30-194 PENT RM EL 737 CLR 2A-A (Note 21)	2-MTR-30-194-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 9A 2-BKR-30-175 RHR PUMP 2A-A RM COOLER	2-MTR-30-175-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 2A1-A, Compt. 10A 2-BKR-30-183 CENT CHG PUMP 2A-A RM CLR	2-MTR-30-183-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT ON		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 287 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 10B 2-BKR-30-196 PENT RM EL 713 CLR 2A-A	2-MTR-30-196-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 10C 2-BKR-30-201 AB EL 692 PIPE CHASE CLR 2A-A	2-MTR-30-201-A	Red Light Off HS - Auto (Note 6)		RED LIGHT ON		RED LIGHT OFF		(Note 1)	
C&A Vent Bd 2A1-A, Compt. 10D 2-MCC-214-A2-A ABGTS HUMIDITY HTR A-A	0-HTR-30-147-A	RED LIGHT OFF (Note 11)		RED LIGHT ON		RED LIGHT ON		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 288 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2A1-A, Compt. 3E 2-BKR-62-247 CCP AUX OIL PMP 2A	2-MTR-62-247-A	RED LIGHT OFF (Note 11)		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2A1-A, Compt. 4F 2-BKR-213-A001/4F THERMAL OVERLOAD BYPASS 2A1	2-RLY-99-2A1/K1	RED LIGHT OFF (Note 11)		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2A1-A, Compt. 16F2 2-BKR-31-303B INCORE INSTR RM CHLR 2A COMPR	2-MTR-31-303B	CLOSED		TRIPPED		TRIPPED		ON	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 289 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2A1-A, Compt. 17E POWER OUTLETS: 2-PO-213-A1/1, 2-PO-213-A1/2, 2-PO-213-A1/3, 2-PO-213-A1/4, 2-PO-213-A1/5	2-PO-213-A1/1,2,3,4,5	ON		TRIPPED		TRIPPED		ON	
RX MOV Bd 2A1-A, Compt. 18C 2-BKR-31-303A INCORE INSTR RM CW PMP 2A	2-MTR-31-303-A	Red Light Off HS - Auto (Note 6)		Red Light Off		Red Light Off		(Note 1)	
RX MOV Bd 2A1-A, Compt. 18F2 POWER OUTLETS: 2-PO-213-A1/6, 2-PO-213-A1/7, 2-PO-213-A1/8, 2-PO-213-A1/9, 2-PO-213-A1/10	2-PO-213-A1/6,7,8,9,10	ON		TRIPPED		TRIPPED		ON	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 290 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: SWGR/MCC

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
Rx MOV BD 2A2-A, Compt. 6D 2-BKR-213-A002/6D THERMAL OVERLOAD BYPASS 2A2-A	2-RLY-99-2A2/K1	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 291 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-3

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35, MFW REG FCV 3-35	2-FCV-3-35	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
2-XX-3-35, MFW REG FCV 3-48	2-FCV-3-48	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
2-XX-3-35, MFW REG FCV 3-90	2-FCV-3-90	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
2-XX-3-35, MFW REG FCV 3-103	2-FCV-3-103	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
2-XX-3-35A, BYP REG FCV 3-48A	2-FCV-3-48A	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 292 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-3

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35A, BYP REG FCV 3-103A	2-FCV-3-103A	OPEN (Note 7)		CLOSED		CLOSED		CLOSED	
2-XI-3-236, 2-FCV-3-236, SG 1 MFW BYP ISOL	2-FCV-3-236	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
2-XI-3-239, 2-FCV-3-239, SG 2 MFW BYP ISOL	2-FCV-3-239	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
2-HS-3-33A, SG 1 MFW ISOL VLV	2-FCV-3-33-A	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 293 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-3

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XI-3-242, 2-FCV-3-242, SG 3 MFW BYP ISOL	2-FCV-3-242	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
2-XI-3-245, 2-FCV-3-245, SG 4 MFW BYP ISOL	2-FCV-3-245	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
2-HS-3-87A, SG 3 MFW ISOL VLV	2-FCV-3-87-A	OPEN (Note 20)		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 294 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-3

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-235, FCV 3-186, CKV BYP-REV FLUSH	2-FCV-3-186	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235, FCV 3-188, CKV BYP-REV FLUSH	2-FCV-3-188	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 295 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-4

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-118A AFW PMP A-A	2-MTR-3-118-A	STOPPED		RUNNING		RUNNING		STOPPED	
2-FIC-46-57A-S T-D AFWP FLOW CONTROLLER	2-FIC-46-57A-S	MANUAL		AUTO		AUTO		MANUAL	
2-HS-46-56A-S T-D AFWP T&T VLV	2-FCV-1-51-S	CLOSED		OPEN		OPEN		CLOSED	
2-HS-3-164A SG 1 SUPPLY LCV-3-164 CNTL	2-LCV-3-164A	CLOSED (Note 4)		N/A (Note 10)	N/A	N/A	N/A	CLOSED	
2-HS-3-156A SG 2 SUPPLY LCV-3-156 CNTL	2-LCV-3-156A	CLOSED (Note 3)		N/A (Note 10)	N/A	N/A	N/A	CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 296 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-4

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-LIC-3-164A SG 1 SUPPLY FRM PMP A-A	2-LIC-3-164A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-156A SG 2 SUPPLY FRM PMP A-A	2-LIC-3-156A	MANUAL		AUTO		AUTO		MANUAL	
INITIAL				1st CV		1st CV		1st CV	

LOCATION: 2-M-4

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-172A SG 3 SUPPLY LCV-3-172 CNTL	2-LCV-3-172	CLOSED		NOT CLOSED (Note 5)		NOT CLOSED		CLOSED	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 297 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-4

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-175A SG 4 SUPPLY LCV-3-175 CNTL	2-LCV-3-175	CLOSED		NOT CLOSED (Note 5)		NOT CLOSED		CLOSED	
2-LIC-3-172A SG 3 SUPPLY FRM T-D PMP	2-LIC-3-172A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-175A SG 4 SUPPLY FRM T-D PMP	2-LIC-3-175A	MANUAL		AUTO		AUTO		MANUAL	
INITIAL				1st CV		1st CV			1st CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 298 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-4

subsection 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-RT-1 RX TRIP BKR A (2-52RTA) (Ind. Light Nomenclature)	2-52RTA	CLOSED		OPEN		OPEN		OPEN	
2-RT-1 RX TRIP BKR B (2-52RTB) (Ind. Light Nomenclature)	2-52RTB	CLOSED		OPEN		OPEN		OPEN	
B RX TRIP BYPASS BKR	2-52BYB	CLOSED		OPEN		OPEN		OPEN	
2-HS-1-7/181 (181 Lights above HS) SG 1 BLOWDOWN VLVS	2-FCV-1-181	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-14/182 (14 Lights on HS) SG 2 BLOWDOWN VLVS	2-FCV-1-14	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-25/183 (183 Lights above HS) SG 3 BLOWDOWN VLVS	2-FCV-1-183	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 299 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-4

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-1-32/184 (32 Lights on HS) SG 4 BLOWDOWN VLVS	2-FCV-1-32	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-68-341A BACKUP HEATERS A-A	2-BKR-68-341A-A	ON		OFF		OFF		OFF	
2-HS-68-341F CONTROL HEATERS D	2-BKR-68-341F-A	ON		OFF		OFF		OFF	
2-HS-68-307A PRT TO GAS ANALYZER	2-FCV-68-307	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 300 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-5

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-68-305A N2 TO PRT CIV-ØA	2-FCV-68-305	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-81-12A PRIMARY WATER TO PRT & STANDPIPES	2-FCV-81-12	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-62-63A RCP SEAL RETURN CIV-ØA	2-FCV-62-63-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-62-108A CCP A-A (ECCS)	2-MTR-62-108-A	STOPPED		RUNNING		RUNNING		STOPPED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 301 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-5

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-132A VCT TO CHARGING PMPS SUCTION	2-LCV-62-132-A	OPEN (note 4)		CLOSED		CLOSED		OPEN	
2-HS-62-135A RWST TO CHARGING PMPS SUCTION	2-LCV-62-135-A	CLOSED (note 4)		OPEN		OPEN		CLOSED	
INITIAL				1st CV		1st CV			1st CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 302 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-6

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-90A CHARGING LINE ISOL	2-FCV-62-90-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-62-76 LETDOWN ORIFICE 5 GPM CIV-ØA	2-FCV-62-76	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-62-72A LETDOWN ORIFICE A 45 GPM CIV-ØA	2-FCV-62-72	OPEN (Note 19)		CLOSED		CLOSED		(Note 1)	
2-HS-62-73A LETDOWN ORIFICE B 75 GPM CIV-ØA	2-FCV-62-73	OPEN (Note 19)		CLOSED		CLOSED		(Note 1)	
2-HS-62-74A LETDOWN ORIFICE C 75 GPM CIV-ØA	2-FCV-62-74	OPEN (Note 19)		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 303 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-6

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-74-10A RHR PMP A (ECCS)	2-MTR-74-10-A	STOPPED		RUNNING		RUNNING		STOPPED	
2-XI-74-16 RHR HX A OUTLET FLOW CNTL FCV-74-16	2-FCV-74-16	CLOSED		OPEN		OPEN		(Note 1)	
2-HS-63-26A BIT OUTLET	2-FCV-63-26-A	CLOSED		OPEN		OPEN		CLOSED	
2-HS-63-10A SI PMP A (ECCS)	2-MTR-63-10-A	STOPPED		RUNNING		RUNNING		STOPPED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 304 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-6

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-63-64A N2 HDR TO CL ACCUMS	2-FCV-63-64	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-63-185 RHR SUPPLY TEST LINE VALVE	2-FCV-63-185	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-63-71A CKV TEST LINE TO HUT	2-FCV-63-71	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 305 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9				section 6.2					
COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-136A FH AREA EXH FAN A & DISCH FCO-30-136	0-MTR-30-136	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
0-HS-30-139A FH AREA EXH FAN B & DISCH FCO-30-139	0-MTR-30-139	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
0-HS-30-137 FH AREA EXH FAN A DISCH	0-FSV-30-137	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 306 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

section 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-140 FH AREA EXH FAN B DISCH	0-FCO-30-140	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
0-HS-30-122 CASK LOAD AREA EXHAUST	0-FCO-30-122	OPEN		CLOSED		OPEN		(Note 1 & 21)	
0-HS-30-129 CASK LOAD AREA SUPPLY	0-FCO-30-129	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
0-HS-77-240 AUX BLDG H2 SUPPLY	0-FCV-77-240	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
0-SW-30-136 FUEL HANDLING AREA EXH FAN A ISOLATION SWITCH (757' A13S)	0-MTR-30-136	CLOSED		CLOSED		CLOSED		CLOSED (Note 21)	
0-SW-30-139 FUEL HANDLING AREA EXH FAN B ISOLATION SWITCH (757' A14U)	0-MTR-30-139	CLOSED		OPEN		OPEN		CLOSED (Note 21)	
1-SW-30-159 AB GENERAL EXH FAN 1A ISOLATION SWITCH (757' A2U)	1-MTR-30-159	CLOSED		CLOSED		CLOSED		CLOSED (Note 21)	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 307 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-SW-30-162 AB GENERAL EXH FAN 1B ISOLATION SWITCH (757' A2S)(Note 21)	1-MTR-30-162	CLOSED		OPEN		OPEN		CLOSED	
2-SW-30-274 AB GENERAL EXH FAN 2A ISOLATION SWITCH (757' A14Q)(Note 21)	2-MTR-30-274	CLOSED		CLOSED		CLOSED		CLOSED	
2-SW-30-278 AB GENERAL EXH FAN 2B ISOLATION SWITCH (757' A14T) (Note 21)	2-MTR-30-278	CLOSED		OPEN		OPEN		CLOSED	
1-HS-30-103A AB GEN SUPPLY FAN 1A & DISCH FCO-30-103	1-MTR-30-103	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 308 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-102A AB GEN SUPPLY FAN 1B & DISCH FCO-30-102	1-MTR-30-102	STOPPED (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
0-HS-30-106A U1 AB GEN SPACES & FH AREA SUP	0-FCO-30-106	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
1-HS-30-86 U1 AB GEN SPACES SUPPLY	1-FCO-30-86	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
2-HS-30-108 U2 AB GEN SUP OUTLET	2-FCO-30-108	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
2-HS-30-21 U2 AB GEN SPACES SUPPLY	2-FCO-30-21	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 309 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-160 AB GEN EXH FAN 1A SUCT	1-FCO-30-160	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
1-HS-30-166 AB GEN EXH FAN 1B SUCT	1-FCO-30-166	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
2-HS-30-104A AB GEN SUPPLY FAN 2A & DISCH FCO-30-104	2-MTR-30-104	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
2-HS-30-105A AB GEN SUPPLY FAN 2B & DISCH FCO-30-105	2-MTR-30-105	STOPPED (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 310 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-271 AB GEN EXH FAN 2A SUCT	2-FCO-30-271	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
2-HS-30-275 AB GEN EXH FAN 2B SUCT	2-FCO-30-275	OPEN		CLOSED		CLOSED		(Note 1 & 21)	
1-HS-30-159A AB GEN EXHAUST FAN 1A & DISCH FCO-30-159	1-MTR-30-159	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
1-HS-30-162A AB GEN EXHAUST FAN 1B & DISCH FCO-30-162	1-MTR-30-162	STOPPED (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
2-HS-30-274A AB GEN EXHAUST FAN 2A & DISCH FCO-30-274	2-MTR-30-274	RUNNING (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 311 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-278A AB GEN EXHAUST FAN 2B & DISCH FCO-30-278 (Note 21)	2-MTR-30-278	STOPPED (Note 16)		STOPPED		STOPPED		(Note 1 & 21)	
DAMPER 1-XI-31-342 (PASf) FCO-31-342	1-FCO-31-342	OPEN (Note 8)		CLOSED		CLOSED		(Note 1 & 21)	
DAMPER 0-XI-31-350 (PASf) FCO-31-350	0-FCO-31-350	OPEN (Note 8)		CLOSED		CLOSED		(Note 1 & 21)	
0-HS-31-64A SD BD ROOM A PRESS FAN A-A	0-MTR-31-64-A	RUNNING		STOPPED		RUNNING/ STOPPED		(Note 1)	
0-HS-31-62A SD BD ROOM B PRESS FAN B-A	0-MTR-31-62-A	RUNNING		STOPPED		RUNNING/ STOPPED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 312 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-3 MCR & SPREAD RM FRESH AIR	0-FCV-31-3	OPEN		CLOSED		OPEN		(Note 1)	
0-HS-31-8A CB EMERG CLEANUP FAN A-A & SUCT FCO-31-8	0-MTR-31-8-A	STOPPED		RUNNING		RUNNING		(Note 1)	
0-HS-31-6A CB EMERG PRESS FAN A-A & SUCT FCO-31-8	0-MTR-31-6-A	STOPPED (Note 9)		RUNNING		RUNNING		(Note 1)	
0-HS-31-25A SPREADING ROOM EXH FAN A-A	0-MTR-31-25	RUNNING		STOPPED		STOPPED		STOPPED	
0-HS-31-26A SPREADING ROOM EXH FAN B-B	0-MTR-31-26	STOPPED		STOPPED		STOPPED		RUNNING	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 313 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 1-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-406A SPREADING ROOM SUPPLY FAN	0-MTR-31-406	RUNNING		STOPPED		STOPPED		RUNNING	
DAMPER 0-XI-31-10 FCO-31-10	0-FCO-31-10	OPEN		CLOSED		OPEN		(Note 1)	
DAMPER 0-XI-31-17 FCO-31-17	0-FCO-31-17	OPEN		CLOSED		OPEN		(Note 1)	
0-HS-31-418A TOILET & LKR RM EXHAUST FAN	0-MTR-31-418	RUNNING		STOPPED		STOPPED		RUNNING	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 314 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 2-XI-30-294 FCO-30-294	2-FCO-30-294-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-1A CNTMT PURGE SUP & EXH FANS 2A AND FCO-30-1A & 1B	2-MTR-30-1 (SUP)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
	2-MTR-30-1E (EXH)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
2-HS-30-4A CNTMT PURGE SUP & EXH FANS 2B AND FCO-30-4A & 4B	2-MTR-30-4 (SUP)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
	2-MTR-30-4E (EXH)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 315 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-11A INSTR RM SUP & EXH FANS AND FCO-30-11A & 11B	2-MTR-30-11 (SUP)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
	2-MTR-30-11E (EXH)	RUNNING (Note 15)		STOPPED		STOPPED		(Note 1)	
2-HS-30-2 PURGE SUPPLY FAN 2A DISCH	2-FCV-30-2	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-5 PURGE SUPPLY FAN 2B DISCH	2-FCV-30-5	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 316 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-7 UPR CNTMT PURGE 2-FCV-30-1 & 51	2-FCV-30-51	OPEN		CLOSED		CLOSED		(Note 1)	
	2-FCV-30-7	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-10 UPR CNTMT PURGE 2- FCV-30-10 & 52	2-FCV-30-52	OPEN		CLOSED		CLOSED		(Note 1)	
	2-FCV-30-10	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-14 LWR CNTMT PURGE 2- FCV-30-14 & 56	2-FCV-30-14	OPEN		CLOSED		CLOSED		(Note 1)	
	2-FCV-30-56	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 317 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-20 INST RM PURGE 2-FCV-30-20 & 59	2-FCV-30-59	OPEN		CLOSED		CLOSED		(Note 1)	
	2-FCV-30-20	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-12 ANNULUS PURGE SUPPLY	2-FCV-30-12	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-54 ANNULUS PURGE EXH	2-FCV-30-54	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-17 LWR CNTMT PURGE SUP	2-FCV-30-17	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-40 LWR CNTMT PURGE EXH PRESS RLF	2-FCV-30-40	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 318 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-61-96 FLOOR CLG SUP OUTSIDE CIV-ØA	2-FCV-61-96	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-61-110 FLOOR CLG RET OUTSIDE CIV-ØA	2-FCV-61-110	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-61-191A GLYCOL TO AHU OUTSIDE CIV-ØA	2-FCV-61-191	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-61-193A GLYCOL FRM AHU OUTSIDE CIV-ØA	2-FCV-61-193	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-30-61 PURGE EXH FAN A SUCT	2-FCV-30-61	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 319 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-62 PURGE EXH FAN B SUCT	2-FCV-30-62	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-31-265A INSTR ROOM CLG A AHU CIRC PMP & FCO	2-MTR-31-265	RUNNING (Note 14)		STOPPED		STOPPED		(Note 1)	
2-HS-31-306 CIRC PMP A SUCT CIV-ØA	2-FCV-31-306	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-31-326 CIRC PMP B SUCT CIV-ØA	2-FCV-31-326	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 320 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-31-330 CIRC PMP B DISCH CIV-ØA	2-FCV-31-330	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-31-308 CIRC PMP DISCH CIV-ØA	2-FCV-31-308	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

LOCATION: 1-M-15

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-26-9A HPFP PMP 2A-A	0-MTR-26-9-A	RUNNING		STOPPED		RUNNING/ STOPPED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 321 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-15

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-77-125A1 FL & EQ DR SMP REAC BLDG PUMP A CONTROL	2-MTR-77-125A	RUNNING (Note 4)		STOPPED		STOPPED		STOPPED	
2-HS-77-128A REAC BLDG SUMP DISCH FLOW CONTROL	2-FCV-77-128	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-10A REAC COOLANT DR TANK FLOW CONTROL	2-FCV-77-10	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-19 RCDT TO VENT HDR FLOW CONTROL	2-FCV-77-19	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-26-240A CONTAINMENT STANDPIPE ISOLATION VALVE CONT	2-FCV-26-240-A	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 322 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-15

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-26-243A REACTOR COOLANT PMP SPRAY ISOL VLV CONT	2-FCV-26-243-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-77-17 RCDT TO GA FLOW CONTROL	2-FCV-77-17	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-20 RCDT N2 SUPPLY FLOW CONTROL	2-FCV-77-20	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 323 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-12

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-90-113 CNTMT TO RM-112 CIV CVI OUTSIDE CNTMT	2-FCV-90-113	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-90-107 CNTMT TO RM-106 CIV CVI OUTSIDE CNTMT	2-FCV-90-107	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-90-117 RM-112 RET TO LOWER CNTMT CIV CVI OUTSIDE CNTMT	2-FCV-90-117	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-90-111 RM-106 RET TO LOWER CNTMT CIV CVI OUTSIDE CNTMT	2-FCV-90-111	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 324 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-26

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Indicating Lights) DG RUN	2-GEN-82-2A-A	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-57-46A 1922-DG TO SD BD 2A-A	2-BKR-211-1922/6-A	OPEN		OPEN		OPEN		OPEN	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 325 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-25

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-146A ABGTS FAN A-A	1-MTR-30-146-A	STOPPED		RUNNING		RUNNING		(Note 1)	
0-HS-30-288 ABGTS A SUCT FROM OUTSIDE	0-FCO-30-288	CLOSED		OPEN		OPEN		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 326 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-27A

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-32A ERCW PMP B-A	0-MTR-67-32-A	(Note 1)		(Note 1)		(Note 1)		(Note 1)	
0-HS-67-40A ERCW PMP D-A	0-MTR-67-40-A	STOPPED		RUNNING		RUNNING		RUNNING	
0-HS-67-28A ERCW PMP A-A	0-MTR-67-28-A	STOPPED		RUNNING		RUNNING		RUNNING	
0-HS-67-36A ERCW PMP C-A	0-MTR-67-36-A	(Note 1)		(Note 1)		(Note 1)		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 327 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-27B

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-77A ANN VAC FAN 2A & SUCT FCO	2-MTR-65-77	RUNNING (Note 17)		STOPPED		STOPPED		STOPPED	
2-HS-65-5 U2 ANN VAC FANS SUCT	2-FCV-65-5	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-65-9 EGTS TR-A U2 SUCT DMPR	2-FCV-65-9	CLOSED		OPEN		OPEN		(Note 1)	
0-HS-65-23A EGTS FAN A & DISCH DMPR	0-MTR-65-23-A	STOPPED		RUNNING		RUNNING		(Note 1)	
2-HS-65-46 EGTS TO U2 SHIELD BLDG	2-FCO-65-46	CLOSED		OPEN		OPEN		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 328 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 0-M-27B

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-81/86 U2 EGTS-ANN ΔP CNTLR A ISOL	2-PCV-65-86	CLOSED (Note 13)		OPEN		OPEN		(Note 1)	
	2-PCV-65-81	CLOSED (Note 13)		OPEN		OPEN		(Note 1)	
2-HS-70-143A EXC LTDN HX SUP CIV-ØA	2-FCV-70-143-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-70-59A CCS PMP 2A-A	2-MTR-70-59-A	STOPPED		RUNNING		RUNNING		(Note 1)	
2-HS-70-131A THRM BAR BSTR PMP 2A (TBBP)	2-MTR-70-131-A	STOPPED		RUNNING		RUNNING		(Note 1)	
1-HS-70-51A CCS PMP C-S ALT ACB	0-MTR-70-51-S	STOPPED		RUNNING		RUNNING		(Note 1)	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 329 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-6, 2-XX-55-6E

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
FCV-43-58 (Window 46) STEAM GEN 2 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-58	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-55 (Window 36) STEAM GEN 1 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-55	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-64 (Window 48) STEAM GEN 4 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-64	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-61 (Window 47) STEAM GEN 3 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-61	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 330 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: 2-M-6, 2-XX-55-6E

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
FCV-43-03 (Window 32) PRESSURIZER GAS SAMPLE ISOL VLV	2-FCV-43-3	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-35 (Window 35) ACCUM TANK SAMPLE HDR ISOL VLV	2-FCV-43-35	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-12 (Window 33) PRESSURIZER LIQUID SAMPLE ISOL VLV	2-FCV-43-12	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-23 (Window 34) HOT LEGS 1/3 SAMPLE ISOL VLV	2-FCV-43-23	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL				1st CV		1st CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 331 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: LOCAL

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(1-L-572) 1-HS-31-437 PASF GENERAL SUPPLY FAN C1	1-MTR-31-437-C1/1	RUNNING		STOPPED		STOPPED		(Note 1)	
(2-R-75) HWP (FWI AUX RELAY)	RELAY HWP	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(6.9KV Unit Bd 2A, Compt. 8) FEEDWATER ISOL AUX RELAY 5X	RELAY 5X	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL		1st CV		1st CV		1st CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 332 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: Main Feedwater Pumps

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Local at 2-FSV-46-9A) VOM-FSV9A 729/T16J	2-FSV-46-9A	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-36A) VOM-FSV36A 729/T16H	2-FSV-46-36A	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL				1st CV		1st CV			1st CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 333 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

LOCATION: Main Turbine Head

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Local at 2-FSV-47-24) VOM-FSV24 755/T13J	2-FSV-47-24	DE- ENERGIZED		ENERGIZED		ENERGIZED		DE- ENERGIZED	
(Local at 2-FSV-47-26A) VOM-FSV26A 755/T12J	2-FSV-47-26A	DE- ENERGIZED		ENERGIZED		ENERGIZED		DE- ENERGIZED	
(Local at 0-L-2) 2-HS-77-4A 692/A8S	2-MTR-77-4	RUNNING		STOPPED		STOPPED		STOPPED	
INITIAL				1st CV		1st CV		1st CV	

NOTES:

SUBSECTION 6.2

1. The "POST-TEST REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. As-left status for these components is recorded in the POST-TEST "ACTUAL" column.
2. Not Used

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 334 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

3. Use valve position indication for "156A" Valve only, NOT "156" Valve.
4. Handswitch in the Center "Pull-Out" position (A-P AUTO, P AUTO STANDBY)
5. "NOT CLOSED" is defined as either Modulating or Full-Open.
6. Component checked as follows: At breaker compartment - Breaker closed/on, Red light at breaker compartment OFF; HS checked locally at fan control in AUTO
7. FIC in "MANUAL" with controller output set to 100%; FWI reset performed in body of instruction.
8. 1-HS-31-481 (1-L-572) in Normal.
9. 0-HS-31-6D in Bypass.
10. Component position verified and repositioned in the performance section of Section 6.2.
11. Component breaker checked in ON position with RED indicating light NOT LIT.
12. Not Used.
13. Ensure 2-HS-65-81/86 in A Auto position.
14. Component is to be started using 0-SOI-30.05.
15. Component is to be started using 2-SOI-30.03.
16. Component is to be started using 0-SOI-30.05.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 335 of 591</b>
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**Safety Injection (SI) - Train 2A, Section 6.2**

17. Component is to be started using 0-SOI-65.02.
18. Not used
19. Valves 2-FCV-62-69 and 2-FCV-62-70 must be OPEN prior to opening this valve.
20. FWI reset to obtain open position. FWI reset performed in body of instruction.
21. These components are verified to ensure correct operation but are not Acceptance Criteria. These items are tested in 0-SI-30-7-A





<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 338 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 2-M-9

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-77A LWR CNTMT CLR C-A	2-MTR-30-77-A	RUNNING HS - IN AUTO		STOPPED		STOPPED		(Note 1)	
2-HS-30-88A CRDM CLR C-A	2-MTR-30-88-A	RUNNING HS - IN AUTO		STOPPED		STOPPED		(Note 1)	
2-HS-30-38A AIR RETURN FAN A-A	2-MTR-30-38-A	STOPPED HS in A AUTO		RUNNING		RUNNING		(Note 1)	
INITIAL								CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 339 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 2-M-15

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-32-81A AUX AIR TO RX BLDG TR A CIV ØB 70 PSI D/S CLOSSES	2-FCV-32-81	OPEN		CLOSED		CLOSED		OPEN	
INITIAL									CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 340 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 0-M-27A

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-295A UPR CNTMT CLR A RET CIV-ØB	2-FCV-67-295-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-130A UPR CNTMT CLR A SUP CIV-ØB	2-FCV-67-130-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-296A UPR CNTMT CLR C RET CIV-ØB	2-FCV-67-296-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-133A UPR CNTMT CLR C SUP CIV-ØB	2-FCV-67-133-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-87A LWR CNTMT A CLRS RET CIV-ØB	2-FCV-67-87-A	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL									CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 341 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 0-M-27A

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-95A LWR CNTMT C CLRS RET CIV-ØB	2-FCV-67-95-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-89A LWR CNTMT A CLRS SUP CIV-ØB	2-FCV-67-89-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-97A LWR CNTMT C CLRS SUP CIV-ØB	2-FCV-67-97-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-139A UPR CNTMT CLR B RET CIV-ØB	2-FCV-67-139-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-142A UPR CNTMT CLR D RET CIV-ØB	2-FCV-67-142-A	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL									CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 342 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 0-M-27A

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-104A LWR CNTMT B CLRS RET CIV-ØB	2-FCV-67-104-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-112A LWR CNTMT D CLRS RET CIV-ØB	2-FCV-67-112-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-99A LWR CNTMT B CLRS SUP CIV-ØB	2-FCV-67-99-A	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-67-107A LWR CNTMT D CLRS SUP CIV-ØB	2-FCV-67-107-A	OPEN		CLOSED		CLOSED		(Note 1)	
INITIAL									CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 343 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

LOCATION: 0-M-27B

SUBSECTION 6.2

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-70-90A THERMAL BAR RET CIV-ØB	2-FCV-70-90-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-92A RCP OIL CLRS RET CIV-ØB	2-FCV-70-92-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-100A RCP OIL CLRS SUP CIV-ØB	2-FCV-70-100-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-131A THRM BAR BSTR PMP 2A (TBBP)	2-MTR-70-131-A	RUNNING PULL A-P AUTO		STOPPED		STOPPED		(Note 1)	
2-HS-70-133A THRM BAR SUP CIV-ØB	2-FCV-70-133-A	OPEN		CLOSED		CLOSED		OPEN	
INITIAL									CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 344 of 591</b>
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**Containment Isolation Phase B (CIØB) - Train 2A, Section 6.2**

**NOTES**

1. The POST-TEST REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. Status for these components is recorded in the POST-TEST "ACTUAL" column. Initials for the performer and CV are made in the Initial row at bottom of column.
2. Component checked as follows: At breaker compartment - Breaker closed/on, Red light at breaker compartment OFF; HS checked locally at fan control in AUTO.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 345 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2A1-A, Compt. 3E 2-BKR-62-247 CCP AUX OIL PMP 2A	2-MTR-62-247-A	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2A1-A, Compt. 4F 2-BKR-213-A001/4F THERMAL OVERLOAD BYPASS 2A1	2-RLY-99-2A1/K1	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2A1-A, Compt. 16F2 2-BKR-31-303B INCORE INSTR RM CHLR 2A COMPR	2-MTR-31-303B	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2A1-A, Compt. 17A BORIC ACID BATCHING TANK HEATER 4, 2-HTR-62-228/4	2-HTR-62-228/4	CLOSED Note 22		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2A1-A, Compt. 17E POWER OUTLETS: 2-PO-213-A1/1, 2-PO-213-A1/2, 2-PO-213-A1/3, 2-PO-213-A1/4, 2-PO-213-A1/5	2-PO-213-A1/1,2,3,4,5	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st /CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 346 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2A1-A, Compt. 18C 2-BKR-31-303A INCORE INSTR RM CW PMP 2A	2-MTR-31-303A	RUNNING Note 29		STOPPED		STOPPED		Note 2	
RX MOV Bd 2A1-A, Compt. 18F2 POWER OUTLETS: 2-PO-213-A1/6, 2-PO-213-A1/7, 2-PO-213-A1/8, 2-PO-213-A1/9, 2-PO-213-A1/10	2-PO-213-A1/6,7,8,9,10	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2A2-A, Compt. 6D 2-BKR-213-A002/6D THERMAL OVERLOAD BYPASS 2A2	2-RLY-99-2A2/K1	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL		1st /CV		1st /CV		1st /CV		1st /CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 347 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 2C 2-BKR-30-186 PENT RM EL 692 CLR 2A-A	2-MTR-30-186-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2	
C&A Vent Bd 2A1-A, Compt. 3C 2-BKR-30-177 CS PUMP 2A-A RM CLR	2-MTR-30-177-A	RED LIGHT OFF		RED LIGHT ON		RED LIGHT OFF		RED LIGHT OFF	
C&A Vent Bd 2A1-A, Compt. 5E 2-BKR-30-184 AFW/BA XFER PMP SPACE CLR 2A-A	2-MTR-30-184-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2 & 37	
C&A Vent Bd 2A1-A, Compt. 8A 2-BKR-30-180 SIS PUMP 2A-A RM CLR	2-MTR-30-180-A	RED LIGHT ON Note 3		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL		1st /CV		1st /CV		1st /CV		1st /CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 348 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 8B 2-BKR-30-194 PENT RM EL 737 CLR 2A-A	2-MTR-30-194-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2 & 37	
C&A Vent Bd 2A1-A, Compt. 9A 2-BKR-30-175 RHR PUMP 2A-A RM COOLER	2-MTR-30-175-A	RED LIGHT ON Note 3		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A Vent Bd 2A1-A, Compt. 10A 2-BKR-30-183 CENT CHG PUMP 2A-A RM CLR	2-MTR-30-183-A	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A Vent Bd 2A1-A, Compt. 10B 2-BKR-30-196 PENT RM EL 713 CLR 2A-A	2-MTR-30-196-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2	
C&A Vent Bd 2A1-A, Compt. 10C 2-BKR-30-201 AB EL 692 PIPE CHASE CLR 2A-A	2-MTR-30-201-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st /CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 349 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2A1-A, Compt. 10D ABGTS HUMIDITY HTR A-A	0-HTR-30-147-A	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A VENT Bd 2A1-A, Compt 10F1 VALVE AND STRAINER ROOM SUMP A PUMP 0-MTR-40-3B	0-MTR-40-3B	CLOSED		TRIPPED		TRIPPED		CLOSED	
C&A Vent Bd 2A1-A, Compt. 4A 2-BKR-30-200 EGTS ROOM CLR 2A-A	2-MTR-30-200-A	RED LIGHT OFF Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2 & 37	
INITIAL		1st /CV		1st /CV		1st /CV		1st /CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 350 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
480V SD Bd 2A1-A, Compt 9B REACTOR VENT BOARD 2A-A NORMAL FEEDER 2-MCC-232-A-A	2-BKR-212-A1/9B-A	CLOSED		OPEN		OPEN		CLOSED	
480V SD Bd 2A1-A, Compt. 10D 2-MCC-214-A2-A 480V C&A BLDG VENT BD 2A2-A ALTERNATE FEEDER	2-BKR-212-A1/10D	CLOSED		OPEN		OPEN		CLOSED	
480V SD Bd 2A1-A, Compt 12D CURRENT LIMITING REACTOR BYPASS BKR 52T	2-BKR-212-A1/12D-A	OPEN		CLOSED		CLOSED		OPEN	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 351 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
480V SD Bd 2A2-A, Compt. 2C 0-BKR-128-2 ELEC BD RM CHLR A-A COMPR	0-MTR-31-128/2-A	RUNNING Note 28		RUNNING		RUNNING		Note 2	
480V SD Bd 2A2-A, Compt. 9C 2-MCC-214-A2-A 480V C&A BLDG VENT BD 2A2-A NORMAL FEEDER	2-BKR-212-A2/9C-A	CLOSED		OPEN		OPEN		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 352 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
480V SD Bd 2A2-A, Compt. 10A REACTOR VENT BOARD 2A-A ALTERNATE FEEDER 2-MCC-232-A-A	2-BKR-212-A2/10A-A	CLOSED		OPEN		OPEN		CLOSED	
480V SD Bd 2A2-A, Compt. 12D CURRENT LIMITING REACTOR BYPASS BKR 52T	2-BKR-212-A2/12D-A	OPEN		CLOSED		CLOSED		OPEN	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 353 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
Diesel Aux Bd 2A1-A. Compt 2C DIESEL GENERATOR 2A-A WATER HEATER 1	2-HTR-82-A1-A	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A1-A. Compt 5A DIESEL GENERATOR 2A-A AIR COMPRESSOR 2	2-MTR-82-241	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A1-A. Comp 5F1 0-BKR-30-480 DGB CORRIDOR EL 742 HTR 2A	0-HTR-30-480	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A1-A, Compt 5F2 POWER OUTLETS	2-PO-215-1,2,3,4,5	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A2-A. Compt 2C DIESEL GENERATOR 2A-A WATER HEATER 2	2-HTR-82-A2-A	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 354 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: SWGR/MCC

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
Diesel Aux Bd 2A2-A, Comp 3E1 2-BKR-30-488 DG 2A-A ELECT BD RM HTR	2-HTR-30-488	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A2-A, Compt 3F1 2-BKR-30-475 DG 2A-A ROOM HTR 2A	2-HTR-30-475	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A2-A, Compt 3F2 2-BKR-30-476 DG 2A-A ROOM HTR 2B	2-HTR-30-476	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A2-A, Compt 5A DIESEL GENERATOR 2A-A AIR COMPRESSOR 1	2-MTR-82-240	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2A2-A, Compt 6D DIESEL GENERATOR 2A-A SPACE HEATER	2-HTR-30-100	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 355 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-3

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35 MFW REG FCV 3-35	2-FCV-3-35	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-48	2-FCV-3-48	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-90	2-FCV-3-90	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-103	2-FCV-3-103	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35A BYP REG FCV 3-35A	2-FCV-3-35A	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35A BYP REG FCV 3-48A	2-FCV-3-48A	OPEN Note 11		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 356 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-3

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35A BYP REG FCV 3-90A	2-FCV-3-90A	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35A BYP REG FCV 3-103A	2-FCV-3-103A	OPEN Note 11		CLOSED		CLOSED		CLOSED	
2-XI-3-236 SG 1 MFW BYP ISOL 2-FCV-3-236	2-FCV-3-236	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-239 SG 2 MFW BYP ISOL 2-FCV-3-239	2-FCV-3-239	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-3-33A SG 1 MFW ISOL VLV	2-FCV-3-33-A	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 357 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-3

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XI-3-242 SG 3 MFW BYP ISOL 2-FCV-3-242	2-FCV-3-242	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-245 SG 4 MFW BYP ISOL 2-FCV-3-245	2-FCV-3-245	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-3-87A SG 1 MFW ISOL VLV	2-FCV-3-87-A	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV 3-186	2-FCV-3-186	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV 3-188	2-FCV-3-188	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 358 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-4

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-118A AFW PMP A-A	2-MTR-3-118-A	RUNNING Note 3		RUNNING		RUNNING		STOPPED	
2-FIC-46-57A-S T-D AFWP FLOW CONTROLLER	2-FIC-46-57A-S	MANUAL		AUTO		AUTO		MANUAL	
2-HS-46-56A-S T-D AFWP T&L VLV	2-FCV-1-51-S	CLOSED		OPEN		OPEN		CLOSED	
2-HS-3-164A SG 1 SUPPLY LCV-3-164 CNTL	2-LCV-3-164A	CLOSED Note 4		N/A Note 21	N/A	N/A	N/A	CLOSED	
2-HS-3-156A SG 2 SUPPLY LCV-3-156 CNTL	2-LCV-3-156A	CLOSED Note 5		N/A Note 21	N/A	N/A	N/A	CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 359 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-4

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-LIC-3 164A SG 1 SUPPLY FRM PMP A-A	2-LIC-3-164	MANUAL		AUTO		AUTO		AUTO	
2-LIC-3-156A SG 2 SUPPLY FRM PMP A-A	2-LIC-3-156	MANUAL		AUTO		AUTO		AUTO	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 360 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-4

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-172A SG 3 SUPPLY LCV-3-172 CNTL	2-LCV-3-172	CLOSED		NOT CLOSED Note 7		NOT CLOSED Note 7		CLOSED	
2-HS-3-175A SG 4 SUPPLY LCV-3-175 CNTL	2-LCV-3-175	CLOSED		NOT CLOSED Note 7		NOT CLOSED Note 7		CLOSED	
2-LIC-3-172A SG 3 SUPPLY FROM T-D PMP	2-LIC-3-172A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-175A SG 4 SUPPLY FROM T-D PMP	2-LIC-3-175A	MANUAL		AUTO		AUTO		MANUAL	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 361 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-4

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-52RTA, RX TRIP BKR A (Ind. Light Nomenclature below clock)	2-52RTA	CLOSED		OPEN		OPEN		OPEN	
2-52RTB, RX TRIP BKR B (Ind. Light Nomenclature below MW meter)	2-52RTB	CLOSED		OPEN		OPEN		OPEN	
2-52BYB, RX TRIP BYPASS BKR B	2-52BYB	CLOSED		OPEN		OPEN		OPEN	
2-HS-1-7/181 SG 1 BLOWDOWN VLVS (181 Lights above HS)	2-FCV-1-181	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-14/182 SG 2 BLOWDOWN VLVS (14 Lights on HS)	2-FCV-1-14	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 362 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-4

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-1-25/183 SG 3 BLOWDOWN VLVS (183 Lights above HS)	2-FCV-1-183	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-32/184 SG 4 BLOWDOWN VLVS (32 Lights on HS)	2-FCV-1-32	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-68-341A BACKUP HEATERS A-A	2-BKR-68-341A-A	ON		OFF		OFF		OFF	
2-HS-68-341F CONTROL HEATERS D	2-BKR-68-341F-A	ON		OFF		OFF		OFF	
2-HS-68-307A PRT TO GAS ANALYZER	2-FCV-68-307	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 363 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-5

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-68-305A N2 TO PRT CIV-ØA	2-FCV-68-305	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-81-3A PRIMARY WATER PUMP A	2-MTR-81-3	RUNNING		LIGHTS OFF		LIGHTS OFF		Note 2	
2-HS-81-12A PRIMARY WATER TO PRT & STANDPIPES	2-FCV-81-12	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-62-63A RCP SEAL RETURN CIV-ØA	2-FCV-62-63-A	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 364 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-5

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-108A CCP A-A (ECCS)	2-MTR-62-108-A	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-62-132A VCT TO CHARGING PMPS SUCTION	2-LCV-62-132-A	OPEN Note 6		CLOSED		CLOSED		OPEN	
2-HS-62-135A RWST TO CHARGING PMPS SUCTION	2-LCV-62-135-A	CLOSED Note 6		OPEN		OPEN		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 365 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-90A CHARGING LINE ISOL	2-FCV-62-90-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-76 LETDOWN ORIFICE 5 GPM CIV-ØA	2-FCV-62-76	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-72A LETDOWN ORIFICE A 45 GPM CIV-ØA	2-FCV-62-72	OPEN Note 35		CLOSED		CLOSED		Note 2	
2-HS-62-73A LETDOWN ORIFICE B 75 GPM CIV-ØA	2-FCV-62-73	OPEN Note 35		CLOSED		CLOSED		Note 2	
2-HS-62-74A LETDOWN ORIFICE C 75 GPM CIV-ØA	2-FCV-62-74	OPEN Note 35		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 366 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-74-10A RHR PMP A (ECCS)	2-MTR-74-10-A	RUNNING Note 3		RUNNING		RUNNING		STOPPED	
2-XI-74-16 RHR HX A OUTLET FLOW CNTL FCV-74-16	2-FCV-74-16	CLOSED		OPEN		OPEN		Note 2	
2-HS-63-26A BIT OUTLET	2-FCV-63-26-A	CLOSED		OPEN		OPEN		CLOSED	
2-HS-63-10A SI PMP A (ECCS)	2-MTR-63-10-A	RUNNING Note 3		RUNNING		RUNNING		STOPPED	
2-XX-55-6C-5 ABI (WINDOW 5)	MISSP TRAIN A 2-XX-55-6C	NOT LIT		LIT		NOT LIT		NOT LIT	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 367 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-55-6C-8, CS (Window 8)	MISSP TRAIN A 2-XX-55-6C	NOT LIT		LIT		NOT LIT		NOT LIT	
2-XX-55-6C-1 ØA (WINDOW 1)	MISSP TRAIN A 2-XX-55-6C	NOT LIT		LIT		NOT LIT		NOT LIT	
2-XX-55-6C-2 CVI (WINDOW 2)	MISSP TRAIN A 2-XX-55-6C	NOT LIT		LIT		NOT LIT		NOT LIT	
2-XX-55-6C-3 ØB (WINDOW 3)	MISSP TRAIN A 2-XX-55-6C	NOT LIT		LIT		NOT LIT		NOT LIT	
2-HS-63-64A N2 HDR TO CL ACCUMS	2-FCV-63-64	OPEN		CLOSED		CLOSED		OPEN	
2-HS-63-185 RHR SUPPLY TEST LINE VALVE	2-FCV-63-185	OPEN		CLOSED		CLOSED		OPEN	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 368 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-63-71A CKV TEST LINE TO HUT	2-FCV-63-71	OPEN		CLOSED		CLOSED		OPEN	
2-HS-72-27A CNTMT SPRAY PMP A	2-MTR-72-27-A	RUNNING Note 3		RUNNING		RUNNING		STOPPED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 369 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 2-XI-30-294 FCO-30-294	2-FCO-30-294-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-1A CNTMT PURGE SUP & EXH FANS 2A AND FCO-30-2A & 2B	2-MTR-30-1 (SUP)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
	2-MTR-30-1E (EXH)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
2-HS-30-4A CNTMT PURGE SUP & EXH FANS 2B AND FCO-30-4A & 4B	2-MTR-30-4 (SUP)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
	2-MTR-30-4E (EXH)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 370 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-11A INSTR RM SUP & EXH FANS AND FCO-30-11A & 11B	2-MTR-30-11 (SUP)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
	2-MTR-30-11E (EXH)	RUNNING Note 30		STOPPED		STOPPED		Note 2	
2-HS-30-2 PURGE SUPPLY FAN 2A DISCH	2-FCV-30-2	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-5 PURGE SUPPLY FAN 2B DISCH	2-FCV-30-5	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-7 UPR CNTMT PURGE 2-FCV-30-1 & 51	2-FCV-30-51	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-7	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-10 UPR CNTMT PURGE 2-FCV-30-10 & 52	2-FCV-30-52	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-10	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 371 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-14 LWR CNTMT PURGE 2-FCV-30-14 & 56	2-FCV-30-56	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-14	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-20 INST RM PURGE 2-FCV-30-20 & 59	2-FCV-30-59	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-20	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-12 ANNULUS PURGE SUPPLY	2-FCV-30-12	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-54 ANNULUS PURGE EXH	2-FCV-30-54	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-17 LWR CNTMT PURGE SUP	2-FCV-30-17	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 372 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-40 LWR CNTMT PURGE EXH PRESS RLF	2-FCV-30-40	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-61 PURGE EXH FAN A SUCT	2-FCV-30-61	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-62 PURGE EXH FAN B SUCT	2-FCV-30-62	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-96 FLOOR CLG SUP OUTSIDE CIV-ØA	2-FCV-61-96	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-110 FLOOR CLG RET OUTSIDE CIV-ØA	2-FCV-61-110	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 373 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-61-191A GLYCOL TO AHU OUTSIDE CIV-ØA	2-FCV-61-191	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-193A GLYCOL FRM AHU OUTSIDE CIV-ØA	2-FCV-61-193	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-265A INSTR ROOM CLG A AHU CIRC PMP & FCO	2-MTR-31-265	RUNNING Note 29		STOPPED		STOPPED		Note 2	
2-HS-31-306 CIRC PMP A SUCT CIV-ØA	2-FCV-31-306	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 374 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-31-326 CIRC PMP B SUCT CIV-ØA	2-FCV-31-326	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-330 CIRC PMP B DISCH CIV-ØA	2-FCV-31-330	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-308 CIRC PMP A DISCH CIV-ØA	2-FCV-31-308	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-95A UPR CNTMT CLR 2A	2-MTR-30-95	RUNNING Note 17		STOPPED		STOPPED		STOPPED	
2-HS-30-74A LWR CNTMT CLR 2A-A	2-MTR-30-74-A	RUNNING Note 17		STOPPED		STOPPED		STOPPED	
2-HS-30-83A CRDM CLR 2C-A	2-MTR-30-83-A	RUNNING Note 17		STOPPED		STOPPED		STOPPED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 375 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-99 UPR CNTMT CLR 2C	2-MTR-30-99	RUNNING Note 17		STOPPED		STOPPED		STOPPED	
2-HS-30-77A LWR CNTMT CLR 2C-A	2-MTR-30-77-A	RUNNING Note 17		STOPPED		STOPPED		STOPPED	
2-HS-30-88A CRDM CLR 2C-A	2-MTR-30-88-A	RUNNING Note 17		STOPPED		STOPPED		Note 2	
2-HS-30-38A AIR RETURN FAN A-A	2-MTR-30-38-A	STOPPED A AUTO		RUNNING Note 10		RUNNING		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 376 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-77-240 AUX BLDG H2 SUPPLY	0-FCV-77-240	OPEN		CLOSED		CLOSED		Note 2 & 37	
0-HS-30-129 CASK LOAD AREA SUPPLY	0-FCV-30-129	OPEN		CLOSED		CLOSED		Note 2 & 37	
0-HS-30-122 CASK LOAD AREA EXHAUST	0-FCV-30-122	OPEN		CLOSED		OPEN		Note 2 & 37	
SW-30-136 (FH AREA A) FUEL HANDLING AREA EXH FAN SHUNT TRIP STATUS	0-MTR-30-136	CLOSED		OPEN		OPEN		CLOSED Note 37	
SW-30-139 (FH AREA B) FUEL HANDLING AREA & AB GENERAL EXH FANS SHUNT TRIP BKR STATUS	0-MTR-30-139	CLOSED		OPEN		OPEN		CLOSED Note 37	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 377 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL			REQUIRED	ACTUAL
SW-30-159 (AB 1A) FUEL HANDLING AREA & AB GENERAL EXH FANS SHUNT TRIP BKR STATUS	1-MTR-30-159	CLOSED		OPEN (Note 37)		OPEN		CLOSED	
SW-30-162 (AB 1B) AB GENERAL EXHAUST FAN SHUNT TRIP STATUS	1-MTR-30-162	CLOSED		OPEN (Note 37)		OPEN		CLOSED	
SW-AB 2B) AB GENERAL EXHAUST FAN SHUNT TRIP STATUS	2-MTR-30-278	CLOSED		OPEN (Note 37)		OPEN		CLOSED	
SW-30-274 (AB 2A) AB GENERAL EXHAUST FAN SHUNT TRIP STATUS	2-MTR-30-274	CLOSED		OPEN (Note 37)		OPEN		CLOSED	
0-HS-30-137 FH AREA EXH FAN A DISCH	0-FCV-30-137	OPEN		CLOSED (Note 37)		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 378 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL			REQUIRED	ACTUAL
0-HS-30-140 FH AREA EXH FAN B DISCH	0-FCV-30-140	OPEN		CLOSED		CLOSED		Note 2 & 37	
1-HS-30-103A AB GEN SUPPLY FAN 1A & DISCH FCO-30-103	1-MTR-30-103	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
1-HS-30-102A AB GEN SUPPLY FAN 1B & DISCH FCO-30-102	1-MTR-30-102	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
2-HS-30-104A AB GEN SUPPLY FAN 2A & DISCH FCO-30-104	2-MTR-30-104	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
2-HS-30-105A AB GEN SUPPLY FAN 2B & DISCH FCO-30-105	2-MTR-30-105	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 379 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-106A U1 AB GEN SPACES & FH AREA SUP	0-FCV-30-106	OPEN		CLOSED		CLOSED		Note 2 & 37	
1-HS-30-86 U1 AB GEN SPACES SUPPLY	1-FCV-30-86	OPEN		CLOSED		CLOSED		Note 2 & 37	
2-HS-30-108 U2 AB GEN SUP OUTLET	2-FCV-30-108	OPEN		CLOSED		CLOSED		Note 2 & 37	
2-HS-30-21 U2 AB GEN SPACES SUPPLY	2-FCV-30-21	OPEN		CLOSED		CLOSED		Note 2 & 37	
1-HS-30-160 AB GEN EXH FAN 1A SUCT	1-FCO-30-160	OPEN		CLOSED		CLOSED		Note 2 & 37	
1-HS-30-166 AB GEN EXH FAN 1B SUCT	1-FCO-30-166	OPEN		CLOSED		CLOSED		Note 2 & 37	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 380 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-271 AB GEN EXH FAN 2A SUCT	2-FCV-30-271	OPEN		CLOSED		CLOSED		Note 2 & 37	
2-HS-30-275 AB GEN EXH FAN 2B SUCT	2-FCV-30-275	OPEN		CLOSED		CLOSED		Note 2 & 37	
1-HS-30-159A AB GEN EXHAUST FAN 1A & DISCH FCO-30-159	1-MTR-30-159	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
1-HS-30-162A AB GEN EXHAUST FAN 1B & DISCH FCO-30-162	1-MTR-30-162	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
2-HS-30-274A AB GEN EXHAUST FAN 2A & DISCH FCO-30-274	2-MTR-30-274	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
2-HS-30-278A AB GEN EXHAUST FAN 2B & DISCH FCO-30-278	2-MTR-30-278	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 37	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 381 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 2-XI-31-342 FCO-31-342	1-FCO-31-342	OPEN Note 12		CLOSED		CLOSED		Note 2	
DAMPER 0-XI-31-350 FCO-31-350	0-FCO-31-350	OPEN Note 12		CLOSED		CLOSED		Note 2	
0-HS-31-400A SD BD ROOM A & B A/C SYS A-A	0-MTR-31-36/2-A	RUNNING Note 32		RUNNING		RUNNING		Note 2	
0-HS-31-64A SD BD ROOM A PRESS FAN A-A	0-MTR-31-64-A	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
0-HS-31-62A SD BD ROOM B PRESS FAN B-A	0-MTR-31-62-A	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
0-HS-31-3 MCR & SPREAD RM FRESH AIR 0-XI-31-3	0-FCV-31-3	OPEN		CLOSED		OPEN		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 382 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-8A CB EMERG CLEANUP FAN A-A & SUCTION FCO-31-8	0-MTR-31-8-A	STOPPED		RUNNING		RUNNING		Note 2	
0-HS-31-6A CB EMERG PRESS FAN A-A & SUCTION FCO-31-6	0-MTR-31-6-A	STOPPED		RUNNING		RUNNING		Note 2	
0-HS-31-25A SPREADING ROOM EXH FAN A-A	0-MTR-31-25	STOPPED	N/A	N/A	N/A	N/A	N/A	STOPPED	
0-HS-31-26A SPREADING ROOM EXH FAN B-B	0-MTR-31-26	RUNNING		STOPPED		STOPPED		RUNNING	
0-HS-31-406A SPREADING ROOM SUPPLY FAN	0-MTR-31-406	RUNNING	N/A	STOPPED	N/A	STOPPED	N/A	RUNNING	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 383 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-9

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 0-XI-31-10 FCO-31-10	0-FCO-31-10	OPEN		CLOSED		OPEN		Note 2	
DAMPER 0-XI-31-17 FCO-31-17	0-FCO-31-17	OPEN		CLOSED		OPEN		Note 2	
0-HS-31-418A TOILET & LKR RM EXHAUST FAN	0-MTR-31-418	RUNNING		STOPPED		STOPPED		RUNNING	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 384 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 1-M-15

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-26-9A HPFP PMP 2A-A	0-MTR-26-9-A	RUNNING Note 6		STOPPED		STOPPED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 385 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-15

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-77-125A1 FL & EQ DR SMP REAC BLDG PUMP A CONTROL	2-MTR-77-125A	N/A Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-HS-77-10A REAC OOLANT DR TANK FLOW CONTROL	2-FCV-77-10	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 386 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-15

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL			REQUIRED	ACTUAL
2-HS-77-128A REAC BLDG SUMP DISCH FLOW CONTROL	2-FCV-77-128	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-17 RCDT TO GA FLOW CONTROL	2-FCV-77-17	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-20 RCDT N2 SUPPLY FLOW CONTROL	2-FCV-77-20-A	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 387 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-15

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-77-19 RCDT TO VENT HDR FLOW CONTROL	2-FCV-77-19	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-32-81A AUX AIR TO RX BLDG TR A CIV ØB 70 PSI D/S CLOSES	2-FCV-32-81	OPEN		CLOSED		CLOSED		Note 2	
2-HS-26-240A HPFP TO CNTMT STANDPIPE CIV-ØA	2-FCV-26-240-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-26-243A HPFP TO RCP SPRAY CIV-ØA	2-FCV-26-243-A	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 388 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-15

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-90-113 CNTMT TO RM-112 CIV CVI OUTSIDE CNTMT	2-FCV-90-113	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-107 CNTMT TO RM-106 CIV CVI OUTSIDE CNTMT	2-FCV-90-107	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-117 RM-112 RET TO UPPER CNTMT CIV CVI OUTSIDE CNTMT	2-FCV-90-117	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-111 RM-106 RET TO LOWER CNTMT CIV CVI OUTSIDE CNTMT	2-FCV-90-111	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 389 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-25

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-146A ABGTS FAN A-A	1-MTR-30-146-A	STOPPED		RUNNING		RUNNING		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 390 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-26

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Indicating Lights) DG RUN	2-GEN-82-2A-A	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-57-44B 1818-MAINTENANCE FROM 6.9 UNIT BD 2B	2-BKR-211-1818/11-A	OPEN		OPEN		OPEN		OPEN	
2-HS-57-41B 1816-NORMAL FROM CSST C	2-BKR-211-1816/16-A	CLOSED		OPEN		OPEN		CLOSED	
2-HS-57-46A 1922-DG TO SD BD 2A-A	2-BKR-211-1922/6-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-57-97B 1936-ALTERNATE FROM CSST D	2-BKR-211-1936/1-A	OPEN		OPEN		OPEN		OPEN	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 391 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27A

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-295A UPR CNTMT CLR A RET CIV-ØB	2-FCV-67-295-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-130A UPR CNTMT CLR A SUP CIV-ØB	2-FCV-67-130-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-296A UPR CNTMT CLR C RET CIV-ØB	2-FCV-67-296-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-133A UPR CNTMT CLR C SUP CIV-ØB	2-FCV-67-133-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-87A LWR CNTMT A CLRS RET CIV-ØB	2-FCV-67-87-A	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 392 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27A

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-95A LWR CNTMT C CLRS RET CIV-ØB	2-FCV-67-95-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-89A LWR CNTMT A CLRS SUP CIV-ØB	2-FCV-67-89-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-97A LWR CNTMT C CLRS SUP CIV-ØB	2-FCV-67-97-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-139A UPR CNTMT CLR B RET CIV-ØB	2-FCV-67-139-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-142A UPR CNTMT CLR D RET CIV-ØB	2-FCV-67-142-A	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 393 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27A

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-104A LWR CNTMT B CLRS RET CIV-ØB	2-FCV-67-104-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-112A LWR CNTMT D CLRS RET CIV-ØB	2-FCV-67-112-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-99A LWR CNTMT B CLRS SUP CIV-ØB	2-FCV-67-99-A	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-107A LWR CNTMT D CLRS SUP CIV-ØB	2-FCV-67-107-A	OPEN		CLOSED		CLOSED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 394 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27A

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-28A ERCW PMP A-A	0-MTR-67-28-A	STOPPED (note 2)		STOPPED		STOPPED		STOPPED (note 2)	
0-HS-67-32A ERCW PMP B-A	0-MTR-67-32-A	RUNNING		RUNNING		RUNNING		Note 2	
0-HS-67-36A ERCW PMP C-A	0-MTR-67-36-A	RUNNING		RUNNING		RUNNING		RUNNING (Note 2)	
0-HS-67-40A ERCW PMP D-A	0-MTR-67-40-A	STOPPED		STOPPED		STOPPED		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 395 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27B

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-77A ANN VAC FAN 2A & SUCT FCO	2-MTR-65-77	RUNNING Note 33		LIGHTS OFF		LIGHTS OFF		Note 2	
2-HS-65-5 U2 ANN VAC FANS SUCT	2-FCV-65-5	OPEN		CLOSED		CLOSED		Note 2	
2-HS-65-9 EGTS TR-A U2 SUCT DMPR	2-FCV-65-9	CLOSED Note 27		OPEN		OPEN		Note 2	
0-HS-65-23A EGTS FAN A & DISCH DMPR	2-MTR-65-23-A	STOPPED		RUNNING		RUNNING		Note 2	
2-HS-65-46 EGTS TO U2 SHIELD BLDG	2-FCO-65-46	CLOSED		OPEN		OPEN		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27B

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-81/86 U2 EGTS-ANN ΔP CNTLR A ISOL	2-PCV-65-86	CLOSED Note 27		OPEN		OPEN		Note 2	
	2-PCV-65-81	CLOSED Note 27		OPEN		OPEN		Note 2	
2-HS-70-143A EXC LTDN HX SUP CIV-ØA	2-FCV-70-143-A	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-70-90A THERMAL BAR RET CIV-ØB	2-FCV-70-90-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-92A RCP OIL CLRS RET CIV-ØB	2-FCV-70-92-A	OPEN		CLOSED		CLOSED		OPEN	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 0-M-27B

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-70-100A RCP OIL CLRS SUP CIV-ØB	2-FCV-70-100-A	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-131A THRM BAR BSTR PMP 2A (TBBP)	2-MTR-70-131-A	RUNNING Note 6		STOPPED		STOPPED		Note 2	
2-HS-70-133A THRM BAR SUP CIV-ØB	2-FCV-70-133-A	OPEN		CLOSED		CLOSED		OPEN	
1-HS-70-46A CCS PMP 1A-A	1-MTR-70-46-A	RUNNING		RUNNING		RUNNING		Note 2	
1-HS-70-51A CCS PMP C-S ALT ACB	0-MTR-70-51-S	STOPPED		RUNNING		RUNNING		Note 2	
2-HS-70-59A CCS PMP 2A-A	2-MTR-70-59-A	STOPPED		RUNNING		RUNNING		Note 2	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6, 2-XX-55-6E

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
FCV-43-58 (Window 46) STEAM GEN 2 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-58	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-55 (Window 36) STEAM GEN 1 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-55	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-64 (Window 48) STEAM GEN 4 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-64	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-61 (Window 47) STEAM GEN 3 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-61	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 399 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: 2-M-6, 2-XX-55-6E

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
FCV-43-03 (Window 32) PRESSURIZER GAS SAMPLE ISOL VLV	2-FCV-43-3	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-35 (Window 35) ACCUM TANK SAMPLE HDR ISOL VLV	2-FCV-43-35	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-12 (Window 33) PRESSURIZER LIQUID SAMPLE ISOL VLV	2-FCV-43-12	OPEN		CLOSED		CLOSED		CLOSED	
FCV-43-23 (Window 34) HOT LEGS 1/3 SAMPLE ISOL VLV	2-FCV-43-23	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 400 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

LOCATION: LOCAL

SUBSECTION 6.3

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(1-L-572) 1-HS-31-437 PASF GEN SUPPLY FAN C1	1-MTR-31-437-C1/1	RUNNING		STOPPED		STOPPED		Note 2 & 37	
(2-R-75) HWP (FWI AUX RELAY)	RELAY HWP	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(6.9KV Unit Bd 2A, Compt. 8) FEEDWATER ISOL AUX RELAY 5X	RELAY 5X	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-9A) VOM-FSV9A 729/T16J	2-FSV-46-9A	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-36A) VOM-FSV36A 729/T16H	2-FSV-46-36A	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 401 of 591</b>
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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

COMPONENT DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Local at 2-FSV-47-24) VOM-FSV24 755/T13J	2-FSV-47-24	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-26A) VOM-FSV26A 755/T12J	2-FSV-47-26A	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(0-L-2) 2-HS-77-4A 692/A8S	2-MTR-77-4	RUNNING		STOPPED		STOPPED		STOPPED	
INITIAL		1st /CV		1st /CV		1st /CV		1st CV	

**NOTES**

**SUBSECTION 6.3**

1. The Pre-Test "REQUIRED" position for all handswitches is the Spring-Return to "Center" position (AUTO, A AUTO, A-P AUTO, NORMAL), unless specified otherwise.
2. The Pre-Test and "POST-TEST REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. As-left status for these components is recorded in the POST-TEST "ACTUAL" column.

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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

3. Pumps will be started immediately prior to "LOOP", within this subsection. Verify associated ESF Pump Room Coolers Auto-Start when corresponding pump starts.
4. Use valve position indication for "164A" Valve only, NOT "164" valve.
5. Use valve position indication for "156A" Valve only, NOT "156" valve.
6. Handswitch in the PULL A-P AUTO position.
7. "NOT CLOSED" is defined as either Modulating or Full-Open.
8. Not used
9. Handswitch is Local.
10. Air Return Fan starts nominal nine minutes after  $\phi$ B actuation.
11. FIC in "MANUAL" with controller output set to 100%
12. 1-HS-31-481 (1-L-572) in Normal.
13. Not used
14. Not used
15. Not used



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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

16. Not used
17. All LCC, UCC, CRDM Cooler HS position is: IN A AUTO.
18. Not used
19. NA
20. NA
21. Component position verified and repositioned in the performance section of Section 6.3.
22. Handswitch 0-HS-62-228 in "OFF" (713/A13R).
23. NA
24. HS in Auto.
25. Not used
26. Not used
27. Handswitch in "A Auto".
28. Component is to be started using 0-SOI-31.01.

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**Coincident LOOP/SI/CIØB - 2A, Section 6.3**

- 29. Component is to be started using 2-SOI-30.04.
- 30. Component is to be started using 2-SOI-30.03.
- 31. Component is to be started using 0-SOI-30.05.
- 32. Component is to be started using 0-SOI-30.07
- 33. Component is to be started using 0-SOI-65.02.
- 34. Not used
- 35. Valves 2-FCV-62-69 and 2-FCV-62-70 must be OPEN prior to opening this valve.
- 36. Not used
- 37. These components are verified to ensure correct operation but are not Acceptance Criteria. These items are tested in 0-SI-30-7-A

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**SER Timing - Subsection 6.1**

TABLE 1: SER TIME TAG (Note 1)

PARAMETER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	6900 CSST D BKR 2814 OPEN	N/A	25	: : :		
B	DG EMRG START RLY ES2AY ACTUATED	N/A	26	: : :		
C	CRDM FAN 2A-A STOP	3	12	: : :		
D	CRDM FAN 2C-A STOP	3	13	: : :		
E	AFW PMP 2A-A STOP	3	9	: : :		
F	PZR HTR 2A-A OFF	3	17	: : :		
G	CCP 2A-A STOP	3	1	: : :		
H	RHR PMP 2A-A STOP	3	2	: : :		
I	SI PMP 2A-A STOP	3	3	: : :		
J	CS PMP 2A-A STOP	3	19	: : :		
K	RX LWR CNTMT CLR FAN 2A-A STOP	3	14	: : :		
L	RX LWR CNTMT CLR FAN 2C-A STOP	3	15	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 406 of 591</b>
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**SER Timing - Subsection 6.1**

PARAMETER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
M	HPFP 2A-A STOP	3	10	: : :		
N	ERCW PMP D-A STOP	3	5	: : :		
O	TBBP 2A-A STOP	3	8	: : :		
P	CCS PMP 2A-A STOP	3	6	: : :		
Q	CCS PMP C-S Tr 1A STOP	NA				
R	SD BD RM CHLR A-A STOP	5	11	: : :		
S	ELECT BD RM AC CPRSR A-A STOP	5	21	: : :		
T	DG 2A-A EMERG FDR BKR 1922 CLOSED	N/A	28	: : :		
U	CCP 2A-A RUN	4	1	: : :		
V	ERCW PMP D-A RUN	4	5	: : :		
W	AFW PMP 2A-A RUN	4	9	: : :		

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**SER Timing - Subsection 6.1**

<b>PARAMETER</b>	<b>PARAMETER DESCRIPTION</b>	<b>NOTES</b>	<b>SER CHANNEL</b>	<b>TIME TAG (Hr : Min : Sec : mSec)</b>	<b>INITIAL</b>	<b>DATE</b>
X	CCS PMP 2A-A RUN	4	6	: : :		
Y	TBBP 2A-A RUN	4	8	: : :		
Z	HPFP 2A-A RUN	4	10	: : :		
AA	PZR HTR 2A-A ON	4	17	: : :		
AB	SD BD RM CHLR A-A RUN	4	11	: : :		
AC	ELECT BD RM AC CPRSR A-A RUN	4	21	: : :		
AD	AFW PMP 2-FCV-1-51 OPEN	3	16	: : :		

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**SER Timing - Subsection 6.1**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP - CRDM FAN 2A-A	C-A		3.0	N/A	3.3	≥2.79	≤3.21		
BUS STRIP - CRDM FAN 2C-A	D-A		3.0	N/A	3.3				
BUS STRIP - AFWP 2A-A	E-A		3.0	N/A	3.3				
BUS STRIP - PZR HTR 2A-A	F-A		3.0	N/A	3.3				
BUS STRIP - CCP 2A-A	G-A		3.0	N/A	3.3				
BUS STRIP - RHRP 2A-A	H-A		3.0	N/A	3.3				
BUS STRIP - SIP 2A-A	I-A		3.0	N/A	3.3				
BUS STRIP - CSP 2A-A	J-A		3.0	N/A	3.3				
BUS STRIP - RX LCC 2A-A	K-A		3.0	N/A	3.3				
BUS STRIP - RX LCC 2C-A	L-A		3.0	N/A	3.3				

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**SER Timing - Subsection 6.1**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)									
EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP - HPFP 2A-A	M-A		3.0	N/A	3.3	≥2.79	≤3.21		
BUS STRIP - ERCWP D-A	N-A		3.0	N/A	3.3				
BUS STRIP - TBBP 2A-A	O-A		3.0	N/A	3.3				
BUS STRIP - CCS PMP 2A-A	P-A		3.0	N/A	3.3				
BUS STRIP - CCS PMP C-S (TR 1A)	N/A								
BUS STRIP - SD BD RM CHLR A-A	R-A		3.0	0.10	3.3	≥2.79	≤3.21		
BUS STRIP - EBR CHLR A-A	S-A		0.5	0.10	5.00	N/A	N/A		
AFWP 2-FCV-1-51 OPEN	AD-A		≤5	N/A	N/A	N/A	N/A		
DG 2A-A UV RLEAY (27D)	B-A		1	N/A	N/A	0.500	1.500		
DG 2A-A EMERG FDR BKR CLOSED	T-B		10	N/A	N/A	N/A	10		

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**SER Timing - Subsection 6.1**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)									
EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
SEQ START - CCP 2A-A	U-T		5	N/A	N/A	4.679	5.277		
SEQ START - ERCW PMP D-A	V-T		20	N/A	N/A	18.717	21.106		
SEQ START - AFWP 2A-A	W-T		25	N/A	N/A	23.395	26.383		
SEQ START - CCS PMP 2A-A	X-T		35	N/A	N/A	32.760	36.930		
SEQ START - TBBP 2A-A	Y-T		35	N/A	N/A	33.700	36.935		
SEQ START - HPFP 2A-A	Z-T		40	N/A	N/A	37.432	42.213		
SEQ START - PZR HTR 2A-A	AA-T		90	N/A	N/A	84.222	94.977		
SEQ START - SD BD CHLR A-A (Note 6)	AB-T		360	N/A	N/A	355.900	514.100		
SEQ START - EBR CHLR A-A (Note 7)	AC-T		360	N/A	N/A	340.900	499.100		



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**SER Timing - Subsection 6.1**

<b>NOTES</b>	
1.	Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
2.	Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
3.	Component actuation following initiation of LOOP.
4.	Component actuation following closure of EDG breaker.
5.	Component trip caused by loss of power to MCC (NOT a UV Relay bus-strip signal).
6.	Start time includes Shutdown Board Room Chiller Skid six minute return of voltage and an internal time delay of 75 seconds.
7.	Start time includes Electrical Board Room Chiller Skid six minute return of voltage and an internal time delay of 60 seconds.

	INITIAL	DATE
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		

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**SER Timing - Subsection 6.2**

TABLE 1: SER TIME TAG (Note 1)

PARAMETER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	SAFETY INJECTION HS 1 ACTUATED	N/A	23	: : :		
B	CCP PMP 2A-A RUN	3	1	: : :		
C	SI PMP 2A-A RUN	3	2	: : :		
D	RHR PMP 2A-A RUN	3	3	: : :		
E	ERCW PMP B-A RUN	3	4	: : :		
F	ERCW PMP D-A RUN	3	5	: : :		
G	AFW PMP 2A-A RUN	3	9	: : :		
H	CCS PMP 2A-A RUN	3	6	: : :		
I	TRN A CCS PMP C-S RUN	3	7	: : :		
J	DG EMRG START RLY ES2AY ACTUATED	3	26			
K	SAFETY INJECTION HS 2 ACTUATED	N/A	29	: : :		
L	ØB ISOL TRAIN A ACTUATED	N/A	18	: : :		

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**SER Timing - Subsection 6.2**

TABLE 1: SER TIME TAG (Note 1)

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
M	CC PMP 2A-A RUN	4	1	: : :		
N	SI PMP 2A-A RUN	4	2	: : :		
O	RHR PMP 2A-A RUN	4	3	: : :		
P	ERCW PMP B-A RUN	4	4	: : :		
Q	ERCW PMP D-A RUN	4	5	: : :		
R	AFW PMP 2A-A RUN	4	9	: : :		
S	DG EMRG START RLY ES2AY ACTUATED	3	26	: : :		
T	CS PMP 2A-A RUN	4	19	: : :		
U	CTMT AIR RET FAN 2A-A RUN	4	20	: : :		

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**SER Timing - Subsection 6.2**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
CC PMP 2A-A SI-START	B-A		0.1	0	2	N/A	N/A		
SI PMP 2A-A SI-START	C-A		0.1	0	2	N/A	N/A		
RHR PMP 2A-A SI-START	D-A		0.1	0	2	N/A	N/A		
ERCW PMP B-A SI-START	E-A		0.1	0	2	N/A	N/A		
ERCW PMP D-A SI-START	F-A		0.1	0	2	N/A	N/A		
AFW PMP 2A-A SI-START	G-A		0.1	0	2	N/A	N/A		
CCS PMP 2A-A SI-SEQ	H-A		8.0	N/A	N/A	7.600	8.400		
CCS PMP C-S TR 1A SI-SEQ	I-A		8.0	N/A	N/A	7.600	8.400		
DG EMRG START RLY ES2AY	J-A		0.1	0	2	N/A	N/A		

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**SER Timing - Subsection 6.2**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
CC PMP 2A-A SI-CIØB-START	M-K		0.1	0	2	N/A	N/A		
SI PMP 2A-A SI-CIØB-START	N-K		0.1	0	2	N/A	N/A		
RHR PMP2A-A SI-CIØB-START	O-K		0.1	0	2	N/A	N/A		
ERCW PMP B-A SI-CIØB-START	P-K		0.1	0	2	N/A	N/A		
ERCW PMP D-A SI-CIØB-START	Q-K		0.1	0	2	N/A	N/A		
AFW PMP 2A-A SI-CIØB-START	R-K		0.1	0	2	N/A	N/A		
DG EMRG START RLY ES2AY SI-CIØB	S-K		0.1	0	2	N/A	N/A		
CS PMP 2A-A SI-CIØB-START	T-L		0.1	0	2	N/A	N/A		
CNTMT AIR RET FAN 2A-A SI-CIØB-START	U-L		540	N/A	N/A	506.820	568.380		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 416 of 591</b>
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**Appendix P  
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**SER Timing - Subsection 6.2**

**NOTES:**

1. Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
2. Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
3. Component actuation following initiation of SI.
4. Component actuation following initiation of SI/PHASE B Containment Isolation signal.

	<b>INITIAL</b>	<b>DATE</b>
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 417 of 591</b>
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**SER Timing - Subsection 6.3**

TABLE 1: SER TIME TAG (Note 1)

(DG 2A)

PARA-ME TER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	SAFETY INJECTION HS 1 ACTUATED	N/A	23	: : :		
B	PHASE B ISOL TRAIN A ACTUATED	N/A	18	: : :		
C	6900 CSST C BKR 2714 OPEN	N/A	24	: : :		
D	DG EMRG START RLY ES2AY ACTUATED	N/A	26	: : :		
E	CC PMP 2A-A STOP	3	1	: : :		
F	SI PMP 2A-A STOP	3	2	: : :		
G	RHR PMP 2A-A STOP	3	3	: : :		
H	ERCW PMP B-A STOP	3	4	: : :		
I	AFW PMP 2A-A STOP	3	9	: : :		
J	CCS PMP 2A-A STOP	3	6	: : :		
K	CCS PMP CS TR 1A STOP	9	7	NA NA: NA:	NA	NA
L	THERM BAR BSTR PMP 2A-A STOP	5	8	: : :		
M	FIRE PMP 2A-A STOP	3	10	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 418 of 591</b>
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**SER Timing - Subsection 6.3**

N	CRDM FAN 2A-A STOP	3	12	:	:	:		
O	CRDM FAN 2C-A STOP	3	13	:	:	:		
P	RX LWR CTMT CLR FAN 2A-A STOP	3	14	:	:	:		
Q	RX LWR CTMT CLR FAN 2C-A STOP	3	15	:	:	:		
R	PZR HTR 2A-A OFF	3	17	:	:	:		
S	CS PMP 2A-A STOP	3	19	:	:	:		
T	SD BD RM CHLR A-A STOP	3	11					
U	ELECT BD RM AC CPRSR A-A STOP	3	21					
V	2A-A 6900 DG BKR 1922 CLOSED	N/A	28	:	:	:		
W	CC PMP 2A- A RUN	4	1	:	:	:		
X	SI PMP 2A-A RUN	4	2	:	:	:		
Y	RHR PMP 2A-A RUN	4	3	:	:	:		
Z	ERCW PMP B-A RUN	4	4	:	:	:		



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 419 of 591</b>
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**SER Timing - Subsection 6.3**

AA	AFW PMP 2A-A RUN	4	9	:	:	:		
AB	CCS PMP 2A-A RUN	4	6	:	:	:		
AC	CCS PMP C-S (TR 1A) RUN	9	7	:	:	:		
AD	CS PMP 2A-A RUN	4	19	:	:	:		
AE	CTMT AIR RET FAN 2A-A RUN	6	20	:	:	:		
AF	SD BD RM CHLR A-A RUN	5	11	:	:	:		
AG	ELECT BD RM AC CPRSR A-A RUN	5	21	:	:	:		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 420 of 591</b>
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**SER Timing - Subsection 6.3**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

(DG 2A)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP-CC PMP 2A-A	E-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-SI PMP 2A-A	F-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RHR PMP 2A-A	G-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-ERCW PMP B-A	H-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-AFW PMP 2A-A	I-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CCS PMP 2A-A	J-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-TRN A CCS PMP CS	K-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-THERM BAR BSTR PMP 2A-A	L-C		0.5	0.10	5.00	N/A	N/A		
BUS STRIP-FIRE PMP 2A-A	M-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CRDM FAN 2A-A	N-C		3.0	2.80	5.00	N/A	N/A		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 421 of 591</b>
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**SER Timing - Subsection 6.3**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

(DG 2A)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP-CRDM FAN 2C-A	O-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RX LWR CTMT CLR FAN 2A-A	P-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RX LWR CTMT CLR FAN 2C-A	Q-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-PZR HTR 2A-A	R-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CS PMP 2A-A	S-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-SD BD RM CHLR A-A	T-C		0.5	0.10	5.00	N/A	N/A		
BUS STRIP-ELECT BD RM AC CPRSR A-A	U-C		0.5	0.10	5.00	N/A	N/A		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 422 of 591</b>
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**SER Timing - Subsection 6.3**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

(DG 2A)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
2A-A 6900 DG BKR 1922 CLOSED	V-D		10	N/A	N/A	N/A	10		
CC PMP 2A-A SEQ START	W-V		5	N/A	N/A	4.679	5.277		
SI PMP 2A-A SEQ START	X-V		10	N/A	N/A	9.358	10.553		
RHR PMP 2A-A SEQ START	Y-V		15	N/A	N/A	14.037	15.830		
ERCW PMP B-A SEQ START	Z-V		20	N/A	N/A	18.717	21.106		
AFW PMP 2A-A SEQ START	AA-V		25	N/A	N/A	23.395	26.383		
CCS PMP 2A-A SEQ START	AB-V		35	N/A	N/A	32.760	36.930		
CCS PMP C-S TRN A SEQ START (see note below)	AC-A		8	N/A	N/A	7.6	8.4		
CS PMP 2A-A SEQ START	AD-V		184	N/A	N/A	178.76	189.24		

NOTE: C-S CCS Pump is powered from Train 1A. Pump receives SIS (Auto/Manual) from either unit.

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**SER Timing - Subsection 6.3**

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

(DG 2A)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
ELECT BD RM AC CPRSR A-A START (Note 8)	AG-V		420	N/A	N/A	340.900	499.100		
SD BD RM CHLR A-A START (Note 7)	AF-V		435	N/A	N/A	355.900	514.100		
CNTMT AIR RET FAN 2A-A START	AE-B		540	N/A	N/A	506.820	568.380		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 424 of 591</b>
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**SER Timing - Subsection 6.3**

**NOTES:**

1. Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
2. Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
3. Component actuation following initiation of LOOP/SI.
4. Component actuation following closure of EDG breaker.
5. Component trip caused by loss of power to MCC (NOT a UV Relay bus-strip signal).
6. Component actuation following initiation of Containment Isolation Phase B.
7. Start time includes Shutdown Board Room Chiller Skid internal time delay of 75 seconds.
8. Start time includes an Electrical Board room Compressor Skid internal time delay of 60 seconds.
9. C-S CCS pump will not STOP from LOOP on Train 2A but will Auto Start from U2 SIS. Pump is powered from Train 1A, 480V Sd Bd 1A2-A.

	INITIAL	DATE
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 425 of 591</b>
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**Appendix R  
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**Transient Load Response - Subsection 6.1**

<b>DG 2A-A, LOSS OF OFFSITE POWER (LOOP), LOAD SEQUENCE (Note 1)</b>							
<b>LOAD SEQUENCE TIME (IDEAL)</b>	<b>LOAD SEQUENCE TIME (ACTUAL) (Note 1 &amp; 2)</b>	<b>ACTUAL VOLTAGE RECOVERY TIME (Note 1 &amp; 3)</b>	<b>Acceptance Criteria</b>	<b>ACTUAL FREQUENCY RECOVERY TIME (Note 4)</b>	<b>Acceptance Criteria</b>	<b>INITIAL</b>	<b>DATE</b>
0.0 (Misc)			3 secs		3 secs		
5.0 (CCP)			3 secs		3 secs		
20.0 (ERCW)			3 secs		3 secs		
25.0 (AFW)			3 secs		3 secs		
35.0 (CCS)			3 secs		3 secs		
40.0 (Fire Pmp)			3 secs		3 secs		
90.0 (Pzr Htr)			3 secs		3 secs		
420.0 (EBR Chlr) (Note 5)			3 secs		3 secs		
435.0 (SDBR Chlr) (Note 6)			3 secs		3 secs		

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**Transient Load Response - Subsection 6.1**

**NOTES:**

1. All times recorded in Appendix R are in seconds.
2. Load Sequence Time (Actual) is the time from DG Breaker closure to component breaker closure as calculated on and recorded on Appendix O, Table 2, Sequence Start calculation for each component listed.
3. Actual Voltage Recovery Time is the time from component breaker closure to voltage returning to between 6255 to 7645 VAC.
4. Actual Frequency Recovery Time is the time from component breaker closure to frequency returning to between 58.8 to 61.2 Hz.
5. Load Sequence Time allowed includes a six minute return of voltage timer and a 60 second normal start delay timer.
6. Load Sequence Time allowed includes a six minute return of voltage timer and a 75 second normal start delay timer.



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**Appendix S  
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**Transient Load Response - Subsection 6.3**

DG 2A-A, COINCIDENT LOOP/SI/CIØB, LOAD SEQUENCE					
LOAD SEQUENCE TIME (IDEAL)	LOAD SEQUENCE TIME (ACTUAL) (Note 1 & 2)	ACTUAL VOLTAGE RECOVERY TIME (Notes 1,3,4)	ACTUAL FREQUENCY RECOVERY TIME (Notes 1,3,5)	INITIAL	DATE
0.0 (Misc)					
5.0 (CCP)					
10.0 (SIP)					
15.0 (RHR)					
20.0 (ERCW)					
25.0 (AFW)					
35.0 (CCS)					
184.0 (CS)					
420.0 (EBR Chlr) (Note 6)					
435.0 (SDBR Chlr) Note 7)					
540(Cntmt Air Ret Fan)					

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**Appendix S  
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**Transient Load Response - Subsection 6.3**

**NOTES:**

1. All times recorded on this Appendix are in seconds.
2. Record Actual sequence start time of the load(s), referenced to DG 2A-A output breaker 1922 closure, as the event start time.
3. ACCEPTANCE CRITERIA: ALLOWABLE recovery time is less than or equal to 3 seconds for Voltage and 3 seconds for Frequency.
4. Record time DG 2A-A voltage is restored to within a band of 6255-7645 VAC following START of associated load(s). If DG 2A-A voltage is NEVER outside this band, record "0" seconds.
5. Record time DG 2A-A frequency is restored to within a band of 58.8-61.2 Hz following START of associated load(s). If DG 2A-A frequency is NEVER outside this band, record "0" seconds.
6. Includes Electrical Board Room Chiller internal skid time delay of 60 seconds.
7. Includes Shutdown Board Room Chiller internal skid time delay of 75 seconds.

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating  
Requirements (FOR), and Offsite Dose Calculation Manual (ODCM) Applications**

**CAUTION**

Prior to fuel load on Unit 2, all potential LCO entries should be evaluated using Unit 1 License documents.

**NOTE**

Radiation Monitors powered from U2 power sources are covered in Appendix V, Radiation Monitors which Lose Power During Integrated Safeguards Tests (Blackout Testing) on Train 2A.

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
161kV Offsite Line	3.8.1	6.1 6.3	A	Perform SR 3.8.1.1 within 1 hr Declare required feature w/no offsite power available inop when redundant required feature is inop, within 12 hrs, AND Restore offsite circuit to operable within 72 hrs.	Mode 1 - 4  LCO should be entered and exited upon opening and closing of CSST Load breaker of 6.9KV Sd Bd feeder breaker.
Explosive Gas Monitor	5.7.2.15	All		Perform daily sampling using 0-SI-77-3 and TI-266.	Required at all times. RCDT and PRT are de-selected during setup since they will isolate.

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
2-RM-90-130 Purge Air Exh	LCO 3.3.6 LCO 3.9.4	6.1 6.3	A, C	A. Restore 4 hrs, then, C. Close purge dampers OR enter 3.9.4.A. and Suspend fuel movement immediately	Modes 1-4 & during movement of irradiated fuel in cntmt (Mode 6).  CVI function disabled by wire lift in setup step (If moving fuel, B train purge dampers should be tagged closed to comply)
ERCW Train A	3.7.8	6.1 6.3	A	1. Enter applicable Conditions and Required Actions of LCO 3.8.1 2. Enter applicable conditions and Required Actions of LCO 3.4.6 - N/A	Modes 1, 2, 3, 4  Restore within 72 hours  LCO should be entered and exited upon deenergizing and energizing of 2A-A 6.9KV Shutdown Bd.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 431 of 591</b>
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
Tr A ABGTS	3.7.12	6.1 6.3	A	Restore ABGTS Train to operable status within 7 days	Modes 1, 2, 3, 4, OR, during movement of irradiated fuel assemblies in the fuel handling area.
ERCW Screen Wash Pump 2A-A	3.7.8	6.1 6.3	A	Tracking Only - With Traveling Screen Washpump 2A-A operable	Modes 1, 2, 3, 4
ERCW Travelling Screen 2A	3.7.8	6.1 6.3	A	Tracking Only - With Traveling Screen 2A-A operable	Modes 1, 2, 3, 4

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 432 of 591</b>
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
ERCW Strainer 2A-A	3.7.8		A	1. Enter applicable Conditions and Required Actions of LCO 3.8.1  2. Enter applicable conditions and Required Actions of LCO 3.4.6 - N/A	Modes 1, 2, 3, 4  Restore within 72 hours  LCO should be entered and exited upon deenergizing and energizing of 2A-A 6.9KV Shutdown Bd.
90-125 CREVS Actuation Instrumentation	LCO 3.3.7.		A	Place 1 CREVS Train in emergency protection mode in 7 days	Required in ALL modes & fuel movement. MCR Intake monitor 0-RE-90-125 loses power during the blackout and is placed in BLOCK during setup to prevent a CRI.

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
Auxiliary Control Air Comp. A-A  (See note, bottom of page 8 of 8)	3.7.10		A	Tracking Only - Restore within 7 days	CREVS relies upon Aux control Air in all Modes
	3.7.11		A	Tracking Only - Restore within 30 days	CREATS and EBR A/C relies on Aux Control Air in all modes.
	3.7.12		A	Tracking Only - Restore within 7 days	ABGTS dampers relies upon Aux Control Air in all modes and fuel handling
	3.6.9		A	Tracking Only - Restore EGTS to Operable status in 7 days	Modes 1, 2, 3, 4
	3.7.4		B	Tracking Only - Restore ADVs to OPERABLE status within 72 hours	Modes 1, 2, 3. Mode 4 when SG is relied upon for heat removal. ADVs require Aux Control Air for operation
	LCO 3.7.5		B		Restore AFW LCVs w/i 72 hours
	OR 14.10				Restore Pzr Spray valve w/i 30D Restore Aux Air Compressor w/i 30D

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
Auxiliary Control Air (continued)	3.7.5		C	Tracking Only - Restore AFW to OPERABLE status within 72 hours	Modes 1, 2, 3, 4 when SG relied upon for heat removal.  Two AFW Train inoperable in Mode 1, 2, 3  Be in Mode 3 in 6 hours,  Mode 4 in 18 hours
2-PCV-68-340B	OR-14.10		Inoperable	Restore PZR Spray Valve within 30 days	Mode 1, 2, 3
0-COMP-32-60	OR-14.10		Inoperable	Restore Aux Air compressor within 30 days	Mode 1, 2, 3
Train A EGTS	3.6.9		A	Restore EGTS Train to OPERABLE status within 7 days	Modes 1, 2, 3, 4



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 435 of 591</b>
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
2-RE-90-400 U-2 Shield Building Exhaust	ODCM 1/ 2.1.2.		B D E G M	B estimate flow every 4 hrs, D auxiliary sampling within 4 hrs, E 12 hr grab samples, G suspend any planned routine releases. M replaces tritium samplers or 24 hr tritium grab sample.	Required at all times. No releases out Unit 2 from this test. Rad Mon & Sampling Pwr Dist Pnl 2
480V Shutdown Bd Transformer Rm Ventilation  2-FAN-30-250E 2-FAN-30-250F 2-FAN-30-250G	3.8.9		A	Restore AC electrical power distribution subsystem to OPERABLE status within 8 hours	Modes 1, 2, 3, 4  Three exhaust fans will be deenergized then reenergized during testing.  Refer to Sys. Description N3-30AB-4001
	OR 14.10.2			Restore within 30 days	

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**Appendix T  
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose Calculation Manual (ODCM) Applications**

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Condition</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
120V Vital Inverters 1-III, 2-III	3.8.7 3.0.3	6.1 6.3	A	Restore Inverter to OPERABLE status	Mode 1 through 4 Inverters will be powered from the DC source during the brief times the Train 2A distribution boards are deenergized for testing.
Vital Battery Charger III	3.8.4	6.1 6.3	A	Restore vital DC electrical power subsystem to OPERABLE status within 2 hours	Modes 1, 2, 3, 4 Battery Charger deenergized briefly when Train 2A dennergized
DG 1A-A	3.8.1	6.2	B	SEE LCO 3.8.1	Mode 1, 2, 3, 4
DG 2A-A	3.8.1	All	B	SEE LCO 3.8.1	Mode 1, 2, 3, 4

**NOTE:** Refer to PER 377481. Auxiliary Control Air System (ACAS) is a support system for some TS required systems/components. The unavailability of a Trained Aux Air compressor does not automatically render supported systems/components inoperable. There is no TS on the auxiliary air compressors. Functions supported by ACAS are still available and functional and the opposite Train of ACAS remains in service. The normal air supply for operating the control systems is the plant compressed air system and it is not directly affected by the loss of power to the Aux Air Compressor. There is no need to enter LCOs or ORs for the temporary loss of power to this Train of ACAS.

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Time Started: \_\_\_\_\_

Reason for Performance: \_\_\_\_\_

Examples: Partial Recovery; Final Recovery; Test Aborted.

**NOTES**

- 1) Additional copies of this Section may be required during the performance of this instruction.
- 2) In general, the alignment of equipment required by the performance of this Section should be the same alignment required by present plant conditions. If a component cannot be restored to the AS FOUND POSITION, then notify the Unit SRO and log the reason in the chronological test log or on the affected page of this appendix, as desired. The step may be N/A'd and annotated as "see CTL" or "HO tag #" or "see below" if explained on that page.
- 3) Steps should be performed sequentially in each Section but Sections can be performed in any order except the Electrical Support (Appendix W Section 6.0 RESTORATION should be completed before Steps 7.0[18.1] through 7.0[1] of this Appendix).
- 4) When a step is signed off it indicates completion of the performance of the step or that the step has been verified performed by a previous action or step.

**1.0 2A AFW REALIGNMENT**

- [1] **ENSURE** 2-HS-46-56A-S, T-D AFWP T&T VLV, is indicating CLOSED. (GREEN light ON, RED light OFF) \_\_\_\_\_
- [2] **ENSURE** 2-FCV-1-51, T-D AFWP T&T VLV, Mechanical Overspeed Trip Device is LATCHED and the valve motor drive is LATCHED to the valve stem. \_\_\_\_\_

CV

- [3] **ENSURE** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>125V VITAL BATTERY BOARD I</b>					
NORM FDR FOR UNIT 2 AFWT PUMP	PANEL 3	OFF	0-BKR-236-1/321		CV
<b>125V VITAL BATTERY BOARD II</b>					
ALT FDR FOR UNIT 2 AFWT PUMP	PANEL 3	OFF	0-BKR-236-2/321		CV

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- [4] **ENSURE** 2-FCV-3-355, AUX FEEDWATER PMP 2A-A  
RECIRC FLOW [2-M-4], CLOSED.

**2.0 CVCS REALIGNMENT**

<b>NOTE</b>					
CVCS may be aligned as required using 2-SOI-62.01. If used, mark the following steps as NA as needed and add appropriate comments to the test log.					

- [1] **ENSURE** HS position.

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CCP A-A (ECCS)	2-M-5	STOP PULL TO LOCK	2-HS-62-108A		CV

- [2] **ENSURE** the following breakers are ON:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>Rx MOV Bd 2A1-A</b>					
CVCS CHARGING HEADER ISOL (2-FCV-62-90)	C/7B	ON	2-BKR-62-90		CV
VCT OUTLET ISOL (2-LCV-62-132)	C/8B	ON	2-BKR-62-132		CV
RWST CVCS SUPPLY HEADER ISOL (2-LCV-62-135)	C/9A	ON	2-BKR-62-135		CV

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- [3] **ENSURE** the following CCP alignment from VCT to normal charging:

NOMENCLATURE	LOC	POS	UNID	PERF INITL	VERIF INIT
CHARGING LINE ISOL	2-M-6	OPEN	2-HS-62-90A		CV
CHARGING LINE ISOL	2-M-6	OPEN	2-HS-62-91A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-132A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-133A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-135A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-136A		CV

- [4] **NOTIFY** WCC SRO or UNIT SRO that CCP 2A clearance may be reinstated if desired.

- [5] **ENSURE** the following to check breaker spring charged after pump run:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
6.9KV SD BD 2A-A					
CENT CHARGING PUMP 2A-A (2-PMP-62-108)	C/18	RACKED UP & SPRING CHARGED	2-BKR-62-108		CV

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**3.0 2A SIP REALIGNMENT:**

[1] **ENSURE** the following SIP alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
SI PMP A (ECCS)	2-M-6	2-HS-63-10A	PULL-TO- LOCK		CV
SI PMP A RECIRC TO RWST	2-M-6	2-HS-63-4A	OPEN		CV
SI PMPS RECIRC HDR TO RWST	2-M-6	2-HS-63-3A	OPEN		CV
SIP 2B-B COLD LEG INJ FLOW CNTL	2-M-6	2-FCV-63-153	OPEN		CV
SI PMP B RECIRC TO RWST	2-M-6	2-HS-63-175A	OPEN		CV
RWST TO SI PMPS SUCTION	2-M-6	2-HS-63-5A	OPEN		CV
SI PMP A SUCTION	2-M-6	2-HS-63-47A	OPEN		CV

[2] **NOTIFY** WCC SRO or UNIT SRO that SIP 2A clearance may be reinstated if desired. \_\_\_\_\_

[3] **ENSURE** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>6.9KV SHUTDOWN BD 2A-A</b>					
SAFETY INJECTION PUMP 2A-A (2-PMP-63-10)	C/15	RACKED UP, CLOSING SPRING CHARGED	2-BKR-63-10		CV

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 441 of 591</b>
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**NOTE**

The next step will reset RWST to Containment Sump switchover logic for 2-FCV-63-72 which will unlatch K647. 2-HS-63-72D White light will NOT be LIT if 2-FCV-63-72 control circuit is de-energized but this reset circuit should still unlatch K647.

- [4] **PLACE** 2-HS-63-72D, RWST-CNTMT SUMP SWITCHOVER  
SI SIG TO FCV-63-72 [2-M-6] in RESET, **THEN**

**RELEASE** 2-HS-63-72D.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [5] **VERIFY** the following CLA MOVs are CLOSED by light  
indication on 2-M-6:

<b>NOMENCLATURE</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
CL ACCUM 1 OUTLET	CLOSED	2-HS-63-118A		CV
CL ACCUM 2 OUTLET	CLOSED	2-HS-63-98A		CV
CL ACCUM 3 OUTLET	CLOSED	2-HS-63-80A		CV
CL ACCUM 4 OUTLET	CLOSED	2-HS-63-67A		CV

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- [6] **VERIFY** the following breaker positions to prevent inadvertent opening:

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POS</b>	<b>UNID</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
<b>480V REACTOR MOV BOARD 2A1-A</b>					
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	C/3F2	OFF	2-BKR-63-118A		CV
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	C/17F2	OFF	2-BKR-63-80A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	C/11D	OFF	2-BKR-63-26		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	C/3F2	OFF	2-BKR-63-98A		CV
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	C/16F2	OFF	2-BKR-63-67A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	C/11E	OFF	2-BKR-63-25		CV



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**4.0 2A CONTAINMENT SPRAY REALIGNMENT:**

[1] **NOTIFY** U2 WCC that Caution Orders or Hold Orders, as applicable, may be placed on U2 Containment Spray components.

[2] **ENSURE** the following CSP alignment on 2-M-6:

NOMENCLATURE	POS	HS POS	UNID	PERF INIT
CNTMT SPRAY PMP A	N/A	P-T-L w/ C.O.	2-HS-72-27A	
CNTMT SPRAY PMP A MINI FLOW	CLOSED	(PULL) P AUTO	2-HS-72-34A	
RWST TO CS PMP A SUCTION	CLOSED	MID w/ C.O.	2-HS-72-22A	
CNTMT SUMP TO CS PMP A SUCTION	NO LIGHTS	MID w/ C.O.	2-HS-72-44A	
CNTMT SPRAY HDR A TO CNTMT	NO LIGHTS	A AUTO w/ C.O	2-HS-72-39A	
RHR SPRAY HDR A TO CNTMT	NO LIGHTS	MID w/ C.O.	2-HS-72-40A	

[3] **PERFORM** the following alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>U2 BIT Rm</b>					
CNTMT SPRAY HDR A TEST LINE ISOLATION	A11V/719	LOCKED CLOSED	2-ISV-72-503		CV
CNTMT SPRAY TEST LINE ISOLATION	A11U/715	CLOSED	2-ISV-72-502		CV

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- [4] **ENSURE** the following alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
6.9KV SD BD 2A-A					
CONTAINMENT SPRAY PUMP 2A-A (2-PMP-72-27)	C/13	RACKED DOWN w/C.O.	2-BKR-72-27		CV

**CAUTION**

It may be appropriate that the Refueling Water Purification alignment be walked down prior to starting the RWPP to ensure pump flowpath.

- [5] **IF** a RWPS Pump(s) were shutdown in Appendix C, **THEN**  
**RESTART** one RWPP: (N/A pump **NOT** started)

NOMENCLATURE	LOC	POS	UNID	PERF INIT
REFUELING WATER PURIFICATION PUMP A .	A5W/692	START	0-HS-78-19	
REFUELING WATER PURIFICATION PUMP B	A5W/692	START	0-HS-78-20	

- [6] **INFORM** U2 operations of the status of Containment Spray. \_\_\_\_\_

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**5.0 2A RHR REALIGNMENT:**

- [1] **IF** SI signal **NOT** present, and 2-HS-74-16, RHR HX A OUTLET FCV SI SIGNAL RESET, white light is LIT, **THEN**  
**TURN** 2-HS-74-16, RHR HX A OUTLET FCV SI SIGNAL RESET, to RESET. \_\_\_\_\_
- [2] **ENSURE** RHR system returned to the condition required by present plant condition. Refer to 2-SOI-74.01 as needed. \_\_\_\_\_

**6.0 FIRE OPERATIONS ALIGNMENTS**

**NOTE**

Steps may be marked N/A if another NPG-SPP-18.4.6, Fire Protection Impairment Permit is in place on the affected equipment.

- [1] **IF** breaker HC (0-BKR-26-0320) was placed in the OFF position in Appendix C Section 6.0[3], **THEN**  
  
**PLACE** breaker to 0-FCV-26-320 in the ON position (located in compartment HC of 0-MCC-281-1 in the MWTP Control Room). \_\_\_\_\_
- [2] **IF** the breaker for 0-FCV-26-320 was **NOT** placed in the OFF position in Appendix C Step 6.0[3], **THEN**  
**RESET/OPEN** 0-FCV-26-320 locally at 0-HS-26-320, MAKEUP WTR TRTMT PLANT ISOLATION VLV CONTROL, [Southeast corner of Water Treatment Plant]. \_\_\_\_\_

CV

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- [3] **IF** the following handswitches were placed in the TEST position in Appendix C Step 6.0[4], **THEN**  
**RETURN** the following handswitches to the NORMAL position:

[3.1] 0-HS-26-3145A [MOB Chiller Room, north wall, el. 725, 0-JB-294-6889]

\_\_\_\_\_  
\_\_\_\_\_  
CV

[3.2] 0-HS-26-3146A [Service Bldg, Mech Equip Rm, S4/SM, el. 741, 0-JB-295-6890]

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [4] **NOTIFY FIRE OPERATIONS** to **COMPLETE** the restoration Section(s) of the NPG-SPP-18.4.6 secured for this test **AND**

**EXIT OR(s)** that were entered for this test.

- [5] **NOTIFY** the Test Director that this Section 6.0 of Appendix U is complete.

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS:**

- [1] **RESTORE** 2-HS-70-130A THRM BAR BSTR PMP 2B (TBBP) to the AS FOUND position of Appendix C Step 7.0[1.3]. \_\_\_\_\_
- [2] **ENSURE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS. Note that this will also shutdown ABGTS if running. \_\_\_\_\_

**NOTE**

The CB Cleanup fans aligned in the next step may already be stopped by this instruction.

- [3] **RECOVER** from CRI using 0-SOI-31.01. \_\_\_\_\_

**NOTE**

EGTS is required OPERABLE in MODES 1-4 for U1. 0-SOI-65.02 is used to align the system to standby readiness. The local reset pushbuttons for a phase A isolation must be reset only after annulus  $\Delta P$  has raised to greater than 4 inches of H<sub>2</sub>O. However, the annulus is normally open in the performance modes of this test.

- [4] **ENSURE** 0-SOI-65.02, Sections 7.1, and 5.1 is performed following auto actuation of EGTS by this test. \_\_\_\_\_
- [5] **ENSURE** the following dampers are CLOSED AND, **PERFORM** the following:

UNID	DESCRIPTION	LOC	POS	PERF INIT	VERIF INIT
2-HS-65-81/86	U2 EGTS-ANN $\Delta P$ CNTLR A ISOL	0-M-27B	A AUTO		CV
2-HS-65-83/87	U2 EGTS-ANN $\Delta P$ CNTLR B ISOL	0-M-27B	A AUTO		CV

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- [6] **ENSURE** 0-BKR-65-23, EGTS FAN A/DISCH ISOL DMPR (0-FAN-65-23) is ON. [480V C&A VENT BD 2A1-A, C/4D]

\_\_\_\_\_  
\_\_\_\_\_  
CV

**CHILLER RECOVERY**

**NOTE**

Jumpers were placed in the EBR chiller in Appendix W but they do NOT inop the chiller and do NOT have to be removed before exiting from the LCO.

- [7] **RESTORE** EBR chillers using 0-SOI-31.01. 0-HS-31-31A EBR CHLR & AHU SYS B-B, must be placed to STOP then released to MID position during this restoration phase.
- [8] **NOTIFY** US / SRO to exit LCO 3.7.11 tracking for EBR chiller B after performing the previous step.

\_\_\_\_\_  
\_\_\_\_\_

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**CAUTION**

Prior to installing fuses for CES2AY in Step below, review all indications of potential DG emergency start signals ON DG 2A-A.

**NOTE**

The next step will restore common start circuits for DG 2A-A to DGs 1A-A, 1B-B, and 2B-B.

[9] **INSTALL** the following fuses:

<b>FUSE</b>	<b>RELAY</b>	<b>PANEL</b>	<b>PERF INIT</b>	<b>VERIF INIT</b>
1-FU-275-R75/M3	CES2AY	1-R-75		CV
1-FU-275-R75/M4	CES2AY	1-R-75		CV

[10] **RESTORE** containment air isolation capability:

[10.1] **ENSURE** 2-FCV-32-81 is OPEN on 2-M-15. \_\_\_\_\_

[10.2] **ENSURE** 2-FCV-32-111 is OPEN on 2-M-15. \_\_\_\_\_

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**CAUTION**

2-FCV-32-81 & 111 must be opened first prior to closing their bypass valves in the next step in order to prevent losing containment air.

[10.3] **RECLOSE AND LOCK** the control air bypass valves in the annulus.

DESCRIPTION	LOC IN ANNULUS	POS	UNID	PERF INIT	VERIF INIT
CONTROL AIR 2-FCV-32-111 BYPASS	EI 720 AZ 290	LOCKED CLOSED	2-BYV-32-338		CV
ESSENT CONTROL AIR 2-FCV-32-81 BYPASS	EI 728 AZ 301	LOCKED CLOSED	2-BYV-32-328		CV

[11] **RESTORE** power to the 480V C & A Vent Board 2A2-A by using 0-SOI-214.06. \_\_\_\_\_

[12] **ENSURE** all UV relays targets are RESET on the following:

- 6.9KV SD BD 2A-A. \_\_\_\_\_
- 6.9KV SD BD 2A-A logic panel. \_\_\_\_\_
- 480V SD BD 2A1-A. \_\_\_\_\_
- 480V SD BD 2A2-A. \_\_\_\_\_

[13] **RESET** all local alarms on Vital Inverter 1-III and 2-III. \_\_\_\_\_

[14] **RESET** thermal overload bypass relays, by performing the following:

[14.1] **TURN** THERMAL OVERLOAD BYPASS 2A1 SWITCH, at 480V Reactor MOV BD 2A1-A [C/4F] to RESET and back to NOR. \_\_\_\_\_



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- [14.2]    **VERIFY** thermal overload bypass relay reset by red  
indicating light OFF at 480V Reactor MOV BD 2A1-A  
[C/4F]. \_\_\_\_\_
  
- [14.3]    **RESET** thermal overload bypass relay at 480V Reactor  
MOV BD 2A2-A, by placing THERMAL OVERLOAD  
BYPASS 2A2 SWITCH, [C/6D] to RESET and back to  
NOR. \_\_\_\_\_
  
- [14.4]    **VERIFY** thermal overload bypass relay reset by red  
indicating light OFF at 480V Reactor MOV BD 2A2-A  
[C/6D]. \_\_\_\_\_

**NOTE**

SPF Pump C-S will be tested in 2-PTI-262-02, on Train 2B, if not already completed.

- [15]    **RESTORE** SFP cooling to normal alignment as plant  
conditions require using 0-SOI-78.01. \_\_\_\_\_
  
- [16]    **RESTORE** computer trend recorders, 2-UDR-278-760  
thru 765 to as-found status:
  
- [16.1]    **REFER TO** the two pages of STRIP CHART  
ASSIGNMENT TEMPLATE obtained at the test setup in  
Appendix C. \_\_\_\_\_
  
- [16.2]    **SELECT** "TREND MENU" on any control room computer  
monitor. \_\_\_\_\_
  
- [16.3]    **SELECT** "ASSIGN POINTS TO STRIP CHART  
RECORDER". This displays the STRIP CHART  
ASSIGNMENT TEMPLATE. \_\_\_\_\_
  
- [16.4]    **CLICK** on each point and restore points and ranges to  
previous values or to values desired by Operations. \_\_\_\_\_  
\_\_\_\_\_

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- [16.5] **PAGE DOWN** to page 2 and restore points and ranges to previous values or to values desired by Operations on page 2.

\_\_\_\_\_  
\_\_\_\_\_  
CV

**NOTE**

The throttle valves should be fully open to provide for flow at low steam generator pressures and temperatures. Several adjustments of the valves will be required as unit conditions change.

- [17] **IF** the SG-BD throttle valves were closed in Appendix C, **THEN**  
**OPEN** the following SG-BD throttle valves:

- [17.1] SG 1, 2-THV-1-828.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [17.2] SG 2, 2-THV-1-829.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [17.3] SG 3, 2-THV-1-830.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [17.4] SG 4, 2-THV-1-831.

\_\_\_\_\_  
\_\_\_\_\_  
CV

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**Appendix U  
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Return To Normal**

**NOTE**

Thermals were removed from several components and should be re-installed per Appendix W and F before returning the remaining associated components normal in this Section.

[18] **ENSURE** Appendix W 6.0 Electrical Restoration and Appendix V "Radiation Monitor Restoration" is completed prior to performing the following steps in this Section.

[18.1] **ENSURE** the following are in A-P AUTO (2-M-15):

[18.1.1] 2-HS-77-125A1, RX BLDG F & EQ SUMP PMP A

\_\_\_\_\_

CV

[18.1.2] 2-HS-77-125B1, RX BLDG F & EQ SUMP PMP B

\_\_\_\_\_

CV

[18.2] **NOTIFY** UO / or Radwaste NAUO that Reactor Coolant Drain Tank Pump 2B may be returned to service.  
(0-L-2)

[19] **ENSURE** the following HVAC systems are returned to normal:

- Incore Instrument Room (2-SOI-30.04).
- 480V BD RM A/C (el.772) (0-SOI-30.07).

[20] **NOTIFY** Chemistry that sampling of the RCDT and PRT may resume if required.

\_\_\_\_\_

Chemistry Contact

\_\_\_\_\_

Date

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -</b> <b>Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 454 of 591</b>
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**Return To Normal**

- [21] **ENSURE** the following systems are in the condition required by present plant conditions by referring to MCR board indications of valve positions, pressure indications and alarms. Refer to listed SOIs as needed:

[21.1] CVCS, 2-SOI-62.01. \_\_\_\_\_

[21.2] BORON CONCENTRATION CONTROL, 2-SOI-62.02. \_\_\_\_\_

[21.3] CCS, 0-SOI-70.01. \_\_\_\_\_

[21.4] ERCW, 0-SOI-67.01. \_\_\_\_\_

- [22] **VERIFY** the RETURN TO AS FOUND position of the PZR heater breakers as recorded in Appendix K is completed. \_\_\_\_\_

- [23] **VERIFY** temporary equipment modifications are restored per Appendix E. \_\_\_\_\_

- [24] **RETURN** Main Feedwater system to service or alignment using 2-SOI-2&3.01. \_\_\_\_\_

- [25] **NOTIFY** chemistry that the sample cart installed in Appendix C section 8.0 can be removed. \_\_\_\_\_

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**Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout Testing)**

<b>RAD MONITOR NAME</b>	<b>RAD MONITOR #</b>	<b>LOC</b>	<b>HI RAD FUNCTION (other than alarm)</b>	<b>COMMENTS</b>
Lower Containment Air Monitor	2-RE-90-106	A12U/737		Fans fed from C & A Vent BD 2A1-A and Inst Pwr from VIPB 2-III. LCO 3.4.15. Modes 1-4.
Condenser Vacuum Exhaust Monitors	2-RE-90-119	T15G/708		Fan fed from C & A Vent BD 2A1-A and Inst Pwr from 2-BD-242-1. ODCM Table 1.1-2, Item 2. Required Modes 1 through 6 when Condenser Vacuum Exhaust System is in operation. See Compensatory Actions C, B, K.
Condenser Vacuum Exhaust Monitors	2-RE-90-255/ 256	T15G/708		NOT TS / ODCM. Powered from 2-M-31 via Inst Pwr Dist Pnl 2A/2B.
Main Control Room Intake Monitor	0-RE-90-125	C2P/755	CRI & CREVS actuation	Tech Spec 3.3.7 action A (7 days), all modes & fuel movement. Fan fed from C & A Vent Bd 2A1-A
U-2 Shield Building Exhaust (1)	2-RE-90-400	729, U2 AEB		See ODCM 1.1.2, Table 1.1-2, Item 3. Monitor is required at all times.  Actions that may apply are B, D, E, G, M. Powered from U2 Rad Mon & Sampling Pwr Dist Pnl 2. Sample pump powered from 480V C & A Vent BD 2A1-A
(1)	ODCM Action G for the shield building exhaust monitors should only apply during the actual Blackouts. Following a restoration of power the standby 452 pump and the isokinetic pump should restart allowing an exit of action G. Actions B, D and E should apply until one of the two pumps is stopped locally and all alarms are reset on the monitors. Power is from A Train C & A Vent Bd & Radiation Monitor & Sampling Power Dist Pnl, 2-BD-242-1.			

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**Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout Testing)**

<b>RAD MONITOR NAME</b>	<b>RAD MONITOR #</b>	<b>LOC</b>	<b>HI RAD FUNCTION (other than alarm)</b>	<b>COMMENTS</b>
Main Steam Line Rad Monitors	2-RE-90-421, 422,423,424	N & S Vlt Rms		NOT Tech Spec/ ODCM. Fed from Rad Mon & Sampling Pwr Dist Pnl 2 and Inst Pwr Dist Pnl 2A/2B.
Containment Purge Air Exhaust Monitor	2-RE-90-130	A15U/713	Containment Vent Isolation (CVI) wire lift will disable CVI	ODCM 1.1.2. requires only 1 Rad monitor 130 or 131 operable. Tech Spec 3.3.6.A 4 hrs then 3.3.6. C. enter LCO 3.9.4 if fuel movement. Wire lift disables. Fan from C & A Vent Bd 2A1-A ratemeter from VIPB 2-III.
Steam Generator Blowdown Liquid Rad Monitor	2-RE-90-120 & 121	T15J/708	Diverts blowdown to Condensate	ODCM 1.1.1. action B only during modes 1-4. Normally OOS in modes 5 & 6. Pwr from U-2 rad monitor and sample dist pnl 1 and C & A Vent BD 2A1-A.
CCS Liquid Effluent Monitor	2-RE-90-123	AB 737 CCS HXs	Each monitor closes both Surge Tank Vents	NOT Tech Spec. Surge tank vents checked open in App K. Loses power from 0-M-12 during Blackouts which causes HI rad actuation.
CAMS Continuous Air Monitors	Portable	Aux Bldg		NOT Tech Spec/ ODCM
Area Radiation Monitors (1)	ALL MCR Area Monitor modules	Throughout the plant		All MCR modules on 0-M-12 are affected. NOT Tech Spec.

- (1) The power supply to 0-M-12 radiation modules is de-energized during Train 2A Blackouts. This will affect (inop) some modules on 0-M-12, causing a high rad alarm and any applicable actuations. All significant effects are listed in this table.

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**Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout Testing)**

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Electrical Support**

**1.0 TEST SETUP WITH ELECTRICAL SUPPORT**

**NOTE**

This Section is to be performed with Operations personnel and with one or two electrical support personnel.

- [1] **ENSURE** the following M&TE or equivalent is available:

DESCRIPTION	MINIMUM RANGE	REQUIRED ACCURACY	INITIALS
VOM	N/A	N/A	
Torque wrench	25-35 IN-LBS	+/- 2.5 IN-LB	

- [2] **DOCUMENT** test equipment or equivalent used during performance of this Instruction below:

TEST EQUIPMENT	MODEL NO.	TVA ID NO.	CAL DUE DATE	RANGE	INITIALS
VOM					
Torque wrench					

- [3] **VERIFY** required M&TE is within its current calibration cycle as evidenced by a current affixed calibration sticker. \_\_\_\_\_

- [4] **ENSURE** the following tools are available :

- [4.1] Door keys for the following panels: 1-R-73, 1-R-78, 1-R-79, 2-R-48, 2-R-50, 2-R-51, 2-R-54, 2-R-73, 2-R-74, 2-R-75, 2-R-76, 2-R-78, 2-R-79, and 2A-A SD Bd Logic Panels. \_\_\_\_\_



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Electrical Support**

- [4.2] (2) Jumpers, 4 to 6 inches long, for jumpering relay terminals in the Electrical Board Room Chiller control panel. \_\_\_\_\_
- [4.3] (4) Jumpers, 4 to 6 inch long, for jumpering terminal block terminals in 2-R-73 and 2-R-76. \_\_\_\_\_
- [4.4] (2) Jumpers, 10 to 12 inch long, for jumpering terminal block terminals in Reactor Vent Board 2A-A. \_\_\_\_\_
- [4.5] (1) Jumper with banana jack plugs, 4 to 6 inches long for jumpering terminal strip banana jack terminals in R-79 for the Fire pump start circuit. \_\_\_\_\_

**NOTES**

- 1) This Section is to be performed with Operations personnel and with one or two electrical support personnel.
- 2) Prepare labels and bags for each set of thermals. Store these where they can be quickly retrieved for restoration at the end of the test. Notify US and place Caution Order or other prepared labels or tags as these are removed.

- [5] **REMOVE** the thermal overloads from the following by completing the table for each component in sequence (A thru D):

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>UNID</b>	<b>A. BKR AS FND POS</b>	<b>B. BKR OFF CV</b>	<b>C. THERMALS REMOVED CV</b>	<b>D. BKR ON CV</b>
<b>480V REACTOR VENT BOARD 2A-A</b>						
RCDT PUMP 2A (2-PMP-77-4)	C/11D	2-BKR-77-4		CV	CV	CV
RB FLR/EQ DRN SUMP PUMP 2A (2-PMP-77-125A)	C/2A	2-BKR-77-125A		CV	CV	CV

- [6] **PLACE** prepared Caution Order or other appropriate labels or tags on each associated Control Room Switch (and breaker if using a Caution Order) stating "Thermals Removed". \_\_\_\_\_

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Electrical Support**

**NOTE**

Jumpers that are installed in the following step bypass the low level trips of the RBF&ED Sump and RCDT Pumps to prove that they trip on an accident signal instead of low level. The thermals are removed from these breakers in step 1.0[5] to prevent pump damage. Two jumpers, each 10 to 12 inches long, are needed.

- [7] **INSTALL** jumpers across the following terminals in the rear of Reactor Vent Board 2A-A:

<b>EQUIPMENT</b>	<b>COMPARTMENT</b>	<b>TERMINALS</b>	<b>PERF</b>	<b>CV</b>
RBF&ED SUMP PUMP 2-PMP-77-125A	2A	2AA7 to 2AA3		CV
RCDT PUMP 2-PMP-77-4	11D	11D2 to 11D6		CV

**NOTE**

Wire lift prevents inadvertent CVI actuations from 2-RE-90-130. Since U-2 will be defueled and the CVI is not required for this this function, LCO 3.3.6 should not be applicable.

- [8] **OBTAIN** SRO permission to disable 2-RM-90-130.

\_\_\_\_\_  
U-2 SRO

- [9] **CONTACT** US/SRO to evaluate entry into LCO 3.3.6 actions A & C for 2-RM-90-130.

- [10] **ENSURE** the previous two steps are completed, **THEN**  
**LIFT AND TAPE** the following internal wire in 2-R-73:

<b>WIRE</b>	<b>TERMINAL</b>	<b>INITIALS</b>	
LRM2	TB334-2		CV

**CAUTION**

This circuit is 120V AC but the cabinet has some exposed 480V circuits in it.

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Electrical Support**

**NOTE**

The next step will enable the Train A EBR chiller to restart following black out. This jumpers out the high oil temp switch which would require local reset if the power is off greater than about 60 seconds. For this test, the Blackout is extended longer than the usual 10 seconds to permit verification of equipment. This jumper will NOT INOP the chiller. The following step will require the use of a 4 to 6 inch jumper with standard approved clips. The 5CR relay can be found behind the right control panel door just above eye level. Wires should be clearly marked 7 and 8 at the relay.

- [11] **PLACE** a jumper across wires 7 and 8 of the 5CR relay in the control panel of chiller 0-CHR-031-0128, ELECTRICAL BOARD ROOM CHILLER A, C13P/692.

TERMINALS	CONTROL PANEL	INITIALS	
Relay 5CR wires 7 and 8	0-CHR-031-0128		CV

**NOTE**

The jumper installed in the next step bypasses the AFW Pump 52STA/b contact closure of the Steam Generator sample valves. This ensures that when the Safety Injection signal is actuated only the Phase A Containment Isolation relay contact actuates the Steam Generator sample valves to the Safeguard state and NOT an AFW pump start.

- [12] **INSTALL** a jumper across the following terminals in 2-R-73:

TERMINALS	PNL	INITIALS	
		PERF	CV
TB305-3 (BVAX) to TB305-4 (BVA1)	2-R-73		

- [13] **NOTIFY** test director that Appendix W, Section 1.0, is complete.

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**Appendix W  
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Electrical Support**

**2.0 DG 2A-A NON-EMERGENCY TRIPS BYPASS TEST**

**CAUTION**

The following steps must be performed with a VOM in a noisy and high air flow area in the running diesel rooms. Proper hearing and safety protection equipment is required. 125V DC potential from the diesel battery control circuit will exist on at least one of the terminals.

- [1] **WHEN** notified by the Test Director per step 6.1.2[70], **THEN**  
**PERFORM** the following at the DG Building to verify DG 2A-A non-emergency trips are removed from service:

**2A-A DIESEL ROOM**

- [1.1] **VERIFY** the following annunciator windows at 0-M-26 are **NOT** LIT:
- [1.1.1] Annunciator Window 210-D, CRANKCASE PRESS HI \_\_\_\_\_
- [1.1.2] Annunciator Window 211-D, DG PROTECTIVE RELAY OPERATION \_\_\_\_\_
- [1.2] **VERIFY** 2-RLY-82-86LOR1, DG 2A-A EMERGENCY START LOCKOUT, is TRIPPED [2-ARB-82-A/1, Diesel Generator 2A-A Relay Board]. \_\_\_\_\_
- [1.3] **MOMENTARILY PLACE** and **REMOVE** a jumper across output terminals at Crankcase Pressure Switch 0-IPS-82-326/2A1, HI CRANKCASE PRESS ALARM. \_\_\_\_\_
- [1.4] **ROTATE** and **HOLD** disk on Protective Relay DSL GEN 2A-A REV PWR RLY 32 at 2-ARB-82-A-A to ACTUATE relay contacts. \_\_\_\_\_



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Electrical Support**

**3.0 SHUTDOWN BOARD ROOM PRESSUIZATION FANS CRI  
JUMPER INSTALLATION AND REMOVAL**

**NOTES**

- 1) The next step must NOT be performed until notified since an LCO entry must be made prior to performing this step. This jumper will affect logic to the SD BD Rm pressurization fans.
- 2) Two jumpers installed in the next step bypass CRI trip signal to SD BD RM PRESS FANS A-A & B-A from A Train CRI logic. This ensures that when Unit 2, Train A SI signal is actuated, Unit 2 K606 & K613 will place SD BD Room Press Fans A-A & B-A in Safeguard state (OFF).
- 3) Electrical support in the next steps may be performed by anyone qualified to place jumpers in R panels.

[1] **WHEN** notified by Test Director per Step 6.2.1[6], **THEN**

**INSTALL** jumpers across the following terminals in 1-R-73:

EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
0-MTR-31-62	VKDA-1	TB341-5 (6A1X) to TB341-6 (6A1)	1-R-73		
0-MTR-31-64	VKDA-1	TB343-1 (6A1X) to TB343-2 (6A1)	1-R-73		

[2] **WHEN** notified by Test Director per Step 6.3.2[72], **THEN**

**REMOVE** jumpers from the following terminals in 1-R-73  
affecting SD BD Rm pressurizing fans:

EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
0-MTR-31-62	VKDA-1	TB341-5 (6A1X) to TB341-6 (6A1)	1-R-73		
0-MTR-31-64	VKDA-1	TB343-1 (6A1X) to TB343-2 (6A1)	1-R-73		

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Electrical Support**

**4.0 U2 CONTANMENT PURGE AND INCORE INSTRUMENT ROOM  
FANS JUMPER INSTALLATION AND REMOVAL**

**NOTE**

Jumpers installed in the next step bypass the ABI trip of Cnmnt Purge. With the Train 2B SSPS removed from service, this ensures that when the Safety Injection signal is actuated only the Train A Containment Vent Isolation contacts are placing the associated equipment in the Safeguard state.

**[1] WHEN** notified by Test Director per Step 6.2.1[7] **THEN**

**INSTALL** a jumper across the following terminals of Relay CPD5 in 2-R-76: [Row E Slot 6]

EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
2-MTR-30-1	CPD5	1 AND 2	2-R-76		

**[2] WHEN** notified by Test Director per Step 6.3.2[71], **THEN**

**REMOVE** jumper from the following terminals of Relay CPD5 in 2-R-76:

EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
2-MTR-30-1	CPD5	1 AND 2	2-R-76		

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Electrical Support**

**5.0 HPFP 2A-A AUTOMATIC START SIGNAL JUMPER  
INSTALLATION/REMOVAL**

**CAUTION**

Terminals are energized with 120V AC.

**NOTE**

The following jumper places an automatic fire pump start signal only on the 2A-A fire pump energizing relay 2A3 in 1-R-73. This terminal strip is located in the back of 1-R-79 (the door without lights). 1-R-79 is normally locked. If banana jacks have been installed on this terminal strip it is preferred to use a jumper for these jacks.

[1] **When** notified by test director **THEN**

**INSTALL** a jumper across terminals 4 (F4-3) and 5 (F4-4) on Terminal Strip TB908 [1-R-79]. (Step 6.1.2[41])

\_\_\_\_\_  
\_\_\_\_\_  
CV

[2] **NOTIFY** the Test Director when the jumper is installed on TB908. [1-R-79] (Step 6.1.2[41])

[3] **WHEN** notified by test director **THEN**

**REMOVE** the jumper across terminals 4 (F4-3) and 5 (F4-4) on Terminal Strip TB908 [1-R-79]. (Step 6.1.2[93])

\_\_\_\_\_  
\_\_\_\_\_  
CV

[4] **NOTIFY** the Test Director when the jumper is removed from TB908. [1-R-79] (Step 6.1.2[93])

\_\_\_\_\_



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Electrical Support**

**6.0 RESTORATION**

**NOTES**

- 1) The jumpers referred to in the following step bypassed the low level trip of the RBF&ED Sump and RCDT Pumps to prove that they trip on an accident signal instead of low level.

- [1] **WHEN** notified by Test Director to perform this restoration Section, **THEN**

**REMOVE** jumpers across the following terminals in the rear of Reactor Vent Board 2A-A:

<b>EQUIPMENT</b>	<b>COMPARTMENT</b>	<b>TERMINALS</b>	<b>PERF</b>	<b>CV</b>
RBF&ED SUMP PUMP 2-PMP-77-125A	2A	2AA7 to 2AA3		
RCDT PUMP 2-PMP-77-4	11D	11D2 to 11D6		

- [2] **WHEN** notified by Test Director to perform this restoration section, **THEN**

**REMOVE** jumper from the following terminals in 2-R-73:

<b>TERMINALS</b>	<b>PNL</b>	<b>INITIALS</b>	
		<b>PERF</b>	<b>CV</b>
TB305-3 (BVAX) to TB305-4 (BVA1)	2-R-73		

**NOTE**

The wire lift referred to in the next step prevented inadvertent CVI actuations from 2-RE-90-130.

- [3] **LAND** the following internal wire back in 2-R-73:

<b>WIRE</b>	<b>TERMINAL</b>	<b>PERF</b>	<b>CV</b>
LRM2	TB334-2		

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- [4] **NOTIFY** US/SRO to exit LCO 3.3.6 for 2-RM-90-130 if no alarms are present from this monitor on 0-M-12. \_\_\_\_\_

**NOTE**

Step 6.0[5] of this appendix will remove the jumper from the high oil temp switch on Train A EBR chiller. The 5CR relay can be found behind the right control panel door just above eye level. Wires should be clearly marked 7 and 8 at the relay. This circuit is 120V AC but the cabinet has some exposed 480V circuits in it.

- [5] **REMOVE** the jumper across wires 7 and 8 of the 5CR relay in the control panel of chiller 0-CHR-031-0128, ELECTRICAL BOARD ROOM CHILLER A, C13P/692.

TERMINALS	CONTROL PANEL	PERF	CV
Relay 5CR wires 7 and 8	0-CHR-031-0128		

- [6] **ENSURE** 0-CHR-031-0128, ELECTRICAL BOARD ROOM CHILLER A, is either in service or all local alarms are reset. \_\_\_\_\_

\_\_\_\_\_  
CV

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Electrical Support**

**NOTES**

- 1) Thermals should have been labeled and bagged and stored with the test director or in the Tagging Office.

- [7] **REINSTALL** the thermal overloads in the following by completing the table for each component in sequence (columns A thru C). Refer to this APP. W, Section 1.0 to find the "AS FOUND POSITION".

NOMENCLATURE	LOC	UNID	A. BKR OFF	B. THERMALS RE- INSTALLED	C. BKR RESTORED TO AS FOUND POSITION PER Att 23, Section 1.0			
480V REACTOR VENT BOARD 2A-A								
			PERF	CV	PERF	CV	PERF	CV
RCDT PUMP 2A (2-PMP-77-4)	C/11D	2-BKR-77-4						
RB FLR/EQ DRN SUMP PUMP 2A (2-PMP-77-125A)	C/2A	2-BKR-77-125A						

- [8] **REMOVE** Caution Order or other labels used from each breaker and associated Control Switch that was placed for removal of thermals **AND**

**COMPLETE** Caution Order sign-offs or document label or tag removal as needed.

- [9] **NOTIFY** US/SRO that Purge Air may now be placed back in service by 2-SOI-30.02 after the hold order is picked up on the B Train dampers, if placed for 2-RM-90-130.

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
108 BATTERY DISCHARGE TEST		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					
109 125V VITAL BATTERY II TIE TO 125V VITAL BATT BD II		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
201 6900V S/D BD 1B-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
202 480V S/D BD 1B1-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
203 480V S/D BD 1B2-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
204 6900V S/D BD 1B-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
205 480V S/D BD 1B1-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
206 480V S/D BD 1B2-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 472 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
207 ELECTRIC TEST BENCH		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
208 SPARE								
209 SPARE								
210 125V VITAL BAT BDII BUS FILTER		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
211 SPARE								
212 SPARE								
213 SPARE								
214 WASTE DISPOSAL PANEL 0-L-2B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
215 U1 CRD POWER SUPPLY		Closed	Closed <input type="checkbox"/>					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 473 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
SWITCHGEAR 1B, 1-L-115B			1 <sup>st</sup> CV					
216 SPARE								
217 U1 FUSE ASSEMBLY COLUMN D		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 474 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
218 U1 FUSE ASSEMBLY COLUMN E		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
219 U1 GLAND STEAM SPILLOVER TO CONDENSER		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
220 SPARE								
221 SPARE								
222 SPARE								
223 6900V COMMON SWGR D (NORMAL FEEDER)		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
224 SPARE								



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 475 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
225 SPARE 125V DC CHARGER 6-S TRANSFER SWITCH 6DC-S		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
226 125V BATTERY CHARGER II		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
227 INTERTIE TO BREAKER 226		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
301 6900VS/D BD 2B-B B/U BUS NOR FDR, FDR FOR 480V S/D BD XFMR 2B2-B, FDR FOR 480V S/D BD XFMR 2B-B, FDR FOR 480V S/D BD XFMR 2B1-B, DEGRADED UNDER VOLTAGE/OVER VOLTAGE RELAYS, UNDER VOLTAGE & ANNUNCIATION RELAYS		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
302 480V S/D BD 2B1-B NOR BUS ALT FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
303 480V S/D BD 2B2-B NOR BUS		Closed	Closed <input type="checkbox"/>					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 477 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
ALT FDR			1 <sup>st</sup> CV					
304 6900V S/D BD 2B-B NOR BUS ALT FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
305 480V S/D BD 2B1-B BACKUP BUS NOR FDR, ALTERNATE FEEDER BREAKER 52E, ALTERNATE FEEDER CONT & AUX BLDG VENT BD 2B2-B, NORMAL FEEDER REACTOR VENT BD 2B-B, UNDERVOLTAGE & ANNUNCIATION RELAYS		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
306 480V S/D BD 2B2-B BACKUP BUS NOR FDR, UNDERVOLTAGE & ANNUNCIATION RELAYS, ALTERNATE FEEDER BREAKER 52E, NORMAL FEEDER CONT & AUX BLDG VENT BD 2B2-B, ALTERNATE FEEDER REACTOR VENT BD 2B-B, U2 REACTOR BLDG CRANE 2 CRN, FUEL HANDLING EXHAUST FAN B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
307 EMERGENCY DC LIGHTING CABINET LD-2		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
308 SPARE								
309 SPARE								

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 479 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
310 U1 FUSE ASSEMBLY COLUMN A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
A19 - 2-FCV-3-173		Removed						
A25 - 2-FCV-3-174		Removed						
311 U1 FUSE ASSEMBLY COLUMN B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
B19 - 2-FCV-3-174		Removed						
B25 - 2-FCV-3-173		Removed						
B32 - 2-PCV-1-30		Removed						
312 U1 FUSE ASSEMBLY COLUMN C		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
313 U1 AUX RELAY RACK PANEL		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
314 SPARE								

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
315 FLOW CONTROL VALVES (TRAIN B) U1		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
316 SPARE								
317 SPARE								
318 SPARE								
319 U1 REACTOR PROTECTION SWITCHGEAR TRAIN B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
320 6.9KV S/D BD LOGIC PNL 1B-B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
321 UNIT 2 AUX FEEDWATER PMP & TURBINE (ALT FDR)		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
322 DIESEL GENERATOR 1B-B STOP CONTROL CIRCUIT		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
323 SPARE								
324 SPARE								

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery II								
325 120V VITAL INVERTER 2-II		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
326 120V VITAL INVERTER 0-II		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 483 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery II								
327 120V VITAL INVERTER 1-II		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 484 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
108 BATTERY DISCHARGE TEST		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
109 125V VITAL BATTERY TIE TO 125V VITAL BAT BD IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
201 6.9KV S/D BD 1B-B BACKUP BUS NOR FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
202 480V S/D BD 1B1-B NOR BUS ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
203 480V S/D BD 1B2-B NOR BUS ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
204 6.9KV S/D BD 1B-B NOR BUS		ON	ON <input type="checkbox"/>					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop					
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV			
125V Vital Battery IV									
ALT FDR			1 <sup>st</sup> CV						
205 480V S/D BD 1B1-B BACKUP BUS NOR FDR		ON	ON □ 1 <sup>st</sup> CV						
206 480V S/D BD 1B2-B BACKUP BUS NORM FDR		ON	ON □ 1 <sup>st</sup> CV						
207 SPARE									

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
208 UNIT 2 ANNUNCIATOR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
209 SPARE								
210 125V VITAL BATTERY BD IV BUS FILTER		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
211 SPARE								
212 SPARE								
213 SPARE								
214 DRUMMING ROOM PANEL 0-L-151		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
215 CONTROL ROD DRIVE MG SET 2B LOAD BKR		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
216 SPARE								

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
217 U2 FUSE ASSEMBLY COLUMN D		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
D3 - CSST D SEP AUX RELAYS		Installed						
D5 - FCV- 62-55		Removed						
D6 - FCV-68-303		Removed						
D7 - FCV-63-24		Removed						
D8 - FCV-63-63		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 488 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
D9 - FCV-63-66		Removed						
D10 - FCV-63-70		Removed						
D11 - FCV-63-87		Removed						
D12 - FCV-63-107		Removed						
D14 - FCV-63-110		Removed						
D16 - FCV-30-216		Removed						
D17 - PCO-65-95		Removed						
D18 - FCV-62-22		Removed						
D19 - FCV-62-48		Removed						
D21 - FCV-62-54		Removed						
D22 - FCV-43-10		Removed						
D24 - FCV-43-21		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 489 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop					
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV			
125V Vital Battery IV									
D26 - FCV-43-31		Removed							
D27 - FCV-63-69		Removed							
D28 - FCV-43-33		Removed							
D29 - FCV-63-96		Removed							
D31 - FCV-63-112		Removed							
D33 - FCV-63-174		Removed							
D34 - FCV-81-14		Removed							
D35 - FCV-81-16		Removed							
D36 - FCV-63-90		Removed							
D40 - FCV-63-95		Removed							
D41 - FCV-43-1		Removed							
D42 - FCV-43-5		Removed							
D43 - FCV-43-20		Removed							
D44 - FCV-43-30		Removed							
D45 - FCV-43-32		Removed							

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 490 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
D48 - FCV-43-67		Removed						
D49 - FCV-43-69		Removed						
D50 - FCV-43-76		Removed						
218 U2 FUSE ASSEMBLY COLUMN E		ON	ON □ 1 <sup>st</sup> CV					
E1 - FSV-3-35E		Installed						
E2 - FSV-3-48E		Installed						
E3 - FSV-3-90E		Installed						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 491 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
E4 - FSV-3-103E		Installed						
E5 - FCV-62-55		Removed						
E6 - FCV-68-303		Removed						
E7 - FCV-63-24		Removed						
E8 - FCV-63-63		Removed						
E9 - FCV-63-66		Removed						
E10 - FCV-63-70		Removed						
E11 - FCV-63-87		Removed						
E12 - FCV-3-88		Removed						
E13 - FCV-63-95		Removed						
E14 - FCV-63-107		Removed						
E15 - FCV-63-110		Removed						
E18 - FCV-62-22		Removed						
E19 - FCV-62-48		Removed						
E20 - FCV-63-166		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 492 of 591</b>
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## Electrical Isolation Alignment

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
E21 - FCV-62-54		Removed						
E26 - FCV-63-68		Removed						
E30 - FCV-63-97		Removed						
E32 - FCV-63-165		Removed						
E33 - FCV-63-116		Removed						
E37 - FCV-43-59A		Removed						
E38 - FCV-43-63A		Removed						

Breaker/Description	Pre-Test			Post-Loop		
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV
125V Vital Battery IV						

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
E39 - FCV-63-90		Removed						
E43 - FCV-63-111		Removed						
E44 - FCV-68-22		Removed						
E45 - FCV-43-54B		Removed						
E46 - FCV-43-56B		Removed						
E47 - FCV-43-59B		Removed						
E48 - FCV-43-63B		Removed						
E49 - FCV-43-54A		Removed						
E50 - FCV-43-56A		Removed						
219 U2 GLAND STEAM SPILLOVER TO CONDENSER		ON	ON □ 1 <sup>st</sup> CV					
220 SPARE								
221 SPARE								
222 SPARE								

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
223 COMMON STATION SWGR D ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
224 SPARE								
225 SPARE 125V DC CHGR 7-S DC XFR SW 7DC-S		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
226 125V BATT CHGR IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
227 INTERTIE TO BKR 226		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
301 6.9KV S/D BD 2B-B BACKUP BUS ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
302 480V S/D BD 2B1-B NOR BUS NOR FDR, CLR BYPASS BKR 52T, UNDER VOLTAGE & ANNUNCIATION RELAYS, NORMAL SUPPLY BKR 52N, AUX BLDG GENERAL SUPPLY FAN 2B, CCS PMP 2B-B, RECIPROCATING CHARGING PMP, SFP PMP C-S, ELECTRIC BD RM AHU D-B,		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
REACTOR LOWER COMPT COOLER FAN 2B-B								
303 480V S/D BD 2B2-B NOR BUS NOR FDR, REACTOR LOWER COMPT COOLER FAN 2D-B, CONTAINMENT AIR RETURN FAN 2B-B, 480V S/D BD RM AHU D-B, CLR BYPASS BKR 52T, AUX BLDG GENERAL EXHAUST FAN 2B, CRD MECH COOLER FAN 2B-B MTR 1, UNDER VOLTAGE & ANNUNCIATION RELAYS, NORMAL SUPPLY BKR 52N, STATION FIRE PMP 2B-B, ELECTRIC BD RM CHILLER PKG B-B, CCS PMP C-S		ON	ON □ 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
304 6900V S/D BD 2B-B, PRESSURIZER HEATER CONTROL GROUP 2D, ALTERNATE FDR FROM CSST C, CONTAINMENT SPRAY PMP 2B-B, EMERGENCY FDR BKR, RHR PMP 2B-B, SAFETY INJECTION PMP 2B-B, BUS DIFFERENTIAL & UNDERVOLTAGE AUX RLYS, CENTRIFUGAL CHARGING PUMP 2B-B, MAINTENANCE FDR FROM 6.9KV UNIT BD 2C, ERCW PMP F-B, ERCW PMP H-B, AUX FEEDWATER PMP 2B-B, NORMAL		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 498 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
FDR FROM CSST D BKR 1828, NORMAL CONTROL BUS								
305 480V S/D BD 2B1-B BACKUP BUS ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
306 480V S/D BD 2B2-B BACKUP BUS ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
307 EMERGENCY DC LIGHTING CAB LD-4		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
308 SPARE								
309 SPARE								



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 499 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
310 U2 FUSE ASSEMBLIES COLUMN A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
A1 - FCV-70-85		Removed						
A2 - FCV-62-77		Removed						
A3 - FCV-62-85		Removed						
A4 - FCV-68-308		Removed						
A5 - PCV-68-334		Removed						
A8 - FCV-62-59		Removed						
A9 - TCV-67-100		Removed						
A10 - TCV-67-101		Removed						
A11 - TCV-67-108		Removed						
A12 - TCV-67-109		Removed						
A13 - TCO-30-81		Removed						
A14 - TCO-30-82		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 500 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
A15 - TCO-30-93		Removed						
A16 - TCO-30-94		Removed						
A17 - FCV-61-192		Removed						
A18 - FCV-61-194		Removed						
A19 - 1-LCV-3-173		Installed						
A20 - FCV-43-2		Removed						
A21 - FCV-43-11		Removed						
A22 - FCV-43-22		Removed						
A23 - FCV-43-34		Removed						
A24 – FCV-77-16		Removed						
A25 - LCV-3-174		Installed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 501 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
A26 - LCV-3-148		Removed						
A27 - FCV-65-28B		Installed						
A28 - LCV-3-171		Removed						
A29 - FCV-63-23		Removed						
A31 - FCV-65-29		Removed						
A32 - FCO-65-45		Removed						
A33 - FCV-65-7		Removed						
A34 - PCO-65-83, -87		Removed						
A35 - FCV-30-37		Installed						
A37 - 1-SW-30-159		Installed						
A39 - FCV-65-4		Removed						
A40 - FCV-30-16		Removed						
A41 - TCV-67-102		Removed						
A42 - TCV-67-110		Removed						
A43 - FCV-77-127		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 502 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
A44 - FCV-77-9		Removed						
A45 - FCV-77-18		Removed						
A46 - FCV-1-4		Removed						
A47 - FCV-1-11		Removed						
A48 - FCV-1-22		Removed						
A49 - FCV-1-29		Removed						
311 U2 FUSE ASSEMBLIES COLUMN B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
B1 - FCV-70-85		Removed						
B2 - FCV-62-77		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 503 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
B3 - FCV-62-85		Removed						
B4 - FCV-68-308		Removed						
B5 - PCV-68-334		Removed						
B8 - FCV-62-59		Removed						
B9 - TCV-67-100		Removed						
B10 - TCV-67-101		Removed						
B11 - TCV-67-108		Removed						
B12 - TCV-67-109		Removed						
B13 - TCO-30-81		Removed						
B14 - TCO-30-82		Removed						
B15 - TCO-30-93		Removed						
B16 - TCO-30-94		Removed						
B17 - FSV-68-395, -396		Removed						
B18 - FCV-3-48		Installed						
B19 - 1-LCV-3-173		Installed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 504 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
B3 - FCV-62-85		Removed						
B20 - FCV-3-103		Installed						
B21 - FCV-77-127		Removed						
B22 - FCV-77-9		Removed						
B23 - FCV-77-18		Removed						
B24 - FCV-77-16		Removed						
B25 - 1-LCV-3-174		Installed						
B26 - FCV-30-8, -50		Installed						
B27 - FCV-90-108		Removed						
B28 - FCV-90-110		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 505 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
B30 - FCV-30-9, -53		Installed						
B31 - LCV-3-148		Removed						
B32 - FCV-30-15, -57		Installed						
B33 - FCV-90-114		Removed						
B34 - FCV-30-19, -58		Installed						
B35 - FCV-77-241		Installed						
B36 - FCV-90-116		Removed						
B38 - LCV-3-171		Removed						
B39 - 2-SW-30-274		Installed						
B44 - FCV-63-84		Removed						
B46 - FCV-1-4		Removed						
B47 - FCV-1-11		Removed						
B48 - FCV-1-22		Removed						
B49 - FCV-1-29		Removed						
B50 - FCV-62-1229-B		Removed						
312 U2 FUSE ASSEMBLIES		ON	ON <input type="checkbox"/>					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 506 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
COLUMN C			1 <sup>st</sup> CV					
C1 - FCO-30-272		Installed						
C2 - FCO-30-276		Installed						
C3 - FCV-31-305		Removed						
C4 - FCV-31-309		Removed						
C5 - FCV-31-327		Removed						
C6 - FCV-31-329		Removed						
C7 - FCO-30-109		Installed						
C8 - 2-FSV-77-2562		Removed						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 507 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
310 U2 FUSE ASSEMBLIES COLUMN A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
C13 - FCO-30-123		Installed						
C14 - FCO-30-22		Installed						
C15 - FCO-30-130		Installed						
C16 - FSV-46-36B		Removed						
C17 - 2-PCV-1-5		Removed						
C19 - 1-FSV-77-2562		Installed						
C21 - FCV-43-75		Removed						
C23 - SG FW CONTROL - B		Installed						
C24 - FCV- 61-97		Removed						
C26 - FCV-61-122		Removed						
C27 - SG FW CONTROL - B		Installed						
C30 - XI-3-239, -245		Removed						
C31 - FSV-46-9B		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 508 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
C34 - FCV-90-109		Removed						
C35 - FCV-90-115		Removed						
C38 - PCV-1-12		Removed						
C39 - 0-SW-30-136		Installed						
C40 - FCV-1-30		Installed						
C41 - FSV-43-54D		Removed						
C42 - FSV-43-56D		Removed						
C43 - FSV-43-59D		Removed						
C44 - FSV-43-63D		Removed						
C47 - 2-PCV-1-23		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 509 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
C48 - FCV-1-148		Removed						
C49 - FCV-1-150		Removed						
313 U2 AUX RELAY RACK PANEL 2-R-55		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
314 SPARE								
315 TB1 PNL 4 (2-FCV-1-7, -25, -182, -184)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
316 SPARE								
317 SPARE								
318 SPARE								
319 REACTOR PROTECTION SYS TRAIN B, 2-L-116		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
320 6.9KV S/D BD LOGIC RELAY		ON	ON <input type="checkbox"/>					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 510 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
PNL 2B-B			1 <sup>st</sup> CV					
321 U1 AUXILIARY FEED PMP TURBINE ALT FDR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
322 DIESEL GENERATOR 2B-B EMERGENCY STOP/RESET		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 511 of 591</b>
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**Electrical Isolation Alignment**

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery IV								
323 SPARE								
324 SPARE								
325 120 VAC VITAL INSTRUMENT INVERTER 2-IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
326 120 VAC VITAL INSTRUMENT INVERTER 0-IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
327 120 VAC VITAL INSTRUMENT INVERTER 1-IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 512 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/01	BOP INSTR RACK 2-R-127/128/143 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/02	INCORE TEMP MONITORING (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/03	MAIN CONTROL ROOM PNL 2-M- 4 INSTRUMENT BUS 1		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/04	MAIN CONTROL ROOM PNL 2-M- 5 PLUGMOLD INSTRUMENT BUS I		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/05	MCR PANEL 2-M-6 INSTR BUS I PLUG MOLD		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 513 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/06	FOXBORO I/A PRIMARY POWER TO PNL 2-R-14 /15 /16 /26		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2.BKR-235-1/07	AUX RELAY RACK 2-R-76 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/08	AUX RELAY RACK C BUS TO PNL 2-R-76		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/09	NSSS AUX RELAY RACK PNL 2-R-58 A BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/10	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 514 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As- Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As- Left	Returned to Breaker ON or As- Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/11	AUX RELAY RACK PNL 2-R-75 A BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/12	SSPS DEMULTIPLEXER TO PNL 2-M-22		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/13	AUX CONT PNL 2-L-10 A INSTRUMENT BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/14	EMERGENCY VHF RADIO		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/15	AUX CONT BD PNL 2-L-11A INSTR BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 515 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/16	AB INSTR PANEL 2-L-57 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/17	AUX RELAY RACK BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/18	PNL 2-L-10 PLUGMOLD INST BUS 1 NEUTRON FLUX IND 2-NI-92-138		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/19	SYS 31 TR A ASSOCIATED FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/20	H2 CNTMT FLOW TO PNL 2-M-10		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 516 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/21	POWER FEED FOR 2-L-905		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/22	FOXBORO I/A PRIMARY POWER TO PNLS 2-R-141 & 142		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/23	RVL INSTUMENT SYSTEM (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/24	FOXBORO I/A PRIMARY POWER TO PNLS 2-R-124/125/126 & 141		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/25	VITAL SUPPLY TO PNL 2-R-3		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 517 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/26	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/27	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/28	CONTAINMENT PURGE DAMPER 2-FCO-30-294-A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/29	SPARE (TO PNL 2-L-381 TDAFWP CONTROL)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/30	SPARE (NEUTRON FLUX MONITOR 2-NM-92-138-D)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 518 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
		120V Vital AC BD 2-I							
2-BKR-235-1/31	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/32	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/33	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/34	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 519 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/35	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/36	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/37	COMMON Q PAM SYSTEM TRAIN-A 2-R-179		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/38	INCORE TC MICROPROCESSOR (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/39	AFPT LEVEL CONT INSTR POWER TO PNL 2-L-11A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 520 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/40	AFPT FLOW CONT NOR FDR 2-FIC-46-57		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/41	SYSTEM 31 TRAIN A FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/42	RCP 1 UV & UF RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BK2-235-1/43	SSPS (A) CH I INPUT RELAYS TO PNL 2-R-46		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/44	SSPS (B) CH I INPUT RELAYS TO PNL 2-R-49		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 521 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/45	NIS INST PWR CH 1 TO PNL 2-M-13		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/46	NIS CONT PWR CH I TO PNL 2-M-13		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/47	PROCESS PROTECTION SET I		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/48	DG 2A-A METER RELAY INSTRUMENT POWER		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 522 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/01	FOXBORO I/A PRI PWR TO PNL 2-R-184		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/02	FOXBORO I/A PRI PWR TO PNLS 2-R-17/18/19		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/03	MCR PNL 2-M-3 INSTRUMENT BUS 2 PLUGMOLD		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/04	MCR PNL 2-M-3 INSTRUMENT BUS 2 PLUGMOLD		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/05	BOP INSTR RACK 2-R-130/131/140 BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 523 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/06	AUX RELAY RACK 2-R-76 BUS B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/07	NSSS AUX RELAY RACK C BUS TO PNL 2-R-58		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/08	NSSS RELAY RACK PNL 2-R-58 'B' BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/09	AUX RELAY RACK PNL 2-R-75 'B' BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/10	AUX RELAY RACK 2-R-75 BUS C		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 524 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/11	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/12	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS C		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/13	AUX CONT PNL 2-L-10 'B' INSTRUMENT BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/14	SYS 31 TR B ASSOCIATED FLOW SWITCHES		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/15	PNL 2-L-27, 336, 43 AUX BLDG INSTR 'B' BUS I		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 525 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/16	AUX RELAY RACK BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/17	AUX RELAY RACK PNL 2-R-72,71 COMMON BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/18	LOCAL H2 CNTMT FLOW (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/19	FOXBORO I/A PRI PWR TO 2-R-185		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/20	SPARE (U1/U2 INTERFACE POINT)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 526 of 591</b>
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Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/21	FOXBORO I/A PRI PWR TO PNL 2-R-121/122		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/22	RVL INSTUMENT SYSTEM (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/23	PNL 1-R-1 PROCESS PROT SET 1 (OFF PER APP-R)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/24	AUX CONT BD PNL 2-L-11B INSTR BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/25 (1)	PROCESS PROTECTION SET II PNL 2-R-7		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 527 of 591</b>
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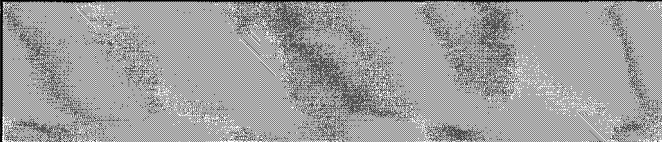
**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup>	CV	IV
<b>120V Vital AC BD 2-II</b>									
2-BKR-235-2/26	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/27	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/28	CNTMT PURGE ISLN DAMPER 2-FCO-30-295-B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/29	SPARE (TO PNL 2-L-381 TDAFWP CONTROL)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/30	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 528 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop					
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV			
	120V Vital AC BD 2-II									
	2-BKR-235-2/31	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-2/32	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-2/33	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-2/34	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/35	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV						

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Electrical Isolation Alignment

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/36	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/37	INCORE TC MICROPROCESSOR (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/38	COMMON Q PAMS SYSTEM TRAIN B 2-R-180		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/39	AFPT LEVEL CONT INSTR POWER TO PNL 2-L-11B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/40	AFPT FLOW CONT ALT FDR TO TRANS SW		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 530 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-II</b>								
2-BKR-235-2/41	SYSTEM 31 TRAIN B FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-2/42	RCP2 UV & UF RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-2/43	PNL 2-R-46 SSPS (A) CH II INPUT RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-2/44	PNL 2-R-49 SSPS (B) CH II INPUT RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-2/45	NIS INST PWR CH II		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 531 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/46	MCR PNL 2-M-13 NIS CONT PWR CH II		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/47 (1)	PNL 2-R-5, 6, 7, 8 PROCESS PROTECTION SET II		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/48	DG 2B-B METER RELAY INSTRUMENT POWER		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 532 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-III</b>								
2-BKR-235-3/1	PROCESS CONTROL GROUP 3 TO PNL 2-R-20, 2-R-21		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/2	TO PNL 2-M-3 INSTR & TRANS PWR		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/3	TO PNL 2-R-188 RCS LOOSE PARTS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/4	FOXBORO I/A DCS TO PNL 2-M-18		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/5	FOXBORO I/A DCS TO PNL 2-L-900		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 533 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup>	CV	IV
<b>120V Vital AC BD 2-III</b>									
2-BKR-235-3/6	SPARE (UHF/VHF RADIO SYSTEM- HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/7	FOXBORO I/A DCS TO PNL 2-L-907/ 2-L-916		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/8	FOXBORO I/A DCS TO PNL 2-L-906		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/9	P-PENT-293-27 TO 2-L-201 (WINCISE)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/10	PWR FD TO PNL 2-PNL-276-L13 INSTRUMENT LOOPS 2-TI-74-38C & 2-TI-74-40C		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 534 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/11	SPARE (PNL 0-L-29 -ERCW TO CCS HX B FLOWMETER)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/12	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/13	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/14	CNTMT PURGE AIR EXHAUST RAD MON 2-RE-90-130		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/15	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 535 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup>	CV	IV
<b>120V Vital AC BD 2-III</b>									
2-BKR-235-3/16	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/17	PASF TO PNL 2-M-10 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/18	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/19	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/20	0-LI-78-43 SFP LEVEL INST		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/21	BORIC ACID TANK B HTR A CNTL 2-L-303		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/22	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/23	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/24	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/25	2-XX-55-6C MISP & 6E CISP ON 2-M-6		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 537 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/26	AB INSTR PNLS 2-L-26/ 2-L-381/2-L-299 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/27	TO PNL 2-R-46/ 2-R-48/ 2-R-52 SSPS (A) CH III TRAIN A INPUT, OUTPUT, & TEST RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/28	AUX FEEDWATER PUMP A PRESSURE CONT 2-PDIC-3- 122A(green tag 2-XI-68-340B)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/29	NSSS AUX RELAY RACK 2-R-54 A BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/30	SEPARATION AUX RELAY PANELS 2-R-73/2-R-74		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 538 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/31	AUX CONTROL BOARD PANEL 2-L-11A RELAY BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/32	AUX CONT BUS TO PNL 2-L-11A (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/33	TO RCP 3 SENSOR PNL RCP3 UV & UF RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/34	TO PNL 2-R-49 SSPS (B) CH III INPUT RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/35	NIS INST PWR CH III		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 539 of 591</b>
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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup>	CV	IV
<b>120V Vital AC BD 2-III</b>									
2-BKR-235-3/36	TO PNL 2-M-13 NIS CONT PWR CH III		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/37	PNL 2-R-9 PROCESS PROTECTION SET III		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/38	FDR FOR SPEC 200 CNTL 2-R-129		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/39	CNTMT ANNULUS DP 2-PDIC-65-80 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/40	AUX RELAY RACK PNL 2-R-73,74 SSPS AUX RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/41	RX BLDG ISOL VLV 2-FCV-032-0081A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/42	ERCW & CNTMT RADIATION MON 2-RE-90-106		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/43	PNL 2-R-11 PROCESS PROTECTION SET III		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/44	BOP INSTR RACK BUS A 2-R-127/2-R-143		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/45	MCR PNL 0-M-12 RAD RATE METER AND 2-RI-90-106		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-III</b>								
2-BKR-235-3/46	125V DC VITAL BATTERY BD III INSTRUMENTATION		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/47	CVCS LTDN FLOW DIVERT TEMP CNTL		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-3/48	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/1	PROCESS CONTROL GRP 4		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/2	TO 2-M-4 INST BUS 4		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/3	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/4	FOXBORO I/A SEC PWR TO PNL 2-M-18		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/5	FOXBORO I/A PRI PWR TO PNL 2-L-901		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup>	CV	IV
<b>120V Vital AC BD 2-IV</b>									
2-BKR-235-4/6	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/7	FOXBORO I/A SEC PWR TO 2-L-916 / 2-L-906		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/8	FOXBORO I/A SEC PWR TO PNL 2-L-907		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/9	SPARE (WINCISE 2-L-202)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/10	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As- Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As- Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-IV</b>								
2-BKR-235-4/11	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/12	PWR TO PNL 2-M-23A (CNTMT NON-ESSENT AIR VENTS FOR APP R)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/13	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/14	CNTMT PURGE AIR EXHAUST RAD MON 2-RE-90-131		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/15	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				

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Electrical Isolation Alignment

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/16	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/17	PASF SOL VLV 2-M-18 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/18	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/19	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/20	0-LI-78-42 SFP LEVEL IND		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-IV</b>								
2-BKR-235-4/21	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/22	BORIC ACID TK B HTR CONT 2-L-304		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/23	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/24	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/25	2-XX-55-6D MISP & 6F CISP ON 2-M-6		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				



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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-IV</b>								
2-BKR-235-4/26	AUX BLDG INST BUS B TO PNL 2-L-26, 381		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/27	PNL 2-R-46 SSPS (A) CH IV INPUT RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/28	SSPS (B) CH IV INPUT & TRAIN B OUTPUT RELAYS TO PNL 2-R-49, 51, 53		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/29	NIS INST PWR CH IV TO PNL 2-M-13		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/30	NIS CONT PWR CH IV TO PNL 2-M-13		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-IV</b>								
2-BKR-235-4/31	PROCESS PROTECTION SET IV TO PNL 2-R-12, 13		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/32	U-2 RCP 4 UV & UF RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/33	ERCW & CNTMT RADIATION MON TO 2-RE-90-112		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/34	2-PDIS-65-82 TO PNL 0-M-27B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/35	SSPS AUX RELAY RACK AUX RELAYS TO PNL 2-R-77, 78		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/36	RX BLDG ISOL VLV 2-FCV-32-103-B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/37	NSSS RELAY RACK B BUS TO PNL 2-R-55		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/38	FDR FOR SPEC 200 TO 2-R-132		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/39	SEPARATION AUX RELAY PANELS 2-R-77 / 2-R-78		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/40	AUX CONTROL PANEL 2-L-11B TO RELAY BUS B		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop			
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found	
							1 <sup>st</sup> CV	IV
<b>120V Vital AC BD 2-IV</b>								
2-BKR-235-4/41	AUX CONT PNL & INST BUS TO PNL 2-L-11B (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/42	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/43	AUX FEEDWATER PUMP B PRESS CONT PDIC-3-132A (RCS LOOP 1 PZR SPRAY CONT VLV POS IND 2-M-4)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/44	125V DC VITAL BATTERY BD IV INSTRUMENTATION		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV				
2-BKR-235-4/45	PNL 2-R-28 PROCESS PROTECTION SET IV		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV				

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**Electrical Isolation Alignment**

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/46	BOP INSTR RACK 2-R-131 BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/47	MCR PNL 0-M-12 RAD RATE METER AND 2-RI-90-112		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/48	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B1-B</b>									
NORM SUPPLY FROM 6.9KV SD BD 2B-B	2-BKR-212-B001/1B C/1B		Closed						
ALT SUPPLY FROM 6.9KV SD BD2B-B	2-BKR-212-B001/4B C/4B		Open						
AUX BLDG GENERAL SUPPLY FAN 2B (2-MTR-30-105)	2-BKR-30-105-B C/2B		Available						
NORM FDR FOR DIESEL AUX BD 2B1-B (2-MCC-215-B1) ALT FDR FOR DIESEL AUX BD 2B2-B (2-MCC-215-B2)	2-BKR-212-B001/2D C/2D		Closed						
SPARE	2-BKR-62-101 C/3B		Open						
CCS PUMP 2B-B (2-MTR-70-33-B)	2-BKR-70-33-B C/3C		Available						
EBR AHU D-B (0-MTR-31-31D-B)	0-BKR-31-31D-B C/7A		Available						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 553 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B1-B</b>									
SFP PMP C-S ALT SUP (0-MTR-78-35-S)	0-BKR-78-35B-B C/7B		Available						
CRD Mechanism Cooler Fan 2B-B MTR 1 (2-MTR-30-92-B)	2-BKR-30-92-B C/7C		Open						
REACTOR LOWER COMPT COOLER FAN 2B-B (2-MTR-30-75-B)	2-BKR-30-75-B C/7D		Open						
NORM FDR FOR RX MOV BD 2B1-B (2-MCC-213-B1) ALT FDR FOR RX MOV BD 2B2- B (2-MCC-213-B2)	2-BKR-212-B001/8B C/8B		Closed						
ALT FDR FOR C&A VENT BD 2B2-B (2-MCC-214-B2)	2-BKR-212-B001/9A C/9A		Open						
NORM FDR FOR RX VENT BD 2B-B (2-MCC-232-B)	2-BKR-212-B001/9B C/9B		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 554 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B1-B</b>									
ALT FDR FOR 480VAC VITAL PWR DIST 125VDC BAT CHGR III AND VITAL INV	0-BKR-236-3A-F C/10A		Open						
NORM FDR FOR C&A VENT BD 2B1-B (2-MCC-214-B1)	2-BKR-212-B001/10B C/10B		Closed						
CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-B001/12D C/12D		Open						

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B2-B</b>									
NORM SUPPLY FROM 6.9KV SD BD 2B-B	2-BKR-212-B002/1B C/1B		Closed						
ALT SUPPLY FROM 6.9KV SD BD 2B-B	2-BKR-212-B002/4B C/4B		Open						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 555 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B2-B</b>									
NORM FDR FOR DIESEL AUX BD 2B2-B (2-MCC-215-B2) ALT FDR FOR DIESEL AUX BD 2B1-B (2-MCC-215-B1)	2-BKR-212-B002/1D C/1D		Closed						
ELEC BD RM CHLR B-B CMPR (0-COMP-31-129/2)	0-BKR-31-29/2 C/2B		Available						
CCS PUMP C-S NOR FDR (0-PMP-70-51-S)	0-BKR-70-51A C/2D		Available						
U2 REACTOR BLDG CRANE (2- CRN-271-R1)	0-BKR-271-R1 C/3B		Open						
EMERG FDR FOR 480V AB COM BD BUS B (0-BD-206-1)	2-BKR-212-B002/3D C/3D		Open						
STATION FIRE PUMP 2B-B (0-PMP-26-11-B)	0-BKR-26-11-B C/4D		Available						

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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B2-B</b>									
AUX BLDG GENERAL EXHAUST FAN 2B (2-FAN-30-278)	2-BKR-30-278 C/7A		Available						
CRDM CLR 2D FAN1 (2-FAN-30-80/1)	2-BKR-30-80/1 C/7B		Open						
FUEL HANDLING EXHAUST FAN B-B (O-FAN-30-139)	0-BKR-30-139 C/7C		Available						
REACTOR LOWER COMPARTMENT COOLER FAN 2D-B (2-CCU-30-78-B	2-BKR-30-78 C/7D		Open						
NORM FDR FOR RX MOV BD 2B2-B (2-MCC-213-B2) ALT FDR FOR RX MOV BD 2B1-B (2-MCC-213-B1)	2-BKR-212-B002/8B C/8B		Closed						
ALT FDR FOR RX VENT BD 2B-B (2-MCC-232-B)	2-BKR-212-B002/9A C/9A		Open						

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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2B2-B</b>									
ALT FDR FOR C&A VENT BD 2B1-B (2-MCC-214-B1)	2-BKR-212-B002/9B C/9B		Open						
CONTAINMENT AIR RETURN FAN 2B-B (2-FAN-30-39-B)	2-BKR-30-39 C/9C		Open						
480V SHTDN BD RM AHU D-B (0-AHU-31-61-B)	0-BKR-31-61 C/9D		Available						
NOR FDR 480VAC VITAL BATT CHGR IV (0-CHGR-236-4)	0-BKR-236-4A C/10A		Closed						
NORM FDR FOR C&A VENT BD 2B2-B (2-MCC-214-B2)	2-BKR-212-B002/10B C/10B		Closed						
CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-B002/12D C/12D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 558 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B1-B</b>									
NORM SUPPLY FROM 480V SD BD 2B1-B	2-BKR-213-B001/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2B2-B	2-BKR-213-B001/1A2 C/1A2		Open						
BORIC ACID TRANSFER PMP 2B-B (2-PMP-62-232)	2-BKR-62-232 C/2B		Open						
CCS THRM BAR BSTR PMP 2B (2-PMP-70-130)	2-BKR-70-130 C/2C		Open						
CCP MIN FLOW VALVE (2-FCV-62-99) (SHUNT TR)	2-BKR-62-99A C/2E2		Open						
SIP COLD LEG INJECTION (2-FCV-63-22) TO CMPT 11D	2-BKR-63-22A C/2F2		Open						
BORIC ACID TANK B HTR B (2- HTR-62-245)	2-BKR-62-245A C/3A		Closed						
SPARE	2-BKR-70-207 C/3E		Open						

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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V Reactor MOV Board 2B1-B									
ALT FDR BATT CHGR 2 XFMR SW (0-XSW-252-2)	0-BKR-252-2/2 C/3F1		Closed						
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	2-BKR-63-98A C/3F2		Open						
SPARE	2-BKR-63-36 C/4A		Open						
ANNUNCIATOR BREAKER	2-BKR-213-B001/4C C/4C		Closed						
CCP AUX OIL PMP 2B (2-PMP-62-244)	2-BKR-62-244 C/4D		Open						
HPFP PUMP 1B-B/2BB LOW WTR SUP (0-FCV-26-8)	0-BKR-26-8 C/5A		Closed						
LOOP 4 HOT LEG TO RHR SUCTION (2-FCV-74-2)	2-BKR-74-2A C/5B		Open						
2-FCV-74-1 BYPASS RHR SUCTION (2-FCV-74-9)	2-BKR-74-9 C/5C		Open						
PRESSURIZER RELIEF (2-FCV-68-332)	2-BKR-68-332 C/5E		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 560 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V Reactor MOV Board 2B1-B									
480V FLEX FEED TO RMOV BD 2B1-B	2-BKR-360-B1/6A-B C/6A		Open						
CVCS SEAL WATER RETURN HDR ISOL (2-FCV-62-61)	2-BKR-62-61 C/6D		Open						
CVCS CHARGING HDR ISOL (2-FCV-62-91)	2-BKR-62-91 C/7A		Open						
CCP MIN FLOW VALVE (2-FCV-62-99) TO CMP 2E2	2-BKR-62-99B C/7B		Open						
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	2-BKR-63-67B C/7D		Open						
VCT OUTLET ISO VLV LEVEL CNTL	2-BKR-62-133 C/8A		Open						
RWST CVCS SUPPLY HEADER ISOL (2-LCV-62-136)	2-BKR-62-136 C/8B		Open						
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	2-BKR-63-98B C/8D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 561 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B1-B</b>									
EMERGENCY BORATION FLOW CNTL (2-FCV-62-138)	2-BKR-62-138 C/9A		Open						
RHR TO HOT LEG 1/3 INJ ISOL (2-FCV-63-172)	2-BKR-63-172 C/9B		Open						
CSP 2B-B MINIFLOW (2-FCV-72-13)	2-BKR-72-13 C/9F		Open						
SIP 2A MINI FLOW RECIRC TO RWST (2-FCV-63-4)	2-BKR-63-4 C/10A		Open						
RWST TO SIP SUCT ISOL (2-FCV-63-5)	2-BKR-63-5 C/10B		Open						
LOOP 4 HOT LEG TO RHR SUCTION (2-FCV-74-2)	2-BKR-74-2B C/10D		Open						
RHR HX 2A OUTLET TO SIP 2A SUCT (2-FCV-63-6)	2-BKR-63-6 C/11A		Open						
RHR HX 2B OUTLET TO SIP 2B SUCT (2-FCV-63-11)	2-BKR-63-11 C/11B		Open						
SIP COLD LEG INJECTION (2-FCV-63-22)	2-BKR-63-22B C/11D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 562 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B1-B</b>									
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	2-BKR-63-25 C/11E		Open						
SIP 2B SUCT ISOL (2-FCV-63-48)	2-BKR-63-48 C/12B		Open						
CNTMT SMP TO RHRP 2B ISOL (2-FCV-63-73)	2-BKR-63-73 C/12D		Open						
RHR TO COLD LEG 1/4 INJ ISOL (2-FCV-63-94)	2-BKR-63-94 C/12E		Open						
SIP 2B COLD INJ FLOW CNTL (2-FCV-63-153)	2-BKR-63-153 C/13A		Open						
SIP 2B HOT LEG 2/4 INJ HDR ISOL (2-FCV-63-157)	2-BKR-63-157 C/13B		Open						
SIP 2B MINI FLOW RECIRC TO RWST (2-FCV-63-175)	2-BKR-63-175 C/13D		Open						
CNTMT SPRAY HDR 2B ISLN VALVE (2-FCV-72-2)	2-BKR-72-2 C/14A		Open						
RHR SPRAY HDR B ISOL (2-FCV-72-41)	2-BKR-72-41 C/14D		Open						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 563 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B1-B</b>									
CNTMT SUMP TO CSP 2B-B SUCTION (2-FCV-72-45)	2-BKR-72-45 C/14E		Open						
RHR PMP 2B-B MINIFLOW (2- FCV-74-24)	2-BKR-74-24 C/15B		Open						
RHR HX 2B OUTLET XTIE (2-FCV-74-35)	2-BKR-74-35 C/15D		Open						
INCORE INSTR RM AHU 2B (2- AHU-31-266)	2-BKR-31-266 C/16A		Open						
THERMAL OVERLOAD BYPASS 2B1	2-BKR-213-B001/16D C/16D		Open						
POWER OUTLETS 2-PO-213- B1/1 - B1/5	2-BKR-213-B001/16E C/16E		Open						
SIS CL ACCUM 4 OUT ISOL (2- FCV-63-67)	2-BKR-63-67A C/16F2		Open						
BORIC ACID BATCH TANK HTR 3 (2-HTR-62-228/3)	2-BKR-62-228/3 C/17A		Closed						
ANNULUS STANDPIPE ISLN VLV (2-FCV-26-241)	2-BKR-26-241 C/17B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 564 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B1-B</b>									
AFW PMP 2B LUBE OIL PMP (2-PMP-3-128D)	2-BKR-3-128D C/17D		Open						
POWER OUTLETS 2-PO-213- B1/6 - B1/10	2-BKR-213-B001/17E C/17E		Open						
SPARE	2-BKR-213-B1/17F1-B C/17F1		Open						
INSTR RM A/C COMPR 2B (2-COMP-31-324/2)	2-BKR-31-324B C/17F2		Open						
INCORE INSTR RM CW PMP 2B (2-PMP-31-324/1)	2-BKR-31-324A C/18C		Open						

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
NORM SUPPLY FROM 480V SD BD 2B2-B	2-BKR-213-B002/1A1 C/1A1		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 565 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
ALT SUPPLY FROM 480V SD BD 2B1-B	2-BKR-213-B002/1A2 C/1A2		Open						
ERCW HDR B AFW PMP 2B-B SUCTION (2-FCV-3-126A)	2-BKR-3-126A C/2A		Open						
ERCW HDR B AFW PMP 2B-B SUCTION (2-FCV-3-126B)	2-BKR-3-126B C/2B		Open						
MS HDR TO TD AFW PMP (2-FCV-1-18)	2-BKR-1-18 C/2E		Open						
ERCW HDR B TD AFW PMP SUCTION (2-FCV-3-179A)	2-BKR-3-179A C/3A		Open						
ERCW HDR B TD AFW PMP SUCTION (2-FCV-3-179B)	2-BKR-3-179B C/3B		Open						
SG 2 MFW ISOL (2-FCV-3-47)	2-BKR-3-47 C/3D		Open						
MFW DEAERATION LINE LP 3 ISOL (2-FCV-3-193)	2-BKR-3-193 C/4A		Open						
MFW DEAERATION LINE LP 4 ISOL (2-FCV-3-194)	2-BKR-3-194 C/4B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 566 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
ANNUNCIATOR BREAKER	2-BKR-213-B002/4C C/4C		Closed						
SG 4 MFW ISOL (2-FCV-3-100)	2-BKR-3-100 C/4D		Open						
AB FROM TB HPFP SUP ISOL (0-FCV-26-15)	0-BKR-26-15 C/5A		Closed						
AB FROM TB HPFP SUP ISOL (0-FCV-26-16)	0-BKR-26-16 C/5B		Closed						
LWR CNTMT CLR HDR D ERCW SUP (2-FCV-67-113)	2-BKR-67-113 C/5C		Open						
CNTMT SPRAY HX 2B-B ERCW IN (2-FCV-67-123)	2-BKR-67-123 C/5E		Open						
CNTMT SPRAY HX 2B-B ERCW OUT (2-FCV-67-124)	2-BKR-67-124 C/5F		Open						
RCP THERMAL BARRIER CCS RETURN (2-FCV-70-87)	2-BKR-70-87A C/6D		Open						
RCP TB CCS SUPPLY (2-FCV-70-134)	2-BKR-70-134A C/6E		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 567 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
THERMAL OVERLOAD BYPASS 2B2	2-BKR-213-B2/6F C/6F		Open						
LWR CNTMT B CLR ERCW RETURN (2-FCV-67-103)	2-BKR-67-103 C/7D		Open						
UPPER CNTMT VT CLR 2A ERCW RET (2-FCV-67-131)	2-BKR-67-131 C/7F		Open						
ERCW STRAINER 2B-B IN ISOL (2-FCV-67-24)	2-BKR-67-24 C/8A		Closed						
AB ERCW SUP HDR 2B ISOL (2- FCV-67-82)	2-BKR-67-82 C/8B		Closed						
LWR CNTMT D CLR ERCW RETURN (2-FCV-67-111)	2-BKR-67-111 C/8D		Open						
UPPER CNTMT VT CLR 2C ERCW RET	2-BKR-67-134-B C/8F		Open						
LWR CNTMT A CLR ERCW RETURN (2-FCV-67-88)	2-BKR-67-88 C/9A		Open						
LWR CNTMT C CLR ERCW RETURN (2-FCV-67-96)	2-BKR-67-96 C/9B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 568 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
UPPER CNTMT VT CLR 2B ERCW RET (2-FCV-67-297)	2-BKR-67-297 C/9D		Open						
UPPER CNTMT VT CLR 2B ERCW SUP (2-FCV-67-138)	2-BKR-67-138 C/9F		Open						
LWR CNTMT CLR HDR C ERCW SUP (2-FCV-67-91)	2-BKR-67-91 C/10A		Open						
LWR CNTMT CLR HDR A ERCW SUP (2-FCV-67-83)	2-BKR-67-83 C/10B		Open						
UPPER CNTMT VT CLR 2D ERCW RET (2-FCV-67-298)	2-BKR-67-298 C/10D		Open						
UPPER CNTMT VT CLR 2D ERCW SUP (2-FCV-67-141)	2-BKR-67-141 C/10F		Open						
AB AIR CLR ERCW SUP HDR 2B ISOL (2-FCV-67-128)	2-BKR-67-128 C/11A		Closed						
LWR CNTMT B CLR SUP ISOL (2-FCV-67-105)	2-BKR-67-105 C/11B		Open						
CVCS HEAT TRACE XFMR B1 (0-DXF-234-B1/CVCS)	0-BKR-234-B1/CVCS C/11D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 569 of 591</b>
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Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
HPFP SUP HDR TRAIN B FLOW CNTL (0-FCV-26-13)	0-BKR-26-13 C/11F		Closed						
CCS HX C OUT ERCW HDR B FLOW CNTL (0-FCV-67-152)	0-BKR-67-152 C/12B		Closed						
RCP THERMAL BARRIER CCS RETURN (2-FCV-70-87)	2-BKR-70-87B C/12D		Open						
ANN SPR ISV	2-BKR-26-244 C/12F		Open						
CCS HX C ERCW HDR 2B SUP ISOL (2-FCV-67-147)	2-BKR-67-147 C/13A		Closed						
CCS HX B/C IN XTIE (2-FCV-70-14)	2-BKR-70-14 C/13B		Open						
RCP OIL COOLER CCS RETURN (2-FCV-70-89)	2-BKR-70-89 C/13D		Open						
RCP OIL COOLER HDR CCS SUPPLY (2-FCV-70-140)	2-BKR-70-140 C/13F		Open						
2B ESF EQUIP CCS SUP HDR (2- FCV-70-3)	2-BKR-70-3 C/14B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 570 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
CCS PMP 2A/2B TO C-S DISCH XTIE (2-FCV-70-28)	2-BKR-70-28 C/14D		Open						
CCS PMP 2A/2B SUCT XTIE (2- FCV-70-39)	2-BKR-70-39 C/14E		Open						
2B ESF EQUIP CCS RTN HDR ISOL (2-FCV-70-75)	2-BKR-70-75 C/15A		Open						
CCS HX B/C OUTLET XTIE (2-FCV-70-196)	2-BKR-70-196 C/15B		Open						
CCS PMP 2A/2B TO C-S SUCT XTIE (2-FCV-70-78)	2-BKR-70-78 C/15D		Open						
RHR HX 2B CCS OUTLET (2-FCV-70-153)	2-BKR-70-153 C/15E		Open						
CCS PMP 2A/2B TO C-S SUCT XTIE (2-FCV-70-76)	2-BKR-70-76 C/16A		Open						
RCP THERMAL BARRIER CCS SUPPLY (2-FCV-70-134)	2-BKR-70-134B C/16B		Open						
SFP HX B CCS SUPPLY (0-FCV-70-194)	0-BKR-70-194 C/17A		Closed						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 571 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2B2-B</b>									
CCS PMP 2A/2B TO C-S DISCH XTIE (2-FCV-70-29)	2-BKR-70-29 C/17B		Open						
STANDBY LIGHTING CAB 3 XFMR (0-DXF-227-2)	0-BKR-227-2 C/17E		Closed						
480V ELEC BD RM 2B (2-COMP-31-447)	2-BKR-31-447 C/18D		Closed						
ALT FDR 125V SPARE BATT CHGR 7-S (0-CHGR-236-7)	0-BKR-236-7A C/18E		Closed						

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
NORM SUPPLY FROM 480V SD BD 2B1	2-BKR-214-B001/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2B2	2-BKR-214-B001/1A2 C/1A2		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 572 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
AUX CONTROL AIR COMPRESSOR B-B (0-MTR-32-86)	2-BKR-32-86 C/2A		Closed						
PEN RM EL 713 COOLER FAN 2B-B (2-CLR-30-197)	2-BKR-30-197-B C/2C		Open						
PRIMARY MAKEUP WTR PMP 2B (2-PMP-81-7)	2-BKR-81-7 C/2D		Open						
VALVE AND STRAINER ROOM SUMP B PUMP 2B (0- MTR-40-66B)	2-BKR-30-66B-B C/2F1		Closed						
AB EL 692 PIPE CHASE COOLER 2B-B (2-CLR-30-202-B)	2-BKR-30-202 C/3B		Open						
CNTMT SPRAY PUMP 2B-B ROOM COOLER (2-PMCL-30-178-B)	2-BKR-30-178 C/3C		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 573 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
AUX BLDG GAS TRTMT SYS EXH FAN B-B (2-FAN-30-157-B)	2-BKR-30-157 C/3D		Closed						
CNT BLDG UPPER COMPT AIR MON (2-RE-90-112-B)	2-BKR-90-112 C/3F1		Open						
SIS HEAT TRACE XFMR B2 (0-OXF-234-B2/SIS)	0-BKR-234-B2/SIS C/3F2		Open						
BATT RM EL 692 EXH FAN C-B (0-FAN-31-27-B)	0-BKR-31-27 C/4A		Closed						
ANNUNCIATOR BREAKER	2-BKR-214-B001/4C C/4C		Closed						
ERCW STRAINER 2B-B BACKWASH VLV (2-FCV-67-10A-B)	2-BKR-67-10A C/4E		Closed						
CNTMT PURGE AIR EXH MON (2-RE-90-131-B)	2-BKR-90-131 C/4F1		Open						
DISTRIBUTION PANEL 5C	2-BKR-214-B001/5B C/5B		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 574 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V C&A Vent Board 2B1-B									
CMPT 5C DISTRIBUTION PNL	2-BKR-214-B001/5B C/5B		Closed						
AUX FW & BORIC ACID TRANS PUMPS SPACE COOLER 2B-B (2-PMCC-30-185)	2-BKR-30-185 C/5E		Closed						
SD BD RM B PRESS FAN D-B (0 FAN-31-68)	0-BKR-31-68 C/6A		Closed						
ERCW STRAINER 2B-B (2-STR-67-10)	2-BKR-67-10/1 C/6B		Closed						
TRAVELING SCREEN 2B-B (2-TWS-67-451-B)	2-BKR-67-451 C/6C		Closed						
ERCW STRAINER 2B-B FLUSH VLV (2-FCV-67-108)	2-BKR-67-10B/2 C/6E		Closed						
125V VITAL BTRY RM IV EXH FAN 2A2-B (2-FAN-31-288)	2-BKR-31-288 C/7B		Closed						
RHR PMP 2B-B INLET FCV (2- FCV-74-21)	2-BKR-74-21 C/7D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 575 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
RWST TO SPRAY HDR 2B-B (2-FCV-72-21)	2-BKR-72-21 C/7E		Open						
SAFETY INJ PUMP 2B-B ROOM COOLER (2-PMCL-30-179-B)	2-BKR-30-179 C/8A		Open						
PEN RM EL 692 COOLER 2B-B (2-CLR-30-187-B)	2-BKR-30-187 C/8B		Open						
SD XFMR RM 2B EXHAUST FAN 2B2-B (2-FAN-30-246G)	2-BKR-30-246G C/8C		Closed						
SD XFMR RM 2B EXHAUST FAN 2B3-B (2-FAN-30-246H)	2-BKR-30-246H C/8D		Closed						
CONT BLDG ELECT BD RM A/C CIR PMP B-B (0-PMP-31-129/1)	0-BKR-31-129/1 C/8E		Closed						
EBR CHLR B-B OIL PMP (0-PMP-31-129/3)	0-BKR-31-129/3 C/8F1		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 576 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
RHR PUMP 2B-B ROOM COOLER (2-PMCL-30-176)	2-BKR-30-176-B C/9A		Open						
480V BD RM 2A PRESS SUP FAN 2A2-B (2-FAN-31-463)	2-BKR-31-463 C/9C		Closed						
SD XFMR RM 2B EXHAUST FAN 2B1-B (2-FAN-30-246F)	2-BKR-30-246F C/9D		Closed						
PEN RM EL 737 COOLER FAN 2B-B (2-CLR-30-195)	2-BKR-30-195 C/9E		Closed						
UNIT 2 CONTROL ANN PNL(2- PNL-55-237)	2-BKR-55-237 C/9F1		Closed						
CNTFGL CHG PUMP 2B-B ROOM COOLER (2-PMCL-30- 182-B)	2-BKR-30-182 C/10A		Open						
480V BD RM 2B PRESS SUP FAN 2B2-B	2-BKR-31-477-B C/10B		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 577 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
125V VITAL BTRY RM III EXHAUST FAN 2B2-B (2-FAN-31-286-B)	2-BKR-31-286 C/10C		Closed						
AUX BLDG GAS TRTMT SYS HUMIDITY HEATER B-B (O-HTR-30-156)	2-BKR-30-156 C/10D		Closed						
CONT RM INTAKE MONITOR (O-RE-90-126)	0-BKR-90-126 C/10F1		Closed						
480V BD RM 2B A/C AHU 2B- B (2-AHU-31-475)	2-BKR-31-475 C/11B		Closed						
480V BD RM 2B A/C COND 2B- B (2-COND-31-289-B)	2-BKR-31-289 C/11C		Closed						
RECIP CHARGING PUMP RM CLR (2-PMCL-30-181)	2-BKR-30-181 C/12A		Open						
EMER GAS TRTMT SYS B-B RM COOLER (O-CLR-30-207)	2-BKR-30-207 C/12B		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 578 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B1-B</b>									
PERM HYDROGEN MITIGATION SYS (2-DXF-268-2)	2-BKR-268-2 C/12C		Open						
AUX CHARGING PUMP 2B (2-PMP-84-21)	2-BKR-84-21 C/13A		Open						
CNTMT ANNULUS VAC FAN 2B (2-MTR-85-74)	2-BKR-65-74 C/13C		Open						
ERCW SCREEN WASH PMP 2B- B (2-PMP-67-447-B)	2-BKR-67-447 C/13D		Closed						

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B2-B</b>									
NORM SUPPLY FROM 480V SD BD 2B2-B	2-BKR-214-B002/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2B1-B	2-BKR-214-B002/1A2 C/1A2		Open						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 579 of 591</b>
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Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V C&A Vent Board 2B2-B									
AB ELEVATOR MACH RM EXH FAN (0-FAN-30-27)	0-BKR-30-27 C/2B		Closed						
480V BD RM 2B HTR A (2-HTR-30-A1B)	2-BKR-30-A1B C/2E1		Closed						
FH AREA HEATER K (0-HTR-30-KFA)	0-BKR-30-KFA C/2E2		Closed						
480V BD RM 2B HTR B (2-HTR-30-B1B)	2-BKR-30-B1B C/2F1		Closed						
480V BD RM 2B DUCT HTR (2-HTR-31-BRB)	2-BKR-31-BRB C/2F2		Closed						
SAMPLING ROOM EXH FAN 2B (2-FAN-30-285)	2-BKR-30-285 C/3B		Open						
FLEX INTERMEDIATE PRESSURE PUMP EL 737 (2-MTR-360-IP01)	2-BKR-360-IP01 C/3C		Open						
480V BD RM 2B HTR C (2-HTR-30-C1B)	2-BKR-30-C1B C/3E1		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 580 of 591</b>
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Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V C&A Vent Board 2B2-B									
FH AREA HEATER L (0-HTR-30-LFA)	0-BKR-30-LFA C/3E2		Closed						
PZR HTR XFMR RM HTR (2-HTR-30-PRX)	2-BKR-30-PRX C/3F1		Open						
RELAY ROOM DUCT HTR (0-HTR-31-93)	0-BKR-31-93 C/3F2		Closed						
SOUTH MS VAULT BACKUP EXH FAN (2-FAN-30-302)	2-BKR-30-302 C/4B		Open						
ANNUNCIATOR BREAKER	2-BKR-214-B002/4C C/4C		Closed						
COMPUTER ROOM DUCT HTR (0-HTR-31-85)	0-BKR-31-85 C/4E1		Closed						
FH AREA HEATER P (0-HTR-30-PFA)	0-BKR-30-PFA C/4E2		Closed						
480V SD BD RM 2B2-B RM HTR (2-HTR-30-SBU)	2-BKR-30-SBU C/4F1		Closed						
AUX CNTL INST RM 2B HTR (2-HTR-30-U113)	2-BKR-30-U113 C/4F2		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 581 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2B2-B</b>									
FLEX IP PUMP 2 EL 692	2-BKR-360-IP02-B C/5B		Open						
AUX INSTR RM DUCT HTR (2-HTR-31-89)	2-BKR-31-89 C/5E1		Closed						
VITAL BATT ROOM 4 HTR (0-HTR-30-RM4)	0-BKR-30-RM4 C/5F1		Closed						
AUXILIARY CONTROL RM HEATER (0-HTR-30-U1)	0-BKR-30-U1 C/5F2		Closed						
SOUTH MS VAULT EXH FAN 2B (2-FAN-30-26)	2-BKR-30-26 C/6B		Open						
FLEX HP PUMP CS EL 692	0-BKR-360-HPCS C/6C		Open						
AB EL 737 AREA HTR (2-HTR-30-AB7)	2-BKR-30-AB7 C/6E1		Closed						
TRANSFORMER RM 2B HTR (2-HTR-30-T1B)	2-BKR-30-T1B C/6F1		Closed						
FLEX HP PUMP 1 EL 692	2-BKR-360-HP01-B C/7A		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 582 of 591</b>
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Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
480V C&A Vent Board 2B2-B									
KITCHEN DUCT HEATER (0-HTR-31-99)	0-BKR-31-99 C/7E1		Closed						
NORTH MS VAULT HTR 2 (2-HTR-30-NM2)	2-BKR-30-NM2 C/7F1		Open						
AB EL 713 HTR (0-HTR-30-A14)	0-BKR-30-A14 C/8E2		Closed						
POWER OUTLETS (2-PO-214-10/11/12)	2-BKR-214-B002/8F2 C/8F2		Open						
CRD EQUIPMENT RM A/C 2B (2-ACU-30-CRB)	2-BKR-30-CRB C/9A		Open						
SIS BORON INJ TANK INLET SHUTOFF VALVE (2-FCV-63-40-B)	2-BKR-63-40-B C/9B		Open						
TEST BLOCKS (2-TB-214-15/16)	2-BKR-214-B002/9D C/9D		Open						

	<b>Test Preparation</b>	<b>Restoration</b>
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Electrical Isolation Alignment**

Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2B-B</b>									
NORM SUP FROM 480V SHTDN BD 2B1-B	2-BKR-232-B/1A1-B		Closed						
ALT SUP FROM 480V SHTDN BD 2B2-B	2-BKR-232-B/1A2-B		Open						
CNTMT FLOOR & EQUIP DRAIN SUMP PMP 2B (2-MTR-77-125B)	2-BKR-77-125B-B C/2A		Open						
SPARE	2-BKR-43-210 C/2F1		Open						
SPARE	2-BKR-94-1A C/3A		Open						
SPARE	2-BKR-94-1B C/3B		Open						
SPARE	2-BKR-94-1C C/3C		Open						
ANNUNCIATOR BREAKER	2-BKR-332-B000/4C C/4C		Closed						
AUX DIST PNL FDR	2-BKR-232-B000/5B C/5B		Closed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 584 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2B-B</b>									
INCORE INST RM PURGE EXH SPLY FAN (2-MTR-30-11)	2-BKR-30-11-B C/5E		Open						
ICE CONDENSER FLOOR COOLING PUMP (2-MTR-61-61)	2-BKR-61-61-B C/6C		Open						
ICE CONDENSER FLOOR DEFROST HTR 2B (2-HTR-61-93)	2-BKR-61-93-B C/6D		Closed						
INCORE INST RM PURGE EXH FAN (2-MTR-30-11E)	2-BKR-30-11E C/6E		Open						
FLOOR & EQUIP DRAIN SUMP PMP 2 (2-MTR-40-2)	2-BKR-40-2-B C/6F1		Open						
AUX & CONT BLDG 480V RECEPTACLES (2-PO-232-12, 13, 14, 15)	2-BKR-232-B000/6F2-B C/6F2		Closed						
RCP 2 MTR HTR (2-HTR-68-31AA	2-BKR-68-31AA-B C/7B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 585 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2B-B</b>									
RCP 2 OIL LIFT PMP (2-MTR-68-85)	2-BKR-68-85-B C/7D		Open						
RCP 4 MTR HTR (2-HTR-68-73AA)	2-BKR-68-73AA-B C/8B		Open						
RCP 4 OIL LIFT PMP (2-MTR-68-87)	2-BKR-68-87-B C/8D		Open						
AUX & CONT BLDG 480V RECEPTACLES (2-PO-232-16, 17, 18, 19)	2-BKR-232-B000/8F2-B C/8F2		Closed						
REACTOR UPPER COMPT CLR 2B (2-CCU-30-97)	2-BKR-30-97 C/9B		Open						
REACTOR UPPER COMPT CLR 2D (2-CCU-30-100)	2-BKR-30-100 C/10B		Open						
REAC BLDG JIB CRANE (2-CRN-271-15)	2-BKR-78-15 C/10F		Open						
COMPUTER RM AIR HANDLING UNIT NO.1 (0- MTR-31-497)	0-BKR-031-0497 C/11B		Closed						

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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2B-B</b>									
REACTOR COOLANT DRN TANK PMP 2B (2-MTR-77-6)	2-BKR-77-6-B C/11D		Open						
REACTOR LWR COMPT HTR 2B (2-HTR-30-75H)	2-BKR-30-75H-B C/11F		Open						
CNTMT INST RM UNIT HTR 2B (2-HTR-30-12H)	2-BKR-30-12H-B C/12F		Open						
ICE COND END WALL DOOR NO. 2B (2-FSV-61-230B)	2-BKR-61-230B-B C/13B		Open						
ICE CONDENSER AIR HNDLG UNITS (2-AHU-61-2, 6, 10, 14, 18, 22, 26, 30)	2-BKR-232-B/13D-B C/13D		Open						
ICE CONDENSER BRIDGE CRANE (2-CRN-61-1)	2-BKR-61-1BC-B C/13F		Open						
RCC CHANGE HOIST (2-CRN- 79-IRCC)	2-BKR-79-1RCC-B C/14B		Open						
ICE CONDENSER (2-AHU-61- 5/9/13/17/21/25/29)	2-BKR-232-B/14D C/14D		Open						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 587 of 591</b>
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**Electrical Isolation Alignment**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2B-B</b>									
EQUIP HATCH HOIST (2-CRN-271-1EH)	2-BKR-271-1EH-B C/14F		Open						
CNTMT UPPER COMPT HTR 2B (2-HTR-30-37H)	2-BKR-30-37H C/15A		Open						
CONTAINMENT PURGE AIR SUPPLY FAN 2B (2-FAN-30-4)	2-BKR-30-4-B C/15D		Open						
REACTOR UPPER COMPT HTR 2D (2-HTR-30-100H)	2-BKR-30-100H-B C/16A		Open						
CONTAINMENT PURGE AIR EXHAUST FAN 2B (2-MTR-30-4E)	2-BKR-30-4E-B C/16D		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 588 of 591</b>
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**DG DAQ Connections, Operation, and Disconnection**

**1.0 DG-DAQ SETUP, DG PROTECTION PANEL**

<b>NOTES</b>
The System Engineer usually performs the DG-DAQ setup and keeps a set of PK Test Block plugs for DG-DAQ setup.
Equipment must comply with seismic and plant temporary equipment guidelines.

- [1] **ENSURE** the following M&TE or equivalent is available for DG data collection:

<b>DESCRIPTION</b>	<b>MINIMUM RANGE</b>	<b>REQUIRED ACCURACY</b>	<b>INITIALS</b>
Current probe	N/A	N/A	
DG-DAQ Data Acquisition System	Per Certification Report	Per Certification Report	

- [2] **DOCUMENT** test equipment or equivalent used during performance of this Instruction below:

<b>TEST EQUIPMENT</b>	<b>MODEL NUMBER</b>	<b>TVA ID NO.</b>	<b>CAL DUE DATE</b>	<b>RANGE</b>	<b>INITIALS</b>
DG-DAQ					
Current Probe			N/A	N/A	

- [3] **ENSURE** from Test Coordinator that permission has been obtained to stage and hookup equipment.

- [4] **CONNECT** DG-DAQ Channel 0 to PK block TB1 in 2A-A DG room as follows (PK Plug Points are numbered top to bottom and right to left looking at the handle side of the plug) :

[4.1] **CONNECT** Channel Pos. To V<sub>a</sub>. (Point 2 on PK Plug)

[4.2] **CONNECT** Channel Neg. to V<sub>b</sub>. (Point 4 on PK Plug)

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**DG DAQ Connections, Operation, and Disconnection**

- [4.3]     **LINK** all terminals on PK Block Plug ( $V_a$ ,  $V_b$ ,  $V_c$ ). \_\_\_\_\_
- [4.4]     **INSERT** PK Plug into PK Block TB1 \_\_\_\_\_
- [5]     **CONNECT** DG-DAQ Channel 1 to PK block TB3 in 2A-A Diesel Generator room as follows (PK Plug Points are numbered top to bottom and right to left looking at the handle side of the plug):
- [6]     **CONNECT** DG-DAQ external current shunt in series with  $I_a$  current (Points 1 and 2 on PK plug) . Remove PK Block Plug Link for  $I_a$ . \_\_\_\_\_
- [7]     **CONNECT** DG-DAQ Channel 1 to the current shunt, with channel positive connected to  $I_a$  "IN" and channel negative connected to  $I_a$  "OUT." \_\_\_\_\_
- [7.1]     **LINK** all remaining terminals on PK Test Block Plug ( $I_b$ ,  $I_c$ ). \_\_\_\_\_
- [7.2]     **INSERT** PK Plug into PK Block TB3 \_\_\_\_\_

**NOTE**

The current probe should be zeroed prior to connecting to the ES21AY relay.

- [8]     **ENSURE** that the current probe is on battery power mode with fresh batteries. \_\_\_\_\_
- [9]     **ZERO** the current probe indication. \_\_\_\_\_
- [10]     **PUT** Start signal into DG-DAQ Channel 2, using clamp-on probe around coil wire 11 or 12 of relay ES2AY.

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -  Train 2A</b>	<b>2-PTI-262-01</b> <b>Rev. 0000</b> <b>Page 590 of 591</b>
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**DG DAQ Connections, Operation, and Disconnection**

- [11] **SETUP** DG-DAQ Channel 0 for an input of +212 to -212 V dc and multiplication factor of 60.0. \_\_\_\_\_
- [12] **SETUP** DG-DAQ Channel 1 for an input of  $\pm 0.472$  V dc and multiplication factor (MF) of  $120 \div X = MF$ , where X = actual ohms ( $\Omega$ ) of the shunt. \_\_\_\_\_
- [13] **SETUP** DG-DAQ Channel 2 for an input of +0.1 to -0.1 V dc and multiplication factor of 1.0. \_\_\_\_\_
- [14] **ENSURE** DG-DAQ System is configured per instructions and set for correct PT and CT. \_\_\_\_\_
- [15] **NOTIFY** Test Coordinator that the DG-DAQ is ready for the test. \_\_\_\_\_

**2.0 OPERATION OF DG DAQ AND SUPPORT ACTIVITIES DURING TEST PERFORMANCE:**

**NOTE**

Each DG-DAQ recording should be marked or saved for the appropriate Section of the test.

- [1] **WHEN** notified by Test Coordinator, **THEN**,  
**START** recording with DG DAQ. \_\_\_\_\_
- [2] **WHEN** notified by Test Coordinator, **THEN**  
**STOP** recording with DG DAQ. \_\_\_\_\_

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2A</b>	<b>2-PTI-262-01 Rev. 0000 Page 591 of 591</b>
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**DG DAQ Connections, Operation, and Disconnection**

**3.0 RESTORATION OF DG DAQ:**

[1] **ENSURE** 2A-A Diesel PK blocks are returned to normal as follows:

[1.1] **DISCONNECT** DG-DAQ from PK test block TB1, **AND**  
**INSTALL** the cover.

[1.2] **DISCONNECT** DG-DAQ from PK test block TB3, **AND**  
**INSTALL** the cover.

[2] **REMOVE** the current probe from the wire at ES2AY relay.

[3] **ENSURE** panel doors are closed and equipment removed  
from the DG room.

[4] **RETURN** this completed appendix to the Test Coordinator to  
be included in the test package.

WATTS BAR NUCLEAR PLANT  
UNIT 2 PREOPERATIONAL TEST

TITLE: Unit 2 Integrated Safeguards Test Train 2B

Instruction No: 2-PTI-262-02

Revision No: 0000

PREPARED BY: David Wiggins/ David R. Wiggins  
PRINT NAME / SIGNATURE

DATE: 1/20/2015

REVIEWED BY: Dieryl Wade/ Dieryl Wade  
PRINT NAME / SIGNATURE

DATE: 1/20/2015

INSTRUCTION APPROVAL

JTG MEETING No: 2-15-046

JTG CHAIRMAN: Nick A. Welch

DATE: 6/26/15

APPROVED BY: Nick A. Welch  
PREOPERATIONAL STARTUP MANAGER

DATE: 6/26/15

TEST RESULTS APPROVAL

JTG MEETING No: \_\_\_\_\_

JTG CHAIRMAN: \_\_\_\_\_

DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_  
PREOPERATIONAL STARTUP MANAGER

DATE: \_\_\_\_\_

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 2 of 569</b>
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#### Revision Log

<b>Revision or Change Number</b>	<b>Effective Date</b>	<b>Affected Page Numbers</b>	<b>Description of Revision/Change</b>
0000	6/26/15	All	Initial Issue. Reviewed U-1 PTI, TDN's, and CN's. Review showed some of the same issues could be encountered such as component manipulation errors, component failures, fuses not properly installed. This review was performed after procedure development and several of the issues were already addressed during procedure development and therefore not specifically incorporated as part of the U-1 test review. TDN 94-2082 lessons learned were incorporated to prevent CS system water hammer.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 3 of 569</b>
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## **1.0 INTRODUCTION**

### **1.1 Purpose**

- A. Provide detailed steps to demonstrate proper automatic actuation, alignment, and operation, including bus stripping and load sequencing, of Diesel Generator 2B-B and Train 2B-B Load Group components controlled by Engineered Safety Features Actuation System (ESFAS) with and without offsite power.
- B. Demonstrate electrical independence between redundant load groups by verification of actuated trained components.
- C. Demonstrate operability and reliability of Diesel Generator, 2B-B, including proper starting and dynamic response to loss of loads and to load sequencing.
- D. Demonstrate safety related loads will automatically and manually transfer to onsite standby diesel from normal or alternate supply and from diesel generator back to normal or alternate supply.

### **1.2 Scope**

- A. Proper automatic actuation, alignment and operation, including bus stripping and load sequencing, of Engineered Safeguards Features (ESF) components controlled by ESFAS is demonstrated by the following:
  - 1. ESF components operate and properly align in response to ESFAS signals, with offsite power available.
  - 2. ESF components operate and properly align in response to ESFAS signals, including Diesel Generator start and sequencing of loads, when offsite power is NOT available.
  - 3. Components actuated by an ESFAS signal remain in actuated condition after reset of initiating signal.
- B. Operability and reliability of Diesel Generator 2B-B, including proper starting and dynamic response to load sequencing, is demonstrated by the following:
  - 1. Diesel Generator 2B-B automatically starts and achieves equal to or greater than 6800 VAC and 58.8 HZ in less than or equal to 10 seconds after receipt of an emergency start signal, with offsite power available.

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## **1.2 Scope (continued)**

2. Diesel Generator 2B-B automatically starts and output breaker closes in less than or equal to 10 seconds after receipt of start signal, when offsite power is NOT available.
  3. Diesel Generator 2B-B maintains output voltage and frequency equal to or greater than 5213 VAC and 57 HZ respectively during load sequencing.
  4. Diesel Generator 2B-B restores output voltage and frequency to a band of 6950 (6255-7645) VAC and 60 (58.8-61.2) HZ respectively, in less than or equal to 3 seconds, following each step load increase during load sequencing.
  5. Diesel Generator 2B-B maintains steady state voltage and frequency at 6900 (6800-7260) VAC and 60 (59.8-60.1) HZ respectively.
  6. Diesel Generator 2B-B auto connected loads are less than or equal to 4.4 MW.
  7. Diesel Generator 2B-B capability to supply emergency loads is demonstrated, NOT to be impaired during performance of periodic testing (operating in parallel with offsite power) when a Safety Injection (SI) signal overrides testing.
  8. Diesel Generator 2B-B non-emergency protective trips are bypassed while operating in Emergency Run Mode.
  9. Diesel Generator 2B-B is synchronized with offsite power while loaded with emergency loads, loads are transferred to offsite power, and diesel is restored to normal standby alignment.
- C. Power supply to safety related loads automatically and manually transfers to onsite (standby) diesel units from normal or alternate supply, and manually transfers from diesel generator units back to normal or alternate supply.

## **2.0 REFERENCES**

### **2.1 Performance References**

#### **2.1.1 Procedures/Instruction References**

- A. 2-SOI-2&3.01, Condensate and Feedwater System
- B. 0-SOI-12.01, Auxiliary Boiler System

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- C. 0-SOI-26.01, High Pressure Fire Protection System
- D. 2-SOI-3.02, Auxiliary Feedwater System.
- E. 2-SOI-30.02, Containment Purge System.
- F. 2-SOI-30.03, Containment HVAC and Pressure Control.
- G. 2-SOI-30.04, Incore Instrument Room Air Cooling System.
- H. 0-SOI-30.05, Auxiliary Bldg HVAC Systems.
- I. 0-SOI-30.06, Auxiliary Building Gas Treatment System.
- J. 0-SOI-30.07, Shutdown Board Rooms HVAC el 757 & 772.
- K. 2-SOI-30.08, Containment Air Return Fans.
- L. 0-SOI-31.01, Control Building HVAC.
- M. 0-SOI-32.01, Control Air System.
- N. 0-SOI-32.02, Auxiliary Air System
- O. 2-SOI-41.02 through 41.05, Steam Generator N<sub>2</sub> Sparging, Pressurization, & Draining Loops 1 - 4.
- P. 0-SOI-61.01, Ice Condenser System.
- Q. 2-SOI-62.01, CVCS - Charging and Letdown System.
- R. 2-SOI-62.02, Boron Concentration Control
- S. 2-SOI-63.01, Safety Injection System.
- T. 0-SOI-65.02, Emergency Gas Treatment System.
- U. 0-SOI-67.01, Essential Raw Cooling Water System.
- V. 0-SOI-70.01, Component Cooling Water System
- W. 2-SOI-72.01, Containment Spray System.
- X. 2-SOI-74.01, Residual Heat Removal System.
- Y. 0-SOI-78.01, Spent Fuel Pool Cooling and Cleaning System.

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### **2.1.1 Procedures/Instruction References (continued)**

- Z. 0-SOI-81.01, Primary Makeup Water System
- AA. 0-SOI-82.02, Diesel Generator (DG) 1B-B.
- BB. 0-SOI-82.04, Diesel Generator (DG) 2B-B.
- CC. 0-SI-82-2, 8 Hour DG AC Power Source Operability Verification
- DD. 0-SI-82-9, Diesel Generator Start History
- EE. 2-SOI-85.01, Control Rod Drive and Indication System
- FF. 0-SOI-90.02, Gaseous Process Radiation Monitors
- GG. 0-SOI-211.01, 6.9KV Shutdown Board 1A-A
- HH. 0-SOI-211.02, 6.9KV Shutdown Board 1B-B.
- II. 2-SOI-211.03, 6.9KV Shutdown Board 2A-A
- JJ. 2-SOI-211.04, 6.9KV Shutdown Board 2B-B.
- KK. 2-SOI-212.07, 480 V Shutdown Board 2B1-B.
- LL. 2-SOI-212.08, 480 V Shutdown Board 2B2-B.
- MM. 2-SOI-213.07, 480V Reactor MOV Board 2B1-B.
- NN. 2-SOI-213.08, 480V Reactor MOV Board 2B2-B
- OO. 2-SOI-214.07, 480V C & A Vent Board 2B1-B
- PP. 2-SOI-214.08, 480V C & A Vent Board 2B2-B.
- QQ. 0-SOI-215.07, 480V Diesel Aux Bd 2B1-B
- RR. 0-SOI-215.08, 480V Diesel Aux Bd 2B2-B
- SS. 2-SOI-232.04, 480V Reactor Vent Board 2B-B.
- TT. 1-SOI-235.01, 120V AC Vital Power System 1-I
- UU. 1-SOI-235.02, 120V AC Vital Power System 1-II
- VV. 1-SOI-235.03, 120V AC Vital Power System 1-III

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WW. 1-SOI-235.04, 120V AC Vital Power System 1-IV

XX. 2-SOI-235.05, 120V AC Vital Power System 2-I

YY. 2-SOI-235.06, 120V AC Vital Power System 2-II

ZZ. 2-SOI-235.07, 120V AC Vital Power System 2-III

AAA. 2-SOI-235.08, 120V AC Vital Power System 2-IV

BBB. 0-SOI-236.01, 125V DC Vital Battery Bd I

CCC. 0-SOI-236.02, 125V DC Vital Battery Bd II

DDD. 0-SOI-236.03, 125V DC Vital Battery Bd III

EEE. 0-SOI-236.04, 125V DC Vital Battery Bd IV

FFF. SOI-237.01, 120V AC Instrument Power 1A

GGG. SOI-237.02, 120V AC Instrument Power 1B

HHH. 2-SOI-237.03, 120V AC Instrument Power 2A

III. 2-SOI-237.04, 120V AC Instrument Power 2B

JJJ. OPDP-8, Limiting Conditions for Operation Tracking.

KKK. NPG-SPP-10.2, Equipment Clearance Program.

LLL. NPG-SPP-18.4.6, Control of Fire Protection Impairments.

MMM. TI-215, Work Permits.

NNN. 0-TI-226, Motor Starting and Operating Limitations

OOO. 0-PI-OPS-1.1, Jumper Control Process

PPP. SMP-9.0, Watts Bar Nuclear Plant Unit 2 Conduct Of Test

QQQ. Offsite Dose Calculation Manual (ODCM)

RRR. 2-PTI-099-03, Reactor Protection System Operational Check

SSS. 2-PTI-099-04, Safeguards System

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### **2.1.1 Procedures/Instruction References (continued)**

TTT. 2-PTI-099-08, Safeguards System Test Panel

UUU. WO 112208342

VVV. WO 112208326

WWW. WO 114332654

XXX. WO 112365526

YYY. WO 113628835

ZZZ. WO 112208339

AAAA. OPDP-7, Fuse Control

### **2.1.2 Drawing References**

- A. 45N1648-3, Rev GG, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-9, Conn Diag
- B. 45N1653-3, Rev Z, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-15, Conn Diag
- C. 45N1659-1, Rev DD, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- D. 45N1659-2, Rev AA, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- E. 45N1659-3, Rev X, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- F. 45N1659-4, Rev AA, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- G. 45N1660-5, Rev X, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27A, Conn Diag
- H. 45N1660-7, Rev U, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27A, Conn Diag
- I. 45N1660-11, Rev BB, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- J. 45N1660-12, Rev HH, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag



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- K. 45N1660-14, Rev DD, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- L. 2-45W2642-1, Rev 3, (CC), Unit Cont Bd PNL 2-M-3, Conn Diag
- M. 2-45N2644-6, Rev 1, (CC), Unit Cont Bd PNL 2-M-5, Conn Diag
- N. 2-45N2645-4, Rev 2, (CC), Unit Cont Bd PNL 2-M-6, Conn Diag
- O. 45N2643-4, Rev 14, (AD), Unit Cont Bd PNL 2-M-4, Conn Diag
- P. 45N2653-2, Rev N, (AC), Unit Cont Bd PNL 2-M-15 Conn Diag
- Q. 2-45N2643-9, Rev 4, (CC), Unit Cont Bd PNL 2-M-4, Conn Diag
- R. 45N2648-3, Rev H, (AC), Unit Cont Bd PNL 2-M-9, Conn Diag
- S. 45N2645-5, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- T. 45N2645-10, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- U. 45N2645-9, Rev P, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- V. 45N2648-5, Rev H, (AC), Unit Cont Bd PNL 2-M-9, Conn Diag
- W. 45N1660-7, Rev U, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27A, Conn Diag
- X. 55W612-1, Rev M, (AC), Wiring Diagram Elec Control Board Panel 2 Common Sta Serv XFMR B & C
- Y. 55W613-5, Rev V, (AC), Wiring Diagram Elec Control Board Panel 3 Common Sta Serv XFMR A & D
- Z. 6947D63, Rev H, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A 480V 3 PH Substation Connection Conn Diag Unit 2
- AA. 6947D66, Rev K, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A 480V 3 PH Substation Connection Conn Diag Unit 2

## 2.2 Developmental References

### 2.2.1 Unit 2 FSAR, Amendment 113

- A. FSAR Section 6.3, Emergency Core Cooling System

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### **2.2.1 Unit 2 FSAR, Amendment 113 (continued)**

- B. FSAR Section 7.3, Engineered Safety Features Actuation System
- C. FSAR Section 8.1.5.3, Compliance to Regulatory Guides and IEEE Standards
- D. FSAR Section 8.3, Onsite (Standby) Power System
- E. FSAR Section 14.2.7, Conformance of Test Programs with Regulatory Guides
- F. Table 14.2-1, Sheets 26 and 27 of 89, Integrated Engineered Safety Features Actuation System Test Summary
- G. Table 14.2-1. Sheets 44, 45 and 46 of 89, Diesel Generators Test Summary
- H. Table 14.2-1, Sheets 47, 48 and 49 of 89, AC Power Distribution System Test Summary
- I. 2-TSD-262-2, Test Scoping Document, Integrated Safeguards Test - Train B
- J. 2-TSD-63-1, Integrated ESFAS System Test

### **2.2.2 Drawings**

- A. Flow Diagram
  - 1. 2-47W801-2, R25, (CC), Flow Diagram - Steam Generator Blowdown System
  - 2. 2-47W803-1, R28, (CC), Flow Diagram - Feedwater
  - 3. 2-47W803-2, R26, (CC), Flow Diagram - Auxiliary Feedwater
  - 4. 2-47W809-1, R35, (CC), Flow Diagram - Chemical & Volume Control System
  - 5. 2-47W810-1, R21, (CC), Flow Diagram - Residual Heat Removal System
  - 6. 2-47W811-1, R40, (CC), Flow Diagram - Safety Injection System
  - 7. 2-47W812-1, R26, (CC), Flow Diagram - Containment Spray System
  - 8. 1-47W845-1, R69, (CC), Flow Diagram - Essential Raw Cooling Water System
  - 9. 2-47W845-2, R8, (CC), Flow Diagram - Essential Raw Cooling Water System

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10. 2-47W859-1, R17, (CC), Flow Diagram - Component Cooling System
11. 1-47W859-2, R37, (CC), Flow Diagram - Component Cooling System

#### B. Electrical Diagram

1. 1-15E500-1, R37, (CC), Key Diagram - Station Aux Power System
2. 1-15E500-2, R52, (CC), Key Diagram - Station Aux Power System
3. 1-15E500-3, R24, (CC), Transformer Taps & Voltage Limits Aux Power System
4. 45B2756-2A, R4, Wiring Diagram 480V Reactor Vent Bd 2B-B, Compt 2A
5. 45B2772-9A, R5, Wiring Diagram 480V C&A Bldg Vt Bd 2B1-B, Conn Diagram, Compt 9A
6. 45B2772-10C, R7, Wiring Diagram 480V C&A Bldg Vt Bd 2B1-B, Conn Diagram, Compt 10C
7. 45N1632-8, R11, Wiring Diagram Miscellaneous Controls Connection Diagram
8. 45N1688-1, R25, Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagram
9. 45N1688-3, R23, Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagram
10. 45N1688-4, R26, Wiring Diagram Separation Aux Relay PNL 1-R-73, Connection Diagram
11. 45N2612-2, R6, Wiring Diagram Turbine Instrumentation & Auxiliaries Connection Diagram
12. 45W2614-4, R3, Wiring Diagram Main Feedwater Pump & Turbine 2A Connection Diagram
13. 45W2614-8, R4, Wiring Diagram Main Feedwater Pump & Turbine 2B Connection Diagram
14. 45N2637-1, R7, Wiring Diagram Aux Control Board - Panel 2-I-10, Connection Diagram

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15. 45N2637-9, R6, Wiring Diagram Aux Control Board - Panel 2-I-10, Connection Diagram
16. 2-45N2637-10, R0, Wiring Diagram Aux Control Board - Panel 2-I-10, Connection Diagram
17. 45N2680-1, R10, Wiring Diagram NSSS Aux Relay Panel 2-R-54
18. 45N2680-3, R9, Wiring Diagram NSSS Aux Relay Panel 2-R-54
19. 45N2684-1, R7, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
20. 2-45N2684-2, R0, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
21. 45N2684-3, R5, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
22. 45N2684-4, R4, Wiring Diagram NSSS Aux Relay Panel 2-R-58, Connection Diagram
23. 45N2686-1, R4, Wiring Diagram Turbo-Gen Aux Relay Panel 2-R-71, Connection Diagram
24. 45N2686-2, R6, Wiring Diagram Turbo-Gen Aux Relay Panel 2-R-71, Connection Diagram
25. 45N2689-1, R11, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
26. 45N2689-2, R7, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
27. 45N2689-3, R0, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
28. 45N2689-4, R18, Wiring Diagram Separation Aux Relay PNL 2-R-74, Conn Diagram
29. 45N2690-1, R9, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
30. 45N2690-2, R6, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram

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## 2.2.2 Drawings (continued)

31. 45N2690-3, R5, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
32. 45N2690-4, R6, Wiring Diagram Separation Auxiliary Relay PNL 2-R-75, Connection Diagram
33. 45N2691-1, R9, (AD), Wiring Diagrams Separation Aux Relay PNL 2-R-76, Conn Diagram
34. 45N2691-4, R7, (AD), Wiring Diagrams Separation Aux Relay PNL 2-R-76, Conn Diagram
35. 45N2692-1, RM, (AC), Wiring Diagrams Separation Aux Relay PNL 2-R-77, Connection Diagram
36. 45N2692-4, RK, (AC), Wiring Diagrams Separation Aux Relay PNL 2-R-77, Connection Diagram
37. 45W2772-1, RU, (AC), Wiring Diagrams 480V C&A Bldg VT BD 2B1-B, Conn Diagram
38. 45W2772-2, RX, (AC), Wiring Diagrams 480V C&A Bldg VT BD 2B1-B, Conn Diagram
39. 2-45W600-3-1, R6, (CC), Wiring Diagrams-Main and Aux Feedwater Sys Schematic Diagram
40. 2-45W600-3-2, R6, (CC), Wiring Diagram-Main & Auxiliary Feedwater Sys Schematic Diagram
41. 2-45W600-3-3, R5, (CC), Wiring Diagram-Main & Auxiliary Feedwater Sys Schematic Diagram
42. 2-45W600-3-4, R6, (CC), Wiring Diagrams-Main & Auxiliary Feedwater Sys Schematic Diagram
43. 2-45W600-3-5, R5, (CC), Wiring Diagrams-Main & Auxiliary Feedwater Sys Schematic Diagram
44. 2-45W600-3-6, R8, (CC), Wiring Diagrams-Main & Aux Feedwater System Schematic Diagram
45. 2-45W600-3-7, R6, (CC), Wiring Diagrams- Main & Aux Feedwater Sys Schematic Diagram

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46. 2-45W600-3-8, R4, (CC), Wiring Diagrams-Main & Aux Feedwater Sys Schematic Diagram
47. 2-45W600-3-9, R4, (CC), Wiring Diagrams-Main & Aux Feedwater System Schematic Diagram
48. 2-45W600-3-10, R6, (CC), Wiring Diagrams - Main & Aux Feedwater System Schematic Diagram
49. 2-45W600-3-11, R4, (CC), Wiring Diagrams - Main and Aux Feedwater Sys Schematic Diagram
50. 2-45W600-3-12, R6, (CC), Wiring Diagrams - Main & Aux Feedwater System Schematic Diagram
51. 2-45W600-3-14, R2 (CC), Electrical Wiring Diagram - Main & Auxiliary Feedwater System Schematic Diagram
52. 2-45W600-3-15, R4, (CC), Wiring Diagram - Main & Auxiliary Feedwater Sys Schematic Diagram
53. 1-45W600-30-4, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
54. 2-45W600-30-7, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
55. 2-45W600-30-8, R7, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
56. 2-45W600-30-9, R4, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
57. 2-45W600-30-11, R4, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
58. 2-45W600-30-12, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
59. 2-45W600-31-1, R3, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
60. 1-45W600-31-2, R27, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams

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61. 2-45W600-31-7, R3, (CC), Wiring Diagram - Air Conditioning System Schematic Diagram
62. 2-45W600-32, R5, (CC), Wiring Diagrams - Control Air System Schematic Diagrams
63. 2-45W600-43-1, R5, (CC), Wiring Diagrams - Sampling & Water Quality Sys Schematic Diagrams
64. 2-45W600-43-2, R6, (CC), Wiring Diagrams - Sampling & Water Quality Sys Schematic Diagrams
65. 2-45W600-46-6, R6, (CC), Wiring Diagrams - Feedwater Pump & Turbines Schematic Diagrams
66. 2-45W600-46-7, R7, (CC), Wiring Diagrams - Feedwater Pump & Turbines Schematic Diagrams
67. 2-45W600-47-2, R16, (CC), Wiring Diagram - Turbo Generator Auxiliaries Schematic Diagrams
68. 2-45W600-57-1, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
69. 2-45W600-57-2, R10, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagram
70. 2-45W600-57-3, R6, (CC), Wiring Diagrams - Separation & Misc Aux Relays Schematic Diagrams
71. 2-45W600-57-4, R11, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagram
72. 2-45W600-57-5, R16, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
73. 2-45W600-57-7, R14, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
74. 2-45W600-57-8, R6, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
75. 2-45W600-57-15, R4, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams

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76. 2-45W600-57-16, R6, (CC), Wiring Diagrams - Separation & Misc Aux Relays Schematic Diagrams
77. 2-45W600-57-17, R6, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
78. 2-45W600-57-18, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
79. 2-45W600-57-19, R4, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
80. 2-45W600-57-22, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
81. 2-45W600-57-23, R7, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
82. 2-45W600-57-25, R8, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
83. 2-45W600-57-26, R9, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
84. 2-45W600-57-29, R5, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
85. 2-45W600-57-30, R6, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
86. 2-45W600-57-32, R3, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
87. 2-45W600-57-33, R4, (CC), Wiring Diagram - Separation & Misc Aux Relays Schematic Diagrams
88. 2-45W600-61-1, R5, (CC), Wiring Diagram - Ice Condenser System Schematic Diagrams
89. 2-45W600-62-1, R7, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
90. 2-45W600-62-2, R10, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams



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91. 2-45W600-62-5, R10, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
92. 2-45W600-63-1, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
93. 2-45W600-65-1, R5, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
94. 2-45W600-65-2, R3, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
95. 2-45W600-65-3, R4, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
96. 2-45W600-68-1, R13, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
97. 2-45W600-70, R6, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
98. 2-45W600-74, R5, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagram
99. 2-45W600-77-1, R5, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
100. 2-45W600-77-2, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
101. 1-45W600-77-4, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
102. 2-45W600-77-6, R4, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
103. 2-45W600-81, R6, (CC), Wiring Diagram - Primary Makeup Water System Schematic Diagrams
104. 2-45W600-90-1, R4, (CC), Wiring Diagram - Radiation Monitoring System Schematic Diagrams
105. 2-45W600-99-1, R4, (CC) Wiring Diagram - Reactor Protection System Schematic Diagrams

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106. 1-45W700-1, R35, (CC), Key Diagram - 120V AC & 125V DC Vital Plant Control Power System
107. 1-45W700-2, R20, (CC), Key Diagram - 250VDC, 120VAC Preferred, 48VDC & 120VAC Misc Plant Power Sys
108. 1-45W708-1, R26, (CC), Wiring Diagram Misc -120V AC Distr Panels Connection Diagrams
109. 1-45W724-1, R28, (CC), Wiring Diagrams - 6900V Shutdown Board 1A-A Single Line
110. 1-45W724-2, R29, (CC), Wiring Diagrams - 6900V Shutdown Board 1B-B Single Line
111. 2-45W724-3, R11, (CC), Wiring Diagrams - 6900V Shutdown Board 2A-A Single Line
112. 2-45W724-4, R12, (CC), Wiring Diagram - 6900V Shutdown Board 2B-B Single Line
113. 2-45W732-3, R0, (CC), Wiring Diagrams - 480V Diesel Aux Bd 2B1-B Single Line
114. 2-45W732-4, R0, (CC), Wiring Diagrams- 480V Diesel Aux Bd 2B2-B Single Line
115. 2-45W749-3, R10, (CC)Wiring Diagrams - 480V Shutdown Bd 2B1-B Single Line
116. 2-45W749-4, R15, (CC), Wiring Diagram - 480V Shutdown Bd 2B2-B Single Line
117. 2-45W751-7, R11, (CC), Wiring Diagrams - 480V Reac MOV Bds 2B1-B Single Line SH-1
118. 2-45W751-8, R14, (CC), Wiring Diagrams - 480V Reac MOV Bds 2B1-B Single Line SH-2
119. 2-45W751-9, R10, (CC), Wiring Diagrams-480V Reac MOV Bds 2B1-B Single Line SH-3
120. 2-45W751-10, R13, (CC), Wiring Diagrams - 480V Reac MOV Bd 2B2-B Single Line SH-1

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121. 2-45W751-11, R9, (CC), Wiring Diagrams - 480V Reac MOV Bd 2B2-B Single Line SH-2
122. 2-45W751-12, R10, (CC), Wiring Diagrams - 480V Reac MOV Bd 2B2-B Single Line SH-3
123. 2-45W755-3, R9, (CC), Wiring Diagrams - 480V Reactor Vent Bd 2B-B Single Line SH-1
124. 2-45W755-4, R6, (CC), Wiring Diagrams - 480V Reactor Vent Bd 2B-B Single Line SH-2
125. 2-45W756-5, R2, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd 2B1-B Single Line SH-1
126. 2-45W756-6, R6, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd 2B1-B Single Line SH-2
127. 2-45W756-7, R3, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd 2B2-B Single Line SH-1
128. 2-45W756-8, R3, (CC), Wiring Diagram - 480V Cont & Aux Bldg Vt Bd 2B2-B Single Line SH-2
129. 2-45W756-10, R7, (CC), Wiring Diagrams - 480V Cont & Aux Bldg Vt Bd 2B1-B Single Line SH-3
130. 2-45W760-2-1, R5, (CC), Wiring Diagram - Condensate System Schematic Diagrams
131. 2-45W760-2-5, R7, (CC), Wiring Diagram - Condensate System Schematic Diagrams
132. 2-45W760-3-1, R6, (CC), Wiring Diagrams - Main & Aux Feedwater System Schematic Diagram
133. 2-45W760-3-6, R7, (CC), Wiring Diagram - Main & Aux Feedwater System Schematic Diagrams
134. 2-45W760-3-7, R7, (CC), Wiring Diagram - Main & Aux Feedwater System Schematic Diagrams
135. 1-45W760-26-1, R27, (CC), Wiring Diagram - Hi Press. Fire Protection Sys Schematic Diagrams

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- 136. 2-45W760-26-5, R3, (CC), Wiring Diagram - Hi Press. Fire Protection Sys Schematic Diagrams
- 137. 2-45W760-30-9, R13, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams SH-9
- 138. 2-45W760-30-10, R11, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 139. 1-45W760-30-11, R11, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 140. 2-45W760-30-11, R0, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 141. 1-45W760-30-12, R8, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 142. 2-45W760-30-12, R0, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 143. 2-45W760-30-13, R9, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 144. 1-45W760-30-14, R9, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 145. 2-45W760-30-15, R5, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 146. 2-45W760-30-16, R6, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 147. 2-45W760-30-17, R3, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 148. 2-45W760-30-18, R5, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 149. 2-45W760-30-19, R5, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 150. 2-45W760-30-20, R4, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams

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- 151. 1-45W760-30-21, R10, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 152. 2-45W760-30-22, R0, (CC), Wiring Diagram - Ventilating System Schematic Diagrams
- 153. 2-45W760-30-23, R0, (CC), Wiring Diagram - Ventilating System Schematic Diagrams
- 154. 2-45W760-30-25, R0, (CC), Wiring Diagrams - Ventilating System Schematic Diagrams
- 155. 2-45W760-31-6, R5, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 156. 1-45W760-31-9, R6, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 157. 1-45W760-31-10, R15, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams SH-10
- 158. 1-45W760-31-13, R13 (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 159. 1-45W760-31-14, R15, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 160. 2-45W760-31-15, R0, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 161. 1-45W760-31-16, R7, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 162. 2-45W760-31-17, R2, (CC), Wiring Diagrams - Air Conditioning System Schematic Diagrams
- 163. 1-45W760-31-18, R21, (CC), Wiring Diagram - Air Conditioning System Schematic Diagram
- 164. 1-45W760-31-19, R20, (CC), Wiring Diagram - Air Conditioning System Schematic Diagram
- 165. 1-45W760-31-21, R12, (CC, )Wiring Diagram - Air Conditioning System Schematic Diagram

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- 166. 1-45W760-32-1, R11, (CC), Wiring Diagrams - Control Air System Schematic Diagrams
- 167. 1-45W760-32-2, R8, (CC), Wiring Diagrams - Control Air System Schematic Diagrams SH-2
- 168. 2-45W760-62-1, R8, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
- 169. 2-45W760-62-2, R12, (CC), Wiring Diagram - Chemical & Volume Control Sys Schematic Diagrams
- 170. 2-45W760-62-3, R8, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
- 171. 2-45W760-62-5, R7, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
- 172. 2-45W760-62-6, R7, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
- 173. 2-45W760-62-7, R6, (CC), Wiring Diagrams - Chemical & Volume Control Sys Schematic Diagrams
- 174. 2-45W760-63-1, R6, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
- 175. 2-45W760-63-2, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
- 176. 2-45W760-63-3, R7, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
- 177. 2-45W760-63-4, R10, (CC), Wiring Diagrams - Safety Injection System Schematic Diagram
- 178. 2-45W760-63-7, R8, (CC), Wiring Diagrams - Safety Injection System Schematic Diagrams
- 179. 1-45W760-65-1, R13, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagram
- 180. 2-45W760-65-2, R4, (CC), Wiring Diagrams - Emergency Gas Treatment System Schematic Diagrams

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- 181. 2-45W760-67-3, R0, (CC), Wiring Diagram - Essential Raw Cooling Water Sys Schematic Diagrams
- 182. 2-45W760-67-4, R0, (CC), Wiring Diagrams - Essential Raw Cooling Water Sys Schematic Diagrams
- 183. 2-45W760-67-5, R8, (CC), Wiring Diagrams - ERCW System Schematic Diagrams
- 184. 2-45W760-67-6, R9, (CC), Wiring Diagram - Essn Raw Cooling Water System Schematic Diagram
- 185. 2-45W760-67-7, R6, (CC), Wiring Diagrams - ERCW System Schematic Diagrams
- 186. 2-45W760-67-8, R6, (CC), Wiring Diagram - Essential Raw Cooling Water Sys Schematic Diagrams
- 187. 2-45W760-67-11, R0, (CC), Wiring Diagram - ERCW System Schematic Diagrams
- 188. 2-45W760-67-15, R6, (CC), Wiring Diagrams- ERCW System Schematic Diagrams
- 189. 2-45W760-68-1, R9, (CC), Wiring Diagram - 6900V Reactor Coolant Pump Bds Schematic Diagrams
- 190. 2-45W760-68-3, R9, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
- 191. 2-45W760-68-4, R9, (CC), Wiring Diagram - Reactor Coolant System Schematic Diagrams
- 192. 2-45W760-70-1, R3, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 193. 2-45N760-70-3, R10, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 194. 2-45W760-70-4, R5, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 195. 2-45W760-70-5, R7, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams

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- 196. 2-45W760-70-6, R8, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 197. 2-45W760-70-7, R5, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 198. 2-45W760-70-8, R9, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 199. 2-45W760-70-9, R9, (CC), Wiring Diagrams - Component Cooling System Schematic Diagrams
- 200. 2-45W760-70-10, R7, (CC), Wiring Diagram - Component Cooling System Schematic Diagrams
- 201. 2-45W760-72-1, R9, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram
- 202. 2-45W760-72-2, R8, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram
- 203. 2-45W760-72-4, R5, (CC), Wiring Diagrams - Containment Spray System Schematic Diagram
- 204. 2-45W760-74-1, R9, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagram
- 205. 2-45W760-74-2, R10, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 206. 2-45W760-74-3, R5, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 207. 2-45W760-74-4, R10, (CC), Wiring Diagrams - Residual Heat Removal System Schematic Diagrams
- 208. 2-45W760-77-3, R3, (CC), Wiring Diagram - Waste Disposal System Schematic Diagrams
- 209. 1-45W760-78-1, R7, (CC), Wiring Diagram - Spent Fuel Pit Cooling System Schematic Diagrams
- 210. 2-45W760-81-1, R5, (CC), Wiring Diagram - Primary Makeup Water System Schematic Diagrams



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- 211. 1-45W760-82-1C, R12, (CC), Wiring Diagram - 6900V Standby Diesel Generator 2B-B Schematic Diagrams
- 212. 1-45W760-82-2C, R10, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2B-B
- 213. 1-45W760-82-3C, R4, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2B-B
- 214. 1-45W760-82-4C, R8, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2B-B
- 215. 1-45W760-82-5C, R13, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2B-B
- 216. 1-45W760-82-6C, R11, (CC), Wiring Diagram - Stby Diesel Gen Sys Schem Diag DG 2B-B
- 217. 2-45W760-211-1, R0, (CC), Wiring Diagram - 6900 V Shutdown Power Schematic Diagram
- 218. 2-45W760-211-2, R0, (CC), Wiring Diagram- 6900 V Shutdown Power Schematic Diagram
- 219. 2-45W760-211-3, R0, (CC), Wiring Diagram - 6900 V Shutdown Power Schematic Diagram
- 220. 1-45W760-211-4, R25, (CC), Wiring Diagram - 6900 V Shutdown Power Schematic Diagram
- 221. 2-45W760-211-5, R0, (CC), Wiring Diagrams - 6900 V Shutdown Power Schematic Diagram
- 222. 2-45W760-211-7, R0, (CC), Wiring Diagram - 6900 V Shutdown Power -Train B Schematic Diagram
- 223. 2-45W760-211-14, R0, (CC), Schematic Diagrams - 6900V Shutdown Power 2B-B Schematic Diagrams
- 224. 2-45W760-211-15, R0, (CC), Wiring Diagrams - 6900V Shutdown Power 2B-B Schematic Diagrams
- 225. 2-45W760-211-16, R0, (CC), Wiring Diagram - 6900V Shutdown Power Diesel Loading Logic

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- 226. 2-45W760-211-17, R0, (CC), Wiring Diagram - 6900V Shutdown Power -Train A and B Schematic Diagram
- 227. 2-45W760-211-18, R0, (CC), Wiring Diagram - 6900V Shutdown Power Schematic Diagram
- 228. 1-45W760-211-22, R4, (CC), Wiring Diagram - 6900V SD Power 1B-B Schematic Diagrams
- 229. 1-45W760-211-23, R2, (CC), Wiring Diagram - 6900V SD Power 2A-A Schematic Diagrams
- 230. 2-45W760-212-1, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 231. 2-45W760-212-2, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 232. 2-45W760-212-3, R0, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 233. 2-45W760-212-4, R1, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 234. 2-45W760-212-4A, R2, (CC), Wiring Diagrams - 480V Shutdown Power Schematic Diagrams
- 235. 2-45W760-270-2, R10, (CC), Wiring Diagram - Miscellaneous System Schematic Diagram
- 236. 2-54114-1-7246D11-16, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 237. 2-54114-1-7246D11-17, R1, (CC), Solid State Protection System Interconnection Diagram
- 238. 2-54114-1-7246D11-18, R0, (CC), Electrical Solid State Protection System Interconnection Diagram
- 239. 2-54114-1-7246D11-19, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 240. 2-54114-1-7246D11-20, R2, (CC), Electrical Solid State Protection System Interconnection Diagram

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## 2.2.2 Drawings (continued)

- 241. 2-54114-1-7246D11-21, R01, (CC), Electrical Solid State Protection System Interconnection Diagram
- 242. 2-54114-1-7246D11-22, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 243. 2-54114-1-7246D11-23, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 244. 2-54114-1-7246D11-24, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 245. 2-54114-1-7246D11-25, R1, (CC), Electrical Solid State Protection System Interconnection Diagram
- 246. 2-54114-1-7246D11-55, R0, (CC), Electrical Solid State Protection System Interconnection Diagram
- 247. C5-DGM1405(X1526)A/B, RB, (AC), Schematic Wiring Diagram IPCX 230-00 with Honeywell (W901A) TLC and DX Chillers 115 volt 60 hz control
- 248. 45N1648-3, Rev GG, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-9, Conn Diag
- 249. 45N1653-3, Rev Z, (AC), Wiring Diagram Unit Cont Bd PNL 1-M-15, Conn Diag
- 250. 45N1659-1, Rev DD, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- 251. 45N1659-3, Rev W, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-26, Conn Diag
- 252. 45N1660-5, Rev X, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27A, Conn Diag
- 253. 45N1660-11, Rev BB, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- 254. 45N1660-12, Rev HH, (AC), Wiring Diagram Unit Cont Bd PNL 0-M-27B, Conn Diag
- 255. 2-45W2642-1, Rev 2, (CC), Unit Cont Bd PNL 2-M-3, Conn Diag
- 256. 2-45N2644-6, Rev 0, (CC), Unit Cont Bd PNL 2-M-5, Conn Diag

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## 2.2.2 Drawings (continued)

- 257. 2-45N2645-4, Rev 2, (CC), Unit Cont Bd PNL 2-M-6, Conn Diag
- 258. 45N2643-4, Rev 14, (AD), Unit Cont Bd PNL 2-M-6, Conn Diag
- 259. 45N2648-3, Rev H, (AC), Unit Cont Bd PNL 2-M-9, Conn Diag
- 260. 45N2645-5, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- 261. 45N2645-10, Rev K, (AC), Wiring Diagram Unit Cont Bd PNL 2-M-6, Conn Diag
- 262. 55W612-1, Rev M, (AC), Wiring Diagram Elec Control Board Panel 2  
Common Sta Serv XFMR B & C
- 263. 55W613-5, Rev V, (AC), Wiring Diagram Elec Control Board Panel 3  
Common Sta Serv XFMR A & D
- 264. 6947D63, Rev H, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A  
480V 3 PH Substation Connection Conn Diag Unit 2
- 265. 6947D66, Rev K, (AC), LVME "DS" SWGR 480V Shutdown Board 2A2-A  
480V 3 PH Substation Connection Conn Diag Unit 2

### C. Mechanical

- 1. None

### D. Logic/Control

- 1. None

### E. Vendor Drawings

- 1. None

## 2.2.3 Vendor Manuals

- A. None

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## **2.2.4 Documents**

### **A. Plant Operating Instructions and Manuals**

1. OPDP-8, R17, Operability Determination Process and Limiting Conditions for Operation Tracking.
2. NPG-SPP-10.2, R10, Clearance Procedure to Safely Control Energy.
3. NPG-SPP-18.4.6, R5, Control of Fire Protection Impairments.
4. 0-TI-226, Rev 1, Motor Starting and Operating Limitations
5. 0-PI-OPS-1.1, R7, Jumper Control Process

### **B. Regulatory Documents**

1. Regulatory Guide 1.9, Rev 4, Selection, Design, Qualification, And Testing Of Emergency Diesel Generator Units Used As Class 1E Onsite Electric Power Systems At Nuclear Power Plants
2. Regulatory Guide 1.41, dated 3/16/73, Preoperational Testing of Redundant On -Site Electric Power Systems to Verify Proper Load Group Assignments
3. Regulatory Guide 1.68, Rev 3, Initial Test Programs for Water - Cooled Nuclear Power Plants
4. NUREG-0847, Supplement 23, Section 14.2.2(3)

### **C. Unit 1 Technical Specifications, Amendment 97, Section 3.8, Electrical Power Systems and associated Surveillance Requirements**

### **D. Unit 2 Technical Specifications, Revision H:**

1. Section 3.3.5, Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation, Table 3.3.5-1 (page 1 of 1) LOP DG Start Instrumentation, Function 3 and 4
2. Section 3.8, Electrical Power Systems and associated Surveillance Requirements

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#### **2.2.4 Documents (continued)**

##### **E. Miscellaneous Documents**

1. NETP - 100, R3, Emergency Diesel Generator Reliability Program
2. PTI-200-01, AC Auxiliary Power System Survey (Unit 1)
3. PTI-262-01, R0, Integrated Safeguards Test (Unit 1)
4. SMP-9.0, R5, Watts Bar Nuclear Plant Unit 2 Conduct of Test
5. WBN2-3B-4002, R2, Auxiliary Feedwater System
6. WBN2-62-4001, R3, Chemical and Volume Control System
7. WBN2-63-4001, R3, Safety Injection System
8. WBN2-68-4001, R4, Reactor Coolant System
9. WBN2-70-4002, R4, Component Cooling System
10. WBN2-72-4001, R3, Containment Heat Removal System
11. WBN2-74-4001, R5, Residual Heat Removal System
12. WBN2-82-4002, R2, Standby Diesel Generator System
13. WBN2-99-4003, R1, Reactor Protection System
14. 2-27-211-1826E-B, R 0, NESSD
15. 2-02-062-104-B, R 0, NESSD
16. 2-02-063-15-B, R 0, NESSD
17. 2-02-074-20-B, R 0, NESSD
18. 0-02-067-47-B, R 1, NESSD
19. 0-02-067-51-B, R 1, NESSD
20. 0-02-067-55-B, R 1, NESSD
21. 0-02-067-59-B, R 1, NESSD
22. 2-02-003-128-B, R 0, NESSD

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#### 2.2.4 Documents (continued)

- 23. 2-02-070-33-B, R 2, NESSD
- 24. 0-02-070-51B-B, R 2, NESSD
- 25. 2-02-070-130B-B, R 1, NESSD
- 26. 2-02-68-341D-B, R 1, NESSD
- 27. 2-02-072-10-B, R 0, NESSD
- 28. 0-02-031-49/2-B, R 1, NESSD
- 29. 2-02-30-39-B, R 0, NESSD

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### 3.0 PRECAUTIONS AND LIMITATIONS

#### 3.1 Precautions

- A. Shorting of test equipment leads can occur if lifted leads are not adequately taped or otherwise insulated when lifted.
- B. To prevent relays from inadvertent actuation, manual actuation of relays should be made with a nonconductive device.
- C. Manual action to maintain Essential Raw Cooling Water (ERCW) pressures within normal pressure band, 95 to 110 psig, and below relief valve pressure setpoints on lower Auxiliary Building areas, may be required, including stopping or starting pump(s) on the non-tested shutdown board(s).
- D. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Manual Procedure 1021.

#### 3.2 Limitations

- A. Maximum permissible duty rating of DG 2B-B is 4840 kW for any 2 hour period in any 24 hour period. Normal continuous duty rating of DG 2B-B is 4400 kW.
- B. To provide for uniform time measurement, all clock times recorded in this test are to be taken from Unit 2 Main Control Room clock located on 2-M-3, when possible, recorded in 24 hour clock format. For example, if time is required to be recorded at 10:35 A. M., time will be entered as 1035. A time recording required for 1 P.M., is recorded 1300. Personnel recording time from locations outside of the Main Control Room may either request time from the control room or timepieces may be synchronized to the Main Control Room clock. If Unit 2 clock is not operating, Unit 1 clock may be used for time reference.
- C. To prevent Reactor Coolant Pump (RCP) seal leakage into containment, RCP motors and pumps are required to be uncoupled with pump backseated for duration of this test.
- D. Since ABI/CVI Crosstie Handswitches, 2-HS-90-410-A and 2-HS-90-415-B are required to be placed in NORMAL position during test performance, fuel movement is required to be stopped or containment must be isolated if either movement of irradiated fuel in containment or auxiliary bldg is planned, or in progress, when containment is open to ABSCE spaces. 2-SOI-30.02 contains further information related to ABI/CVI Crosstie Handswitches.



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### 3.2 Limitations (continued)

- E. To prevent overloading of associated Emergency Diesel Generator, only one ERCW pump at a time can be automatically started off same 6900V Shutdown Board . Therefore, testing of two ERCW pumps will be performed as follows:

<b>ERCW PUMP</b>	<b>TEST SECTION and EVENT</b>	<b>TEST SECTION and EVENT</b>
F-B	6.3 - SIS	6.3 - LOOP (load sequence)
H-B	6.1 - LOOP (load sequence)	6.2 - SIS

- F. The following pump run out flowrate limits apply during performance of this test:
1. Centrifugal Charging Pump: 550 gpm
  2. Safety Injection Pump: 650 gpm
  3. Residual Heat Removal Pump: 5,000 gpm
  4. Containment Spray Pump: 4,950 gpm
  5. Motor-Driven Auxiliary Feedwater Pump: 410 gpm

#### **NOTE**

0-TI-226 provides information on starting and operating limitations for motors listed.

- G. The following motor starting limitations apply during performance of this test:
1. Centrifugal Charging Pump permissible starts per hour:
    - a. Motor at ambient temperature - 3 consecutive starts
    - b. Motor at operating temperature - 2 consecutive starts

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### 3.2 Limitations (continued)

2. Safety Injection Pump;
  - a. Motor at ambient temperature - 3 consecutive starts
  - b. Motor at operating temperature - 2 consecutive starts
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
3. Residual Heat Removal Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
4. Containment Spray Pump permissible starts per hour:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 15 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
5. Auxiliary Feedwater Pump (motor-driven)
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes

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### 3.2 Limitations (continued)

6. Essential Raw Cooling Water Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
7. Component Cooling Water Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
8. Thermal Barrier Booster Pump:
  - a. Motor at ambient temperature - 2 consecutive starts
  - b. Motor at operating temperature - 1 consecutive starts
  - c. Subsequent starts with motor running between starts - 20 minutes
  - d. Subsequent starts with motor standing idle between starts - 45 minutes
- H. The following chiller has compressor start limitations of 20 minutes between starts. These limits will be bypassed during performance of this test as normally done during 0-SI-82-3, -4, -5, -6 series surveillance testing:
  - a. Electrical Board Room Chillers
- I. Anytime Motor-Driven Auxiliary Feedwater Pumps are running, additional recirculation flow path may be used during low flow demand conditions using 2-SOI-3.02.
- J. Review 0-SOI-82.04 for diesel generator 2B precautions/limitations that will be applicable during this testing.

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### 3.2 Limitations (continued)

- K. 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 Chronological Test Log (CTL) and continue testing.
- L. 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.
- M. All open problems are to be tracked by a corrective action document and entered on the appropriate system punchlist.
- N. Observe all Radiation Protection (RP) requirements when working in or near radiological areas.
- O. Ensure there are no adverse effects to the operation of Unit 1 structures, systems, or components.
- P. Test personnel will coordinate with Unit 1 Operations when manipulating Unit 1 equipment if required.
- Q. System water chemistry is within system specifiable parameters especially for fluids supplied from external sources.

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Date \_\_\_\_\_

#### 4.0 PREREQUISITE ACTIONS

##### NOTES

- Section 4.3, Approvals and Notifications, provides for notifications and approvals for this Instruction to be performed and should be performed prior to manipulating plant equipment.
- Steps 4.3[1] and 4.3[2] should be completed prior to beginning equipment alignments and verifications of plant equipment, as well as installing M&TE, or other temporary equipment required for this test.
- Preliminary actions administrative in nature, that do not change plant configuration, may be completed prior to obtaining appropriate management approval in Section 4.3. Examples of administrative actions are, but not limited to, reviewing drawings and WITEL for test impact, sampling of water systems by Chemistry group when procedures are used by Chemistry and configuration of plant components are controlled by those personnel/procedures.
- Prerequisite Sub-Sections 4.1, 4.2, 4.3, and 4.4, and steps within those subsections, may be performed in any order or concurrently with Test Director's approval. Approval by Test Director is noted by Test Director notation at bottom of page for those steps performed out of sequence.

#### 4.1 Preliminary Actions

[1] **INITIATE** work order for craft support: \_\_\_\_\_

- Perform 2-PTI-262-02, Train 2B Integrated Safeguards Test.

Work Order No. \_\_\_\_\_ 112365526

- Install M&TE and monitor power on CSST A, B, C, D.

Work Order No. \_\_\_\_\_ 113628835

- Makeup cables required for sequence of events and response time as required by this test.

Work Order No. \_\_\_\_\_ 112208339

Date \_\_\_\_\_

#### 4.1 Preliminary Actions (continued)

- Perform test support activities such as install or remove jumpers, check contacts open or closed, etc...

Work Order No. \_\_\_\_\_ 112208342

- Drain Steam Generators as required during the performance of this test.

Work Order No. \_\_\_\_\_ 112208326

- Uncouple RCP motors and pumps and backseat RCPs using appropriate procedure:

Work Order No. \_\_\_\_\_ 114332654

- [2] **EVALUATE** punchlist items on Open Watts Bar Integrated Task Equipment List (WITEL) **AND**

**ENSURE** that they will **NOT** adversely affect the test performance:

SUBSECTION	INITIAL	DATE
Subsection 6.1		
Subsection 6.2		
Subsection 6.3		

- [3] **ENSURE** plant instruments required for test performance, listed on Appendix B, Permanent Plant Instrumentation Log, have been verified filled, vented (as required), placed in service, and within their calibration interval.

- [4] **ENSURE** outstanding Design Change Notices (DCN's), Engineering Document Construction Releases (EDCR's) or Temporary Modifications (T-Mod) do NOT adversely impact testing, and

**ATTACH** documentation of DCN's, EDCR's and T-Mod's that were reviewed to the data package.

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#### 4.1 Preliminary Actions (continued)

- [5] **ENSURE** changes to references listed in Appendix A, Test Procedure Reference Review, have been reviewed, recorded in Appendix A, and determined **NOT** to adversely affect test results. \_\_\_\_\_
- [6] **OBTAIN** copies of the applicable forms from the latest revision of SMP-9.0, and

**ATTACH** to this Preoperational Test Instruction (PTI) for use during the performance of this PTI. \_\_\_\_\_
- [7] **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. \_\_\_\_\_
- [8] **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. \_\_\_\_\_
- [9] **ENSURE** preoperational tests have been successfully completed for SSPS Train 2B:

  - 2-PTI-099-03, Reactor Protection System Operational Test; \_\_\_\_\_
  - 2-PTI-099-04, Safeguards System; \_\_\_\_\_
  - 2-PTI-099-08, Safeguards System Test Panel. \_\_\_\_\_
- [10] **ENSURE** ERCW system flow balance has been completed per 2-PTI-067-02-A Train A and 2-PTI-067-02-B Train B, ERCW Flow Balancing. \_\_\_\_\_
- [11] **ENSURE** all components that are within the scope of this test are turned over to Preoperational Startup Engineering or Operations. \_\_\_\_\_
- [12] **ENSURE** Communications methods have been established or will be provided in areas where testing is to be conducted. \_\_\_\_\_

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#### 4.1 Preliminary Actions (continued)

- [13] **ENSURE** Unit 2 (U-2) Reactor Vessel head, upper internals and lower internals are removed. \_\_\_\_\_
- [14] **ENSURE** U-2 Reactor Vessel stud hole covers are installed. \_\_\_\_\_
- [15] **ENSURE** U2 Reactor Vessel Cavity seal is installed. \_\_\_\_\_
- [16] **ENSURE** U2 Refueling Cavity has been verified to meet requirements for Cleanliness Class B and is available to accept overflow from Reactor Vessel. \_\_\_\_\_
- [17] **ENSURE** U2 RCPs are uncoupled and backseated:
- Reactor Coolant Pump 1 \_\_\_\_\_
  - Reactor Coolant Pump 2 \_\_\_\_\_
  - Reactor Coolant Pump 3 \_\_\_\_\_
  - Reactor Coolant Pump 4 \_\_\_\_\_
- [18] **REQUEST** Chemistry to sample the following water sources for use in Reactor Coolant System (RCS) and Steam Generators (SGs):
- U2 Refueling Water Storage Tank (RWST) \_\_\_\_\_
  - U2 Condensate Storage Tank (CST) \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

- [19] **OBTAIN** Chemistry approval for use of water contained in CST B and RWST for SGs and RCS. \_\_\_\_\_

\_\_\_\_\_  
Chemistry

\_\_\_\_\_  
Date



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Date \_\_\_\_\_

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

##### NOTES

- 1) Each recorder requires an uninterruptible power supply to allow continuous operation should a local power outlet lose power during the testing sequence.
- 2) Each channel should be fitted with a power supply such that no battery/toggle switch operation is required to supply a channel with power to record the channel data.
- 3) Each recorder should be set up to initiate recording of data by personnel simply "STARTING" the recorder.
- 4) The Sequence of Events recorder should be placed in standby and a trigger event set to begin recording without personnel intervention, if possible.

[1] **ENSURE** the following M&TE or equivalent is available:

- One (1) Dranetz System 22 Sequence of Event Recorder (SER) , capable of monitoring 68 simultaneous inputs (resolution 0.020 seconds, accuracy  $\pm 0.010$  seconds) \_\_\_\_\_

##### NOTE

Refer to Appendix G, DG Chart Recorder Connections, for channel scaling requirements.

- Eight (8) Western Graphtec WR3101 Chart Recorders, 6-Channels each (accuracy  $\pm 1.8\%$  full-scale, chart speed  $\pm 0.24\% \pm 0.6\text{mm}$ ). \_\_\_\_\_
- One (1) Dranetz 325 Power System Polymeter, capable of monitoring 0-150 VAC at 55 to 65 Hz [Voltage Accuracy  $\pm (0.36\%$  of reading  $\pm 0.06\%$  of range); Frequency Accuracy  $\pm 1.2 \times (0.002 \text{ Hz} + 1 \text{ LSD})$ ] \_\_\_\_\_
- Uninterruptible Power Supply for each recorder. \_\_\_\_\_
- One (1) Keithley 197 Digital Multimeter, capable of measuring 20 VDC. Accuracy  $\pm (0.018\%$  of reading  $0.0012\%$  of range). \_\_\_\_\_
- Eleven (11) multimeters, capable of monitoring 0-120 VAC, 250 VDC, and continuity ( $\pm 2\%$  range). \_\_\_\_\_
- Two (2) 6.9KV breaker umbilical test cords \_\_\_\_\_

Date \_\_\_\_\_

**4.2 Special Tools, Measuring and Test Equipment, Parts and Supplies (continued)**

- Two (2) 6.9KV breaker test links
- Fifty (50) electrical jumpers

\_\_\_\_\_  
 \_\_\_\_\_

[2] **ANNOTATE** information for each test equipment or equivalent used during performance of this Instruction (NA unused information blanks):

TEST EQUIPMENT	MODEL NO.	TVA ID NO.	CAL DUE DATE	RANGE	INIT
Stopwatch			N/A		
Stopwatch			N/A		
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					
VOM					

Date \_\_\_\_\_

**4.2 Special Tools, Measuring and Test Equipment, Parts and Supplies (continued)**

TEST EQUIPMENT	MODEL NO.	TVA ID NO.	CAL DUE DATE	RANGE	INIT
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					
Recorder					

[3] **ENSURE** keys for the following panels are available:

- 2-R-48 \_\_\_\_\_
- 2-R-50 \_\_\_\_\_
- 2-R-51 \_\_\_\_\_
- 2-R-54 \_\_\_\_\_
- 2-R-73 \_\_\_\_\_
- 2-R-74 \_\_\_\_\_
- 2-R-75 \_\_\_\_\_
- 2-R-76 \_\_\_\_\_
- 2-R-78 \_\_\_\_\_
- 2-R-79 \_\_\_\_\_
- 2B-B SD Bd Logic Panels \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications

##### **NOTE**

Shift Manager's approval is required prior to performing any equipment manipulations or realignments.

- [1] **OBTAIN** permission of Preoperational Startup Manager prior to begin test.

\_\_\_\_\_  
Startup Manager Signature

\_\_\_\_\_  
Date

- [2] **OBTAIN** Shift Manager's (SM) authorization to begin test.

\_\_\_\_\_  
SM Signature

\_\_\_\_\_  
Date

- [3] **VERIFY** Units 1 and 2 are in "Train A Protected Status".

\_\_\_\_\_  
U2 SRO

\_\_\_\_\_  
Date

- [4] **NOTIFY** U2 SRO of requirement to have ABI/CVI Crosstie Switches 2-HS-90-410-A & 2-HS-90-415-B in NORMAL position for duration of this test (Signoff for switch placement in Section 4.4).

\_\_\_\_\_  
U2 SRO

\_\_\_\_\_  
Date

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- [5] **NOTIFY** U1 and U2 Operations Work Control Center of test preparations beginning **AND**

**REQUEST** notification of any tagging planned on plant common equipment or Train 2B equipment. \_\_\_\_\_

\_\_\_\_\_  
Unit 1 Work Control SRO Date

\_\_\_\_\_  
Unit 2 Work Control SRO Date

- [6] **NOTIFY** U1 and U2 Operations Work Control Center to **NOT** allow hydrocarbon use permits in areas open to EGTS and ABGTS for 24 hours prior to testing. \_\_\_\_\_

\_\_\_\_\_  
Unit 1 Work Control SRO Date

\_\_\_\_\_  
Unit 2 Work Control SRO Date

- [7] **NOTIFY** Chemistry and Radiation Protection (RP) sample carts will be required for Unit 2 Shield Building Vent 2-RE-90-400 rad monitors which are removed from service during this test **AND**

**PROVIDE** both groups a copy of Appendix V. \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact Date

\_\_\_\_\_  
RP Contact Date

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- [8] **REQUEST** Chemistry to open U2 Containment Purge and U2 Incore Instrument Room purge packages for duration of test.

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

- [9] **NOTIFY** Radiation Protection (RP) LCC coolers, CRDM coolers, and Air Return Fans will be starting and running for this test.

\_\_\_\_\_  
RP Contact

\_\_\_\_\_  
Date

#### NOTE

- 1) Signoff of Step 4.3[10] may be delayed until start time of DG is determined within relative certainty.
- 2) Timely notification with expected time of start is important for Dispatcher to ensure system response.
- 3) Notification requirement in 0-SOI-82.03 may be signed off in Section 8.1.4, Step 3 once notification is completed.

- [10] **NOTIFY** load dispatcher that DG 2B-B will be synchronized to and disconnected from the grid several times over the course of this test:

\_\_\_\_\_  
Person Contacted

\_\_\_\_\_  
Date

- [11] **PROVIDE** Operations with Appendix T as Information Only for potential LCO evaluations required during this test evolution.

- [12] **OBTAIN PERMISSION** to stage recorders and wiring in Train 2B areas such as SD BD RMS and DG 2B-B rooms.

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

U2 SRO

Date

- [13] **OBTAIN** U2 SRO permission to perform M&TE connections to Train 2B equipment. \_\_\_\_\_

U2 SRO

Date

- [14] **NOTIFY** Startup I&C (SUTI) personnel to install and connect recording equipment and cabling in the following Appendixs:

- Appendix G, DG 2B-B Chart Recorder Connections \_\_\_\_\_
- Appendix H, DG 2B-B Chart Recorder Hookup \_\_\_\_\_
- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
- Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

- [15] **REQUEST** Startup Electrical (SUTE) support for performing Appendix E, Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_

#### NOTE

Impairment Permit required in Step 4.3[16] addresses defeat of 0-FCV-26-320, -3145, and -3146, loss of all water based suppression systems from 2-R-79 and loss of U2 B Train Electric Fire Pump during Blackouts.

- [16] **NOTIFY** Fire Operations of Blackout testing on U2 Train B Power Supply **AND**

**REQUEST** an impairment permit for components listed in Appendix C. \_\_\_\_\_

Fire Operations Contact

Date

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Date \_\_\_\_\_

#### 4.3 Approvals and Notifications (continued)

- [17] **NOTIFY** Chemistry that sample lines to Gas Analyzers 0-H2E-43-450, 0-O2E-43-450, and recorder 0-XR-43-232, GAS ANALYZER SYSTEM O2/H2 RECORDER, will be isolated when 2-FCV-68-307, PRESSURIZER RELIEF TANK (PRT) GAS ANALYZER SUPPLY, is closed by Phase A Containment Isolation signal and to take appropriate actions for these recorders.

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

- [18] **REQUEST** Chemistry to suspend sampling of U2 Reactor Coolant Drain Tank (RCDT) and PRT:

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

- [19] **NOTIFY** Chemistry and RP to take appropriate actions required for the Radiation Monitors listed in Appendix V which will lose power during the performance of this test. A sample cart(s) should be installed for 2-RE-90-400.

- [20] **NOTIFY** Nuclear Security Supervisor that the upcoming Blackout of 2B-B 6.9 KV Shutdown Board will drop out the Sheriff's Radio for approximately 20 to 30 minutes.



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Date \_\_\_\_\_

#### 4.4 Field Preparations

- [1] **REQUEST** I&C (SUTI) remove Train 2A Solid State Protection System (SSPS) from service using Appendix D, Section 1.0 \_\_\_\_\_

\_\_\_\_\_  
I & C (SUTI) Contact

\_\_\_\_\_  
Date

- [2] **REQUEST** permission of U2 SRO to make test recorder connections for DG 2B-B and Unit 2 equipment, **AND**

**EVALUATE** LCO entry conditions for DG 2B-B while connecting cabling. \_\_\_\_\_

\_\_\_\_\_  
U2 SRO

\_\_\_\_\_  
Date

- [3] **REQUEST** I&C (SUTI) install and connect test Recorder(s) per Appendices G, H, I, and J. \_\_\_\_\_

\_\_\_\_\_  
I & C (SUTI) Contact

\_\_\_\_\_  
Date

- [4] **ENSURE** the following systems/components are filled and vented (as required), and available for service in accordance with the applicable system operating instruction:

- U-2 Auxiliary Feedwater System motor-driven pump (MDAFW) 2B-B and associated piping for both recirc operation and full flow injection in accordance with Appendix C, Equipment Alignment, and 2-SOI-3.02 Auxiliary Feedwater System. \_\_\_\_\_
- High Pressure Fire Protection System is in Standby per 0-SOI-26.01. \_\_\_\_\_
- Control Air System is in service per 0-SOI-32.01. \_\_\_\_\_
- Auxiliary Air System is in service per 0-SOI-32.02. \_\_\_\_\_

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#### 4.4 Field Preparations (continued)

- U2 Chemical and Volume Control System Centrifugal Charging Pumps (CCP) 2B-B and associated piping for both recirc operations and full flow injection in accordance with Appendix C, Equipment Alignment, and 2-SOI-62.01, CVCS Charging and Letdown System. \_\_\_\_\_
- U2 Safety Injection System pump 2B-B and associated piping for both recirc and full flow injection as specified by applicable portion of Appendix C, Equipment Alignment, and 2-SOI-63.01, Safety Injection System. \_\_\_\_\_
- U2 Residual Heat Removal System Pump 2B-B and associated piping for both recirc and full flow injection as specified by applicable portion of Appendix C, Equipment Alignment, and 2-SOI-74.01, Residual Heat Removal System. \_\_\_\_\_
- U2 Containment Spray Pump 2B-B and associated piping for both recirc and full flow injection as specified by applicable portion of Appendix C, Equipment Alignment, and 2-SOI-72.01, Containment Spray System. \_\_\_\_\_
- Essential Raw Cooling Water System is in operation per 0-SOI-67.01. \_\_\_\_\_
- Component Cooling Water System is in operation per 0-SOI-70.01. \_\_\_\_\_
- U2 Containment Purge System is available per 2-SOI-30.02. \_\_\_\_\_
- U2 Train B containment HVAC and Pressure control system, (upper, lower, and CRDM) are aligned in Standby Readiness per 2-SOI-30.03. \_\_\_\_\_
- U2 Train B Incore Instrument Room Air Cooling System is in operation using 2-SOI-30.04. \_\_\_\_\_
- Auxiliary Building HVAC System, Unit 2, Train B is in operation per 0-SOI-30.05. \_\_\_\_\_
- Auxiliary Building Gas Treatment System Train A and B aligned in Standby, **NOT** in service per 0-SOI-30.06. \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- Train B SD board room A/C system is aligned for normal operation and is in service in accordance with 0-SOI-30.07, Shutdown Board Rooms HVAC. \_\_\_\_\_
- U2 Containment Air Return Fans are aligned in Standby Readiness, handswitches may be in Pull to Lock, per 2-SOI-30.08. \_\_\_\_\_
- Train B Control Building HVAC Systems (MCR & EBR Systems) are in operation per 0-SOI-31.01. \_\_\_\_\_
- Primary Makeup Water System is in operation per 0-SOI-81.01. \_\_\_\_\_
- Emergency Gas Treatment System is aligned in Standby Readiness per 0-SOI-65.02. \_\_\_\_\_

[5] **INITIATE** equipment alignment per Appendix C, Equipment Alignment. \_\_\_\_\_

[6] **ENSURE** U-2 Steam Generator levels are equal to or less than 30% as indicated by each of the following 2-M-3 indicators, by draining Steam Generators as necessary per applicable portion(s) of 2-SOI-41-02 thru -05.

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
T-D AFW PMP SG1 LEVEL	2-LI-3-174		
T-D AFW PMP SG2 LEVEL	2-LI-3-173		
T-D AFW PMP SG3 LEVEL	2-LI-3-172		
T-D AFW PMP SG4 LEVEL	2-LI-3-175		
AFW PMP A-A SG1 LEVEL	2-LI-3-164		
AFW PMP A-A SG2 LEVEL	2-LI-3-156		
AFW PMP B-B SG3 LEVEL	2-LI-3-148		
AFW PMP B-B SG4 LEVEL	2-LI-3-171		

Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- [7] **ENSURE** U-2 Refueling Water Storage Tank (RWST) levels are equal to or greater than 70% as indicated by the following 2-M-6 indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
RWST LEVEL	2-LI-63-50		
RWST LEVEL	2-LI-63-51		
RWST LEVEL	2-LI-63-52		
RWST LEVEL	2-LI-63-53		

- [8] **ENSURE** U-2 Condensate Storage Tank (CST B) level is equal to or greater than 200,000 gallons as indicated by the following 2-M-2 indicator:

DESCRIPTION	INDICATOR	LEVEL (gals)	INITIALS
CST B LEVEL	2-LI-2-233D		

- [9] **VERIFY** 6.9KV Shutdown Boards are energized from Normal feeder:

- 6.9KV SD Bd 1A-A (0-SOI-211.01) \_\_\_\_\_
- 6.9KV SD Bd 1B-B (0-SOI-211.02) \_\_\_\_\_
- 6.9KV SD Bd 2A-A (2-SOI-211.03) \_\_\_\_\_
- 6.9KV SD Bd 2B-B (2-SOI-211.04) \_\_\_\_\_

- [10] **ENSURE** 480V Shutdown Boards are energized from Normal feeder:

- 480V SD Bd 2B1-B (2-SOI-212.07) \_\_\_\_\_
- 480V SD Bd 2B2-B (2-SOI-212.08) \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[11] **ENSURE** 480V Reactor MOV Boards are energized from Normal feeder:

- 480V Reactor MOV Bd 2B1-B (2-SOI-213.07) \_\_\_\_\_
- 480V Reactor MOV Bd 2B2-B (2-SOI-213.08) \_\_\_\_\_

[12] **ENSURE** 480V Boards are energized from Normal feeder:

- 480V Reactor Vent Bd 2B-B (2-SOI-232.04) \_\_\_\_\_
- 480V C&A Building Vent Bd 2B1-B (2-SOI-214.07) \_\_\_\_\_
- 480V C&A Building Vent Bd 2B2-B (2-SOI-214.08) \_\_\_\_\_
- 480V Diesel Aux Bd 2B1-B (0-SOI-215.07) \_\_\_\_\_
- 480V Diesel Aux Bd 2B2-B (0-SOI-215.08) \_\_\_\_\_

[13] **ENSURE** 125V DC Vital Battery Boards are energized:

- 125V DC Vital Battery Bd I (0-SOI-236.01) \_\_\_\_\_
- 125V DC Vital Battery Bd II (0-SOI-236.02) \_\_\_\_\_
- 125V DC Vital Battery Bd III (0-SOI-236.03) \_\_\_\_\_
- 125V DC Vital Battery Bd IV (0-SOI-236.04) \_\_\_\_\_

[14] **ENSURE** 120V AC Vital Power Systems (Vital Instrument Power Board & associated Vital Inverter) are energized on NORMAL feeder:

- 120V AC Vital Power System 1-I (1-SOI-235.01) \_\_\_\_\_
- 120V AC Vital Power System 1-II (1-SOI-235.02) \_\_\_\_\_
- 120V AC Vital Power System 1-III (1-SOI-235.03) \_\_\_\_\_
- 120V AC Vital Power System 1-IV (1-SOI-235.04) \_\_\_\_\_
- 120V AC Vital Power System 2-I (2-SOI-235.05) \_\_\_\_\_
- 120V AC Vital Power System 2-II (2-SOI-235.06) \_\_\_\_\_

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#### 4.4 Field Preparations (continued)

- 120V AC Vital Power System 2-III (2-SOI-235.07) \_\_\_\_\_
- 120V AC Vital Power System 2-IV (2-SOI-235.08) \_\_\_\_\_
- [15] **ENSURE** 120V AC Instrument Power Systems are energized and aligned to Normal power supply:
  - 120V AC Instrument Power 1A (SOI-237.01) \_\_\_\_\_
  - 120V AC Instrument Power 1B (SOI-237.02) \_\_\_\_\_
  - 120V AC Instrument Power 2A (2-SOI-237.03) \_\_\_\_\_
  - 120V AC Instrument Power 2B (2-SOI-237.04) \_\_\_\_\_
- [16] **ENSURE** breakers at 2-DPL-68-341D, PZR BACKUP HTR GRP 2B-B DISTRIBUTION PANEL [A11W, 782], are OPEN:
  - 2-BKR-68-341D/B1, PRESSURIZER HTR (2-HTR-68-341D/B1-B) \_\_\_\_\_
  - 2-BKR-68-341D/B2, PRESSURIZER HTR (2-HTR-68-341D/B2-B) \_\_\_\_\_
  - 2-BKR-68-341D/B3, PRESSURIZER HTR (2-HTR-68-341D/B3-B) \_\_\_\_\_
  - 2-BKR-68-341D/B4, PRESSURIZER HTR (2-HTR-68-341D/B4-B) \_\_\_\_\_
  - 2-BKR-68-341D/B5, PRESSURIZER HTR (2-HTR-68-341D/B5-B) \_\_\_\_\_
  - 2-BKR-68-341D/B6, PRESSURIZER HTR (2-HTR-68-341D/B6-B) \_\_\_\_\_
  - 2-BKR-68-341D/B7, PRESSURIZER HTR (2-HTR-68-341D/B7-B) \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[17] **ENSURE** breakers at 2-DPL-68-341H, PZR BACKUP HTR GRP 2C DISTRIBUTION PANEL [A11W, 782], are OPEN:

- 2-BKR-68-341H/C1, PRESSURIZER HTR  
(2-HTR-68-341H/C1) \_\_\_\_\_
- 2-BKR-68-341H/C2, PRESSURIZER HTR  
(2-HTR-68-341H/C2) \_\_\_\_\_
- 2-BKR-68-341H/C3, PRESSURIZER HTR  
(2-HTR-68-341H/C3) \_\_\_\_\_
- 2-BKR-68-341H/C4, PRESSURIZER HTR  
(2-HTR-68-341H/C4) \_\_\_\_\_
- 2-BKR-68-341H/C5, PRESSURIZER HTR  
(2-HTR-68-341H/C5) \_\_\_\_\_
- 2-BKR-68-341H/C6, PRESSURIZER HTR  
(2-HTR-68-341H/C6) \_\_\_\_\_

[18] Record H.O. number issued \_\_\_\_\_

#### NOTE

- 1) If work in Steps 4.4[19] and 4.4[20], is performed in 2-PTI-262-01, NA may be entered in steps and explained at bottom of page.

[19] **DISABLE** U-2 RHR Spray Header Isolation valves by performing the following:

- [19.1] **ENSURE** by local valve stem position 2-FCV-72-40, RHR SPRAY HDR A ISOLATION, is CLOSED [713/A11W] \_\_\_\_\_
- [19.2] **ENSURE** by local valve stem position 2-FCV-72-41, RHR SPRAY HDR B ISOLATION, is CLOSED [713/A11W] \_\_\_\_\_
- [19.3] **ENSURE** Breaker 2-BKR-72-40, RHR SPRAY HDR A ISOL (2-FCV-72-40), at 480V Reactor MOV Bd 2A1-A, Compt. 14A, is OPEN. \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

[19.4] **ENSURE** Breaker 2-BKR-72-41, RHR SPRAY HDR B ISOL (2-FCV-72-41), at 480V Reactor MOV Bd 2B1-B, Compt. 14D, is OPEN.

\_\_\_\_\_

[19.5] **REQUEST** Unit 2 Operations WCC tag RHR Spray header breakers in OPEN position.

\_\_\_\_\_

[19.6] **ENSURE** breakers are tagged with a hold order in OPEN position:

- 2-BKR-72-40, RHR SPRAY HDR A ISOL (2-FCV-72-40), at 480V Reactor MOV BD 2A1-A, Compt. 14A
- 2-BKR-72-41, RHR SPRAY HDR B ISOL (2-FCV-72-41), at 480V Reactor MOV BD 2B1-B, Compt. 14D

\_\_\_\_\_

\_\_\_\_\_

Hold Order No.
----------------

[20] **ISOLATE** U-2 Containment Spray Ring Headers by performing the following:

[20.1] **ENSURE** by local valve stem position 2-FCV-72-39, Containment Spray Header 2A Isolation Valve is closed.

\_\_\_\_\_

CV

[20.2] **ENSURE** by local valve stem position 2-FCV-72-2, Containment Spray Header 2B Isolation Valve is closed.

\_\_\_\_\_

CV

[20.3] **ENSURE** 2-BKR-72-39, CNTMT SPRAY HDR 2A ISOL VLV (2-FCV-72-39), at 480V Reactor MOV BD 2A1-A, Compt. 13E, is OPEN.

\_\_\_\_\_

1st

CV



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#### 4.4 Field Preparations (continued)

- [20.4] **ENSURE** 2-BKR-72-2, CNTMT SPRAY HDR 2B ISOL VLV (2-FCV-72-2), at 480V Reactor MOV BD 2B1-B, Compt. 14A, is OPEN.

\_\_\_\_\_  
1st

\_\_\_\_\_  
CV

- [20.5] **REQUEST** Unit 2 Operations WCC tag Containment Spray header breakers in OPEN position.

- [20.6] **ENSURE** breakers are tagged with a hold order in OPEN position:

- 2-BKR-72-39, CNTMT SPRAY HDR 2A ISOL VLV (2-FCV-72-39), at 480V Reactor MOV BD 2A1-A, Compt. 13E.
- 2-BKR-72-2, CNTMT SPRAY HDR 2B ISOL VLV (2-FCV-72-2), at 480V Reactor MOV BD 2B1-B, Compt. 14A.

\_\_\_\_\_  
Hold Order No. \_\_\_\_\_

- [21] **ISOLATE** ERCW supply to U-2 Auxiliary Feedwater Pumps:

- [21.1] **ENSURE** by local valve stem position valves are CLOSED:

- 2-FCV-3-116A, ERCW HEADER A AFW PUMP 2A-A SUCTION [713/A12S]
- 2-FCV-3-116B, ERCW HEADER A AFW PUMP 2A-A SUCTION [713/A12S]
- 2-FCV-3-126A, ERCW HEADER B AFW PUMP 2B-B SUCTION [713/A13S]

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

\_\_\_\_\_  
CV

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#### 4.4 Field Preparations (continued)

- 2-FCV-3-126B, ERCW HEADER B AFW PUMP  
2B-B SUCTION [713/A13S]

\_\_\_\_\_  
CV

- 2-FCV-3-136A, ERCW HEADER A TD AFW PMP  
SUCT [692/A14T]

\_\_\_\_\_  
CV

- 2-FCV-3-136B, ERCW HEADER A TD AFW PMP  
SUCT [692/A14T]

\_\_\_\_\_  
CV

- 2-FCV-3-179A, ERCW HEADER B TD AFW PMP  
SUCT [692/A14T]

\_\_\_\_\_  
CV

- 2-FCV-3-179B, ERCW HEADER B TD AFW PMP  
SUCT [692/A14T]

\_\_\_\_\_  
CV

[21.2] **ENSURE** breakers are OPEN on 480V Reactor MOV BD  
2A2-A:

- 2-BKR-3-116A, ERCW HDR A AFW PMP 2A-A  
SUCTION (2-FCV-3-116A), Compt. 2A

\_\_\_\_\_  
CV

- 2-BKR-3-116B, ERCW HDR A AFW PMP 2A-A  
SUCTION (2-FCV-3-116B), Compt. 2B

\_\_\_\_\_  
CV

- 2-BKR-3-136A, ERCW HDR A TD AFW PMP  
SUCTION (2-FCV-3-136A), Compt. 3A

\_\_\_\_\_  
CV

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#### 4.4 Field Preparations (continued)

- 2-BKR-3-136B, ERCW HDR A TD AFW PMP  
SUCTION (2-FCV-3-136B), Compt. 3B

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.3] **ENSURE** breakers are OPEN on 480V Reactor MOV BD  
2B2-B:

- 2-BKR-3-126A, ERCW HDR B AFW PMP 2B-B  
SUCTION (2-FCV-3-126A), Compt. 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-126B, ERCW HDR B AFW PMP 2B-B  
SUCTION (2-FCV-3-126B), Compt. 2B

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-179A, ERCW HDR B TD AFW PMP  
SUCTION (2-FCV-3-179A), Compt. 3A

\_\_\_\_\_  
\_\_\_\_\_  
CV

- 2-BKR-3-179B, ERCW HDR B TD AFW PMP  
SUCTION (2-FCV-3-179B), Compt. 3B

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.4] **WHEN** Steps 4.4[21.2] and 4.4[21.3] are COMPLETE,  
**THEN**

**REQUEST** Unit 2 WCC tag with a hold order each  
breaker in Steps 4.4[21.2] and 4.4[21.3] in OPEN  
position.

\_\_\_\_\_  

Hold Order No.

[22] **ENSURE** U-2 Safety Injection System Cold Leg Accumulators  
are depressurized IAW 2-SOI-63.01:

- SIS Cold Leg Accumulator 1
- SIS Cold Leg Accumulator 2

\_\_\_\_\_  
\_\_\_\_\_

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#### 4.4 Field Preparations (continued)

- SIS Cold Leg Accumulator 3 \_\_\_\_\_
- SIS Cold Leg Accumulator 4 \_\_\_\_\_
- [23] **ENSURE** U2 Condensate/MFW is secured. \_\_\_\_\_
- [24] **ENSURE** 2-HS-3-45, MFW - MODE SWITCH, at 2-M-3, in  
NORMAL position. \_\_\_\_\_
- [25] **INSTALL** temporary equipment modifications per Appendix E,  
Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_

#### NOTE

If SG tubes are water solid, maintaining water level above Hot legs may prevent inadvertent draining of tubes.

- [26] **ENSURE** Reactor Vessel water level is above cold and hot  
legs, but below vessel flange, (EL 722 to 724ft.), **AND**  
**RECORD** vessel level. \_\_\_\_\_

Vessel Level: EL. \_\_\_\_\_ ft.

- [27] **ENSURE** ABI/CVI Crosstie Handswitches in NORMAL:
- 2-HS-90-410-A (back of 2-R-73) \_\_\_\_\_
  - 2-HS-90-415-B (back of 2-R-78) \_\_\_\_\_
- [28] **ENSURE** CCS pumps aligned as follows:
- CCS Pump 2A-A in standby to U2 Train A CCS. \_\_\_\_\_
  - CCS Pump 2B-B in service to U2 Train A CCS. \_\_\_\_\_
  - C-S CCS Pump aligned to Train B CCS. \_\_\_\_\_
- [29] **ENSURE** Ice Condenser Lower Inlet Doors **BLOCKED** closed,  
allowing running of LCC, CRDM, and Air Return Fans during  
this test. \_\_\_\_\_

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#### 4.4 Field Preparations (continued)

##### NOTE

- 1) No LCO condition is entered as a result of Step 4.4[31].

[30] **REQUEST** permission from U2 SRO to perform Step 4.4[31]. \_\_\_\_\_

\_\_\_\_\_  
U2 SRO

\_\_\_\_\_  
Date

##### NOTE

To prevent emergency starts from DG 2B-B to Unit 1 Diesel Generators and Unit 2 A-A Diesel Generator, DG 2B-B Common Emergency Start circuit fuses are removed during performance of this Test.

[31] **REMOVE** the following fuses:

FUSES FOR RELAY CES2BY	DG	PNL/LOC	INITIALS/DATE	
		1-R-76	PERF	CV
1-FU-275-R76/M2	2B-B	Row M		
1-FU-275-R76/M3	2B-B	Row M		

[32] **ENSURE** Subsection 6.4, Common Station Service Transformer (CSST) Capacity Verification, M&TE is connected and ready for data mining during performance of Subsections 6.1 through 6.3 \_\_\_\_\_

[33] **WHEN** Backup Heater Group 2B-B and Control Group 2C breaker configuration changes are completed in Appendix E, Temporary Wire Lift and Jumper Equipment Modifications, **THEN**

**CYCLE** breakers manually using Main Control Room breaker handswitches, 2-HS-68-341D, BACKUP HEATER B-B & 2-HS-68-341H, BACKUP HEATERS C, to ensure breaker readiness for testing with jumpers installed. \_\_\_\_\_

[34] **PERFORM** Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_

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Date \_\_\_\_\_

#### 4.4 Field Preparations (continued)

- [35] **CONDUCT** a pretest briefing with all Test and Operations personnel using SMP-9.0. \_\_\_\_\_
- [36] **ENSURE** test personnel are briefed for contact checks for Appendix W, Section 2.0, which tests DG 2B-B non-emergency trips bypassed upon an emergency start. \_\_\_\_\_
- [37] **ENSURE** Chemistry is prepared to obtain compensatory samples of U2 Shield Building release upon actuation of EGTS/ABGTS. \_\_\_\_\_
- [38] **ENSURE** the scheduled activities that require U2 polar crane use do **NOT** conflict with Integrated Safeguards Tests testing or temporary power is set up. (480V SDBD 2B2-B) \_\_\_\_\_
- [39] **PERFORM** Appendix X, Electrical Isolation Alignment, and inform Test Director when completed. \_\_\_\_\_

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## 5.0 ACCEPTANCE CRITERIA

### NOTES

- 1) References to Technical Specifications, Technical Requirements, and other Licensing documents referred to in this Instruction should be to Unit 1 Licensing documents until Unit 2 is licensed and Unit 2 TS/TR and other Unit 2 License documents are implemented.
- 2) Unit 1 TS acceptance criteria begin in Section 5.2.

## 5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)

- A. Proper automatic actuation, alignment and operation, including bus stripping and load sequencing, of ESF components controlled by the Engineered Safety Features Actuation System (ESFAS) is demonstrated by the following:
  1. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, with offsite power available:
    - a. Safety Injection (SI) - Train 2B (Section 6.2)
      - (1) Post-SI component status (**Step 6.2.2[85]**)
      - (2) SI-Sequencing (**Step 6.2.2[89.1]**)
      - (3) RWST/CNTMT-Sump Switchover (**6.2.2[30.5]**, **6.2.2[30.6]**)
    - b. Containment Isolation Phase B - Train 2B (Section 6.2)
      - (1) Post-CIØB component status (**Step 6.2.2[87]**)
      - (2) CIØB-Sequencing (**Step 6.2.2[89.2]**)
  2. Engineered Safety Features (ESF) components operate and properly align in response to ESFAS signals, including Diesel Generator start and sequencing of loads, when offsite power is NOT available:
    - a. Loss of Offsite Power (LOOP) - Train 2B (Section 6.1)
      - (1) Post-LOOP component status (**Step 6.1.2[108]**)
      - (2) Bus-Stripping (**Step 6.1.2[109.1]**)
      - (3) LOOP-Sequencing (**6.1.2[109.3]**)

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**5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit)**  
**(continued)**

- b. Coincident LOOP/SI/CIØB - Load Group B (Section 6.3)
      - (1) Post-LOOP component status **(Step 6.3.2[82])**
      - (2) Bus-Stripping **(Step 6.3.2[84.1])**
      - (3) 2B-B Phase B/SI/LOOP-Sequencing **(Step 6.3.2[84.3])**
  - 3. Components actuated by a ESFAS signal remain in ACTUATED condition after reset of initiating signal:
    - a. SI Train 2B Post-Reset **(Step 6.2.2[86] )**
    - b. CIØB Train 2B Post-Reset **(Step 6.2.2[88])**
    - c. LOOP/SI/CIØB Load Group B Post-Reset **(Steps 6.3.2[83])**
    - d. RWST/CNTMT-Sump Switchover Train 2B Post-Reset **(Step 6.2.2[32.1], Step 6.2.2[32.2])**
- B. Operability and reliability of Diesel Generator 2B-B, including proper starting and dynamic response to load sequencing, is demonstrated by the following:
  - 1. Diesel Generator 2B-B automatically start and achieve equal to or greater than 6800 VAC and 58.8 HZ in less than or equal to 10 seconds after receipt of simultaneous start signals, with offsite power available:
    - a. Diesel Generator 2B-B **(Step 6.2.2[90.1])**
  - 2. Diesel Generator 2B-B automatically starts and output breaker closes in less than or equal to 10 seconds after receipt of start signal, when offsite power is NOT available:
    - a. Diesel Generator 2B-B **(Steps 6.1.2[109.2], 6.3.2[84.2])**
  - 3. Diesel Generator 2B-B maintains output voltage and frequency equal to or greater than 5213 VAC and 57 HZ respectively during load sequencing:
    - a. LOOP Sequencing:
      - (1) Diesel Generator 2B-B **(Step 6.1.2[111],**
    - b. LOOP/SI/CIØB Sequencing:
      - (1) Diesel Generator 2B-B **(Step 6.3.2[86])**



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## 5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit) (continued)

4. Diesel Generator 2B-B restores output voltage and frequency to a band of 6950 (6255-7645) VAC and 60 (58.8-61.2) HZ respectively, in equal to or less than 3 seconds, following each step load increase during load sequencing:
  - a. LOOP Sequencing:
    - (1) Diesel Generator 2B-B (**Step 6.1.2[112]**)
  - b. LOOP/SI/CIØB Sequencing:
    - (1) Diesel Generator 2B-B (**Step 6.3.2[87]**)
5. Diesel Generator 2B-B maintains steady-state voltage and frequency at 6950 (6800-7260) VAC and 60 (59.8-60.1) HZ respectively, for each of the following:
  - a. Standby Operation (output breaker open):
    - (1) Diesel Generator 2B-B (**Step 6.2.2[90.2]**)
  - b. Following LOOP Sequencing:
    - (1) Diesel Generator 2B-B (**Step 6.1.2[114]**)
  - c. Following LOOP/SI/CIØB Sequencing:
    - (1) Diesel Generator 2B-B (**Step 6.3.2[88]**)
6. Diesel Generator 2B-B auto-connected loads are equal to or less than 4400 kW for each of the following:
  - a. LOOP loads:
    - (1) Diesel Generator 2B-B (**Step 6.1.2[72.6]**)
  - b. LOOP/SI/CIØB loads:
    - (1) Diesel Generator 2B-B (**Step 6.3.2[41]**)

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## **5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit) (continued)**

7. Diesel Generator capability to supply emergency loads is demonstrated NOT to be impaired during performance of periodic testing (operating in parallel with offsite power) when a Safety Injection (SI) signal overrides test made as follows:
  - a. Diesel Generator returns to Standby Operation (running in Emergency [Isochronous] Mode with output breaker open)
    - (1) Diesel Generator 2B-B (**Step 6.2.2[61]**)
    - (2) Diesel Generator 1B-B (**Step 6.2.2[18]**)
  - b. Emergency loads are energized from offsite power:
    - (1) 6.9KV Shutdown Board 2B-B (**Step 6.2.2[61]**)
    - (2) 6.9KV Shutdown Board 1B-B (**Step 6.2.2[18]**)
8. Diesel Generator non-emergency protective trips are bypassed while operating in Emergency Run Mode:
  - a. Diesel Generator 2B-B (**Step 6.1.2[106]**)
9. Each Diesel Generator is synchronized with offsite power while loaded with emergency loads, loads are transferred to offsite power, and diesel is restored to normal standby alignment:
  - a. Diesel Generator 2B-B (**Steps 6.1.2[87]A, 6.1.2[93], 6.1.2[115], 6.3.2[66], 6.3.2[67]**)
10. Each Diesel Generator will maintain voltage and speed upon rejection of largest single load and full load.
  - a. Diesel Generator 2B-B ( total loss of load ) (**Step 6.2.2[92]**)
    - (1) DG 2B-B does not trip on overspeed
    - (2) DG 2B-B voltage is maintained  $\leq 8880V$
  - b. Diesel Generator 2B-B (single load loss) (**Step 6.3.2[89]**)
    - (1) Voltage is  $\geq 6555V$  and  $\leq 7260V$  within 3 seconds
    - (2) Frequency is  $\geq 58.8$  and  $\leq 61.2$  HZ within 4 seconds

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## **5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit) (continued)**

(3) DG 2B-B speed is maintained <1001 RPM

(4) Verify frequency is maintained less than or equal to 66.75 HZ.

C. POWER supply to safety related loads automatically and manually transfers to onsite (standby) diesel units from NORMAL or alternate supply, and manually transfers from diesel generator units back to NORMAL or alternate supply, when the following is demonstrated:

1. Each 6.9KV Shutdown Board is manually transferred from Normal to Diesel Generator:
    - a. 6.9KV Shutdown Board 2B-B (**Steps 6.1.2[5], 6.1.2[6]**)
  2. Each from 6.9KV shutdown Board is manually transferred from Alternate to Diesel Generator:
    - a. 6.9KV Shutdown Board 2B-B (**Steps 6.1.2[19], 6.1.2[20]**)
  3. Each 6.9KV Shutdown Board is manually transferred from Diesel Generator to Normal:
    - a. 6.9KV Shutdown Board 2B-B (**Step 6.1.2[12]**)
  4. Each 6.9KV Shutdown Board is manually transferred from Diesel Generator to Alternate:
    - a. 6.9KV Shutdown Board 2B-B (**Step 6.1.2[28]**)
  5. Each 6.9KV Shutdown Board is automatically transferred from Normal to Diesel Generator on bus undervoltage:
    - a. 6.9KV Shutdown Board 2B-B (**Step 6.3.2[31]**)
  6. Each 6.9KV Shutdown Board is automatically transferred from Alternate to Diesel Generator on bus undervoltage:
    - a. 6.9KV Shutdown Board 2B-B (**Step 6.1.2[65]**)
- D. Demonstrate that CSST A, B, C, and D have the capacity to supply power concurrently to one unit in Mode 3, Hot Standby then subsequently cooling down from Mode 3 to Mode 5 while the other unit is under accident conditions.

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## **5.1 Integrated Safeguards Test Acceptance Criteria (Acc Crit) (continued)**

1. One unit hot standby loads are less than the rating of each transformer secondary winding. A & B CSST's 48 MVA and C & D CSST's 40 MVA. **(Step 6.4[3])**
2. Unit 2 ESF loads under accident conditions will be less than associated transformer ratings. A & B CSST's 48 MVA and C & D CSST's 40 MVA. **(Step 6.4[4])**

## **5.2 Loss of Offsite Power - No ESF**

- A. On an actual or simulated loss of offsite power with no ESF actuation: (SR 3.8.1.11)
  1. De-energization of emergency buses. **(Step 6.1.2[64])**
  2. Load shedding from the emergency buses. **(Step 6.1.2[109.1])**
  3. DG auto-starts from standby condition and:
    - a. Energizes permanently connected loads in  $\leq 10$  seconds. **(Step 6.1.2[109.2])**
    - b. Energizes auto-connected shutdown loads through automatic load sequencer. **(Step 6.1.2[109.3], Step 6.1.2[68])**
    - c. Maintains steady state voltage  $\geq 6800$  V and  $\leq 7260$  V **(Step 6.1.2[114])**
    - d. Maintains steady state frequency  $\geq 59.8$  Hz and  $\leq 60.1$  Hz. **(Step 6.1.2[114])**
    - e. Supplies permanently connected and auto-connected shutdown loads for  $\geq 5$  minutes. **(Step 6.1.2[72.4])**
- B. The auxiliary feedwater pumps receive a start signal automatically upon receipt of a simulated Blackout test signal (SR 3.7.5.4). **(Step 6.1.2[68])**
- C. Verification that DG 2B-B: (SR 3.8.1.16)
  1. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power. **(Step 6.3.2[66])**
  2. Transfers loads to offsite power source. **(Step 6.3.2[66])**

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3. Returns to ready-to-load operation. **(Step 6.3.2[67])**

### 5.3 ESF Actuation - Offsite Power Available

- A. On an actual or simulated Engineered Safety Feature (ESF) actuation signal with no loss of offsite power, 2B-B DG auto-starts from standby condition AND: (SR 3.8.1.12)
  1. In less than or equal to 10 seconds after auto-start and during tests, achieves voltage greater than or equal to 6800 V and frequency greater than or equal to 58.8 Hz. **(Step 6.2.2[90.1])**
  2. After DG fast start from standby conditions DG achieves Steady state voltage greater than or equal to 6800 V and less than or equal to 7260 V, and frequency greater than or equal to 59.8 Hz and less than or equal to 60.1 Hz. **(Step 6.2.2[90.2])**
  3. Operates for greater than or equal to five minutes. **(Step 6.2.2[23.3])**
  4. Permanently connected loads remain energized from offsite power system. **(Step 6.2.2[61])**
  5. Emergency loads are energized from offsite power system. **(Step 6.2.2[23.4])**
- B. Actuation of 2-HS-63-133A, SI ACTUATE TR A & B (Section 6.3) or 2-HS-63-133B, SI ACTUATE TR A & B (Section 6.2), will cause initiation of Safety Injection and reactor trip breakers to trip. (SR 3.3.2.8-1.a and 3.3.1.13) **(Step 6.2.2[12.4])**
- C. Verification that each ECCS pump starts automatically on an actual or simulated signal (SR 3.5.2.6). **(Step 6.2.2[63])**

### 5.4 DG Test Mode Override

- A. Verification that with Unit 1 DG 1B-B operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides the test mode by: (SR 3.8.1.17) **(step 6.2.2[18])**
  1. Returning DG to ready-to-load operation:
    - a. DG 1B-B

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#### 5.4 DG Test Mode Override (continued)

2. Automatically energizing emergency load from offsite power.
  - a. 6.9kV SD BD 1B-B

#### 5.5 DG Load Rejection Capability

- A. Verification that DG 2B-B, while loaded with emergency loads,: (SR 3.8.1.9) **(Step 6.3.2[89])**
  1. Maintains the following criteria upon rejection of single largest load of 640 KW (800HP)
    - a. Frequency is less than or equal to 66.75 Hz **AND**
    - b. Within three seconds following load rejection, voltage is greater than or equal to 6555 VAC and less than or equal to 7260 VAC, **AND**
    - c. Within four seconds following load rejection, frequency is between 58.8 Hz and 61.2 Hz. (SR 3.8.1.9)
- B. Verification that DG 2B-B operating under the following parameters: (SR 3.8.1.10). **(Step 6.2.2[92])**
  1. Load of greater than or equal to 3960 kW and less than or equal to 4400 kW **(Step 6.2.2[41])**
  2. DG MEGAVAR loading greater than or equal to 2970 kVAR (0.8 pf) and less than or equal to 3300 kVAR (0.9 pf) **(Step 6.2.2[42])**
    - a. Maintains the following criteria upon a complete loss of load
      - (1) DG 2B-B does NOT overspeed trip;
      - (2) DG 2B-B Voltage is maintained less than or equal to 8880VAC.

#### 5.6 Loss of Offsite Power - coincident with ESF Actuation

- A. On an actual or simulated loss of offsite power in conjunction with an actual or simulated ESF actuation signal: (SR 3.8.1.19)
  1. De-energization of emergency buses. **(Step 6.3.2[26])**
  2. Load shedding from the emergency buses. **(Step 6.3.2[84.1])**

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**5.6 Loss of Offsite Power - coincident with ESF Actuation  
(continued)**

3. DG 2B-B auto starts from standby condition and:
  - a. Energizes permanently connected loads in less than or equal to 10 seconds **(Step 6.3.2[84.2])**
  - b. Energizes auto connected emergency loads through automatic load sequencer. **(Step 6.3.2[84.3])**
  - c. Achieves steady state voltage greater than or equal to 6800 V and less than or equal to 7260 V. **(Step 6.3.2[88])**
  - d. Achieves steady state frequency greater than or equal to 59.8 Hz and less than or equal to 60.1 Hz. **(Step 6.3.2[88])**
  - e. Supplies permanently connected and auto connected emergency loads for greater than or equal to five minutes. **(Step 6.3.2[40.5])**

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## 5.7 Slave Relay Safeguard State Testing (continued)

## 5.7 Slave Relay Safeguard State Testing

### NOTE

Section 5.7 is provided as information on which Slave Relay actuates which component. All acceptance criteria are determined in appropriate performance section according to related Appendix documenting safeguard state actuation position.

#### A. Acceptance Criteria for Slave Relay K605 (CI-ØA):

The following devices reach the Safeguard state when Slave Relay K605 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[17], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-1-7	SG 1 BLOWDOWN FLOW CONTROL VLV	CLOSED
2-FCV-1-25	SG 3 BLOWDOWN FLOW CONTROL VLV	CLOSED
2-FCV-1-182	SG 2 BLOWDOWN ISOLATION VLV	N/A (1)
2-FCV-1-184	SG 4 BLOWDOWN ISOLATION VLV	N/A (1)
2-FCV-43-2	PRESSURIZER GAS CNTMT ISOL VLV	CLOSED
2-FCV-43-11	PRESSURIZER LIQ CNTMT ISOL VLV	CLOSED
2-FCV-43-22	RCS HOT LEGS HDR CNTMT ISOL VLV	CLOSED
2-FCV-43-34	ACCUM TK HDR CNTMT ISOL VLV	CLOSED
2-FCV-43-54D	STM GEN BLDN NO 1 SAMP ISOL VLV	CLOSED
2-FCV-43-56D	STM GEN BLDN NO 2 SAMP ISOL VLV	CLOSED
2-FCV-43-59D	STM GEN BLDN NO 3 SAMP ISOL VLV	CLOSED
2-FCV-43-63D	STM GEN BLDN NO 4 SAMP ISOL VLV	CLOSED
2-MTR-77-6	RCDT PUMP 2B	OFF (1)(2)
2-FCV-77-9	RCDT PUMP DISCH FLOW CONTROL VALVE	CLOSED
2-FCV-77-16	RCDT TO GA FLOW CONTROL	CLOSED
2-FCV-77-18	RCDT TO VENT HDR FLOW CONTROL	CLOSED
2-FCV-77-127	REAC BLDG SUMP DISCH FLOW CONTROL	CLOSED

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

(2) Pump trips when 2-FCV-77-9 closes

#### B. Acceptance Criteria for Slave Relay K606 (CI-ØA, ABI):

The following devices reach the Safeguard state when Slave Relay K606 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[17], 6.2.2[13.4], 6.2.2[59.5], 6.2.2[85] 6.3.2[29], 6.3.2[39], 6.3.2[54.4], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-63-84	SIS TEST LINE ISOLATION VALVE	CLOSED
2-FCV-68-308	PRESSURIZER RELIEF TANK GAS ANALYZER SUPPLY	CLOSED



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## 5.7 Slave Relay Safeguard State Testing (continued)

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FAN-31-266	INCORE INSTR RM AHU 2B FAN	OFF (1)
2-XX-55-6C-5	ABI	LIT
0-MTR-31-67-B	A SD BD RM PRESSURIZATION FAN C-B	OFF

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

### C. Acceptance Criteria for Slave Relay K607 (CI-ØA):

The following devices reach the Safeguard state when Slave Relay K607 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[17], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-61-192	GLYCOL SUPPLY ISOLATION VALVE	CLOSED
2-FCV-61-194	GLYCOL RETURN ISOLATION VALVE	CLOSED
2-FCV-62-77	REGEN HT EXCH LETDOWN ISO VLV	CLOSED (1)

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

### D. Acceptance Criteria for Slave Relay K608 (SI):

The following devices reach the Safeguard state when Slave Relay K608 is energized. Pumps running can be determined by observing MCR indication, or indication of circuit breaker closure. Measured response time for each pump must be less than or equal to the following, or an engineering evaluation must be performed to determine if response time is acceptable for the affected Engineered Safeguards Feature. (Steps 6.2.2[13], 6.2.2[17], 6.2.2[59.6], 6.2.2[63], 6.2.2[85], 6.3.2[29], 6.3.2[39], 6.3.2[82], 6.3.2[54.4])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-6	CRI	LIT
2-XA-55-5C-106A	MCR ISOLATION ACTUATION	LIT
2-PMP-62-104	CHARGING PUMP 2B-B	RUNNING
2-PMP-63-15	SI PUMP 2B-B	RUNNING
2-PMP-70-33-B	CCS PUMP 2B-B	RUNNING
2-PMP-70-51-S	CCS PUMP C-S	RUNNING
2-PMP-74-20	RHR PUMP 2B-B	RUNNING
0-FCV-67-152	CCS HX "C" DISCH TO HEADER B	POSITION A
2-CLR-30-182	CCP PUMP ROOM COOLER	RUNNING
2-CLR-30-179	SIS PUMP ROOM COOLER	RUNNING
2-CLR-30-176	RHR PUMP ROOM COOLER	RUNNING

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## 5.7 Slave Relay Safeguard State Testing (continued)

### E. Acceptance Criteria for Slave Relay K609 (SI):

The following devices reach the Safeguard state when Slave Relay K609 is energized. Device state can be determined by observing MCR indication, or indication of circuit breaker closure. Measured response time must be less than or equal to the following, or an engineering evaluation must be performed to determine if response time is acceptable for the affected Engineered Safeguards Feature. (Steps 6.2.2[17], 6.2.2[21], 6.2.2[85], 6.3.2[32], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
DG 2B-B	DIESEL GENERATOR 2B-B	RUNNING
2-MTR-77-125B	REACTOR BUILDING FLOOR & EQUIPMENT DRAIN SUMP PUMP 2B	OFF
0-MTR-26-11-B	HIGH PRESSURE FIRE PUMP 2B-B	OFF
2-MTR-70-130-B	CCS TBBP 2B-B	RUNNING
THERMAL OVERLOAD BYPASS	THERMAL OVERLOAD BYPASS	ON

### F. Acceptance Criteria for Slave Relay K611 (SI):

The following devices reach the Safeguard state when Slave Relay K611 is energized. Pumps running can be determined by observing a rise in discharge pressure on the chart recorder, or indication of circuit breaker closure. Measured response time for each pump must be less than or equal to the following, or an engineering evaluation must be performed to determine if response time is acceptable for the affected Engineered Safeguards Feature. (Steps 6.2.2[17], 6.2.2[63], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
AFW Separation Relay	RELAY RB1	ENERGIZED
AFW Separation Relay	RELAY RB2	ENERGIZED
0-PMP-67-47-B	ERCW PUMP E-B	RUNNING
0-PMP-67-51-B	ERCW PUMP F-B	RUNNING
0-PMP-67-55-B	ERCW PUMP G-B	RUNNING
0-PMP-67-59-B	ERCW PUMP H-B	RUNNING
2-PMP-3-128-A	AUX MD FD PMP 2B-B	RUNNING

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## 5.7 Slave Relay Safeguard State Testing (continued)

### G. Acceptance Criteria for Slave Relay K612/K613 (CI-ØA):

The following devices reach the Safeguard state when Slave Relay K612 and K613 are energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off) or from a 125 to 0 VDC step change on recorder chart. Measured response time for the Emergency Gas Treatment Fan A-A must be less than or equal to time in table, or an engineering evaluation must be performed to determine if response time is acceptable for the affected Engineered Safeguards Feature.

(Steps 6.2.2[17], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
0-FAN-31-68-B	SHUTDOWN BOARD ROOM B PRESSURIZING FAN D-B	OFF
0-FAN-65-42-B	EMERGENCY GAS TREATMENT FAN B-B	RUNNING (steady state ΔP)
2-FCV-31-305	INCORE INSTR RM AHU 2A CW PUMP ISOL	CLOSED
2-FCV-31-309	INCORE INSTR RM AHU 2A CWS ISOL	CLOSED (1)
2-FCV-31-327	INCORE INSTR RM AHU 2B CWR ISOL	CLOSED
2-FCV-31-329	INCORE INSTR RM AHU 2B CWS ISOL	CLOSED
2-FCV-63-23	SI ACCUMULATOR FILL ISO	CLOSED
2-FAN-65-74	EGTS CNTMT ANN VAC FAN 2B	TRIPPED
2-FCO-65-74	EGTS CNTMT ANN VAC FAN 2B SUCT ISOLATION	CLOSED
2-FCV-65-29	EGTS TRAIN B UNIT 2 SUCT ISOL	OPEN
2-FCO-65-45	EGTS TO U2 SHIELD BLDG	OPEN
2-FCV-65-4	EGTS CNTMT ANN VAC SUCT ISOL	CLOSED
2-PCV-65-83	SHIELD BLDG VENT & CNTMT ANN ISOL VLV	OPEN
2-PCV-65-87	EGTS CNTMT ANNULUS ISOL VLV	OPEN

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

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## 5.7 Slave Relay Safeguard State Testing (continued)

### H. Acceptance Criteria for Slave Relay K614 (CI-ØA):

The following devices reach the Safeguard state when Slave Relay K614 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[13], 6.2.2[17], 6.2.2[59], 6.2.2[85], 6.3.2[29], 6.3.2[39], 6.3.2[54.4], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-1	ØA	LIT
2-FCV-62-61	CVCS SEAL WATER RETURN HEADER ISOL	CLOSED

### I. Acceptance Criteria for Slave Relay K615 (CI-ØA & CVI):

The following devices reach the Safeguard state when Slave Relay K615 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[17], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FAN-30-1	CONTAINMENT PURGE AIR SUPPLY FAN 2A	TRIPPED
2-FAN-30-1E	CONTAINMENT PURGE AIR EXHAUST FAN 2A	TRIPPED
2-FAN-30-4	CONTAINMENT PURGE AIR SUPPLY FAN 2B	TRIPPED
2-FAN-30-4E	CONTAINMENT PURGE AIR EXHAUST FAN 2B	TRIPPED
2-FAN-30-11	CNTMT INCORE INSTR ROOM SUPPLY FAN	TRIPPED
2-FAN-30-11E	CNTMT INCORE INSTR ROOM EXHAUST FAN	TRIPPED
2-FCV-30-2	CONTAINMENT PURGE AIR SUPPLY FAN 2A DISCHARGE	CLOSED
2-FCV-30-5	CONTAINMENT PURGE AIR SUPPLY FAN 2B DISCHARGE	CLOSED
2-FCV-30-12	CNTMT ANNULUS PURGE SUPPLY	CLOSED
2-FCV-30-54	CNTMT ANNULUS PURGE EXHAUST	CLOSED
2-FCV-30-61	CNTMT PURGE AIR EXHAUST FAN 2A SUCTION	CLOSED
2-FCV-30-62	CNTMT PURGE AIR EXHAUST FAN 2B SUCTION	CLOSED

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## 5.7 Slave Relay Safeguard State Testing (continued)

### J. Acceptance Criteria for Slave Relay K618 (CIØB):

The following devices reach the Safeguard state when Slave Relay K618 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[65], 6.2.2[87], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-70-87	RC PMP THERM BAR RET CNTMT ISOL VLV	CLOSED
2-FCV-70-89	RC PMP OIL CLR RET CNTMT ISOL VLV	CLOSED
2-FCV-70-140	RC OIL CLR HDR CNTMT ISLN VLV	CLOSED
2-FCV-70-134	RC PMP THRM BAR CONT ISOL VLV	CLOSED

### K. Acceptance Criteria for Slave Relay K619 (CIØB):

The following devices reach the Safeguard state when Slave Relay K619 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off).

(Steps 6.2.2[59], 6.2.2[65], 6.3.2[29], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-XX-55-6C-3	ØB	LIT
2-FCV-32-103	REACTOR BLDG CONTROL AIR ISOL	CLOSED
2-FCV-32-111	REACTOR BLDG CONTROL AIR ISOL (NON ESSENTIAL)	CLOSED
2-PMP-70-130-B	RCP THERMAL BARRIER CCS BOOSTER PUMP 2B-B	OFF

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## 5.7 Slave Relay Safeguard State Testing (continued)

### L. Acceptance Criteria for Slave Relay K622 (CVI):

The following devices reach the Safeguard state when Slave Relay K622 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[13], 6.2.2[17], 6.2.2[59], 6.2.2[85], 6.3.2[29], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-30-8	UPPER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-9	UPPER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-15	LOWER COMPT PURGE ISOL VALVE	CLOSED
2-FCV-30-16	CNTMT LOWER COMPARTMENT PURGE SUPPLY	CLOSED
2-FCV-30-19	INCORE INSTR RM PURGE ISOL VALVE	CLOSED (1)
2-FCV-30-37	CNTMT LOWER COMPARTMENT PURGE EXH PRESS RELIEF	CLOSED (1)
2-FCV-30-50	CNTMT UPPER COMPARTMENT EXHAUST ISOLATION	CLOSED
2-FCV-30-53	CNTMT UPPER COMPARTMENT EXHAUST ISOLATION	CLOSED
2-FCV-30-57	CNTMT LOWER COMPARTMENT EXHAUST ISOLATION	CLOSED (1)
2-FCV-30-58	CNTMT INSTRUMENT ROOM EXHAUST ISOLATION	CLOSED
2-FCV-90-108	CNTMT BLDG LOWER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-109	CNTMT BLDG LOWER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-110	CNTMT BLDG LOWER COMPT AIR RAD MON RETURN	CLOSED
2-FCV-90-114	CNTMT BLDG UPPER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-115	CNTMT BLDG UPPER COMPT AIR RAD MON SUPPLY	CLOSED
2-FCV-90-116	CNTMT BLDG UPPER COMPT AIR RAD MON RETURN	CLOSED
2-XX-55-6C-2	CVI	LIT

- (1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

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## 5.7 Slave Relay Safeguard State Testing (continued)

### M. Acceptance Criteria for Slave Relay K625 (CIØB):

The following devices reach the Safeguard state when Slave Relay K625 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). Containment Air Return Fan is **NOT** started during the performance of this instruction. **(Steps 6.2.2[65], 6.2.2[87], 6.3.2[39], 6.3.2[82])**

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-67-91	LWR CNTMT 2C CLRS DISCH ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-103	LWR CNTMT 2B CLRS DISCH ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-83	LOWER CNTMT 2A COOLER SUPPLY ISLN VLV OC	CLOSED
2-FCV-67-111	LWR CNTMT 2D COOLERS DISCH ISOL VLV	CLOSED
2-FCV-67-138	UPPER CNTMT 2B COOLERS SUPPLY ISOL VLV	CLOSED
2-FCV-67-141	UPPER CNTMT VENT CLR 2D SUPPLY ISOL VLV	CLOSED
2-FCV-67-297	UPPER CNTMT VENT CLR 2B ISOL VLV INSIDE CNTMT	CLOSED
2-FCV-67-298	UPPER CNTMT VENT CLR 2D ISOL VLV INSIDE CNTMT	CLOSED
2-FAN-30-39	CNTMT AIR RETURN FAN 2B-B	RUNNING (2-02-30-38-A ENERGIZED)
2-FAN-30-92	CRDM CLR 2B-B	OFF (1)
2-FAN-30-80	CRDM CLR 2D-B	OFF (1)
2-FAN-30-75	LWR CNTMT CLR 2B-B	OFF (1)
2-FAN-30-78	LWR CNTMT CLR 2D-B	OFF (1)
2-FAN-30-97	UPR CNTMT CLR 2B	OFF (1)
2-FAN-30-100	UPR CNTMT CLR 2D	OFF (1)

(1) Submerged components are deenergized on a simulated accident signal and remain deenergized when the accident signal is reset

### N. Acceptance Criteria for Slave Relay K626 (CIØB):

The following devices reach the Safeguard state when Slave Relay K626 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). **(Steps 6.2.2[65], 6.2.2[87], 6.3.2[39], 6.3.2[82])**

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-67-88	LWR CNTMT A COOLER DISCH ISLN VALVE	CLOSED
2-FCV-67-96	LWR CNTMT C CLRS DISCH ISOL VLV	CLOSED
2-FCV-67-113	LWR CNTMT D CLRS SUPPLY ISOL VLV	CLOSED
2-FCV-67-105	LWR CNTMT B CLRS SUPPLY ISOL VLV	CLOSED
2-FCV-67-131	UPPER CNTMT VENT CLR A ISOL VLV	CLOSED
2-FCV-67-134	UPPER CNTMT VENT CLR C ISOL VLV	CLOSED

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## 5.7 Slave Relay Safeguard State Testing (continued)

### O. Acceptance Criteria for Slave Relay K630 (CI-ØA):

The following devices reach the Safeguard state when Slave Relay K630 is energized. Closed valve position can be determined from 2-XX-55-6E (green light on, red light off). (Steps 6.2.2[17], 6.2.2[85], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-FCV-61-97	FLOOR COOLANT GLYCOL ISOLATION VALVE	CLOSED
2-FCV-61-122	FLOOR COOLANT GLYCOL ISOLATION VALVE	CLOSED
2-FCV-70-85	ISOL VLV TO EXCESS LETDOWN HX	CLOSED

### P. Acceptance Criteria for Slave Relay K643 (CS):

The following devices reach the Safeguard state when Slave Relay K643 is energized. Pump Running can be determined by observing MCR indication, or indication of circuit breaker closure.

(Steps 6.2.2[63], 6.2.2[65], 6.3.2[39], 6.3.2[82])

DEVICE	DESCRIPTION	SAFEGUARD STATE
2-PMP-72-10	CONTAINMENT SPRAY PMP 2B-B	RUNNING
2-CLR-30-178	CS PUMP 2B ROOM COOLER	RUNNING

## 5.8 System Description Manual, N3-82-4002, Standby Diesel Generator System

### 5.8.1 Appendix G, Preoperational Test Criteria, (Page 2 of 3), Paragraph 2.4, Random Loads Test

- A. DG 2B-B capability to start and carry random loads along with sequenced loads shall be verified. Random load to be started with medium voltage motor shall be either fire pump or main control room or shutdown board room chiller. Verification of capability to start and carry random loads will also verify potential of overlapping loading sequences due to sequence timer inaccuracies. (Step 6.3.2[35])
- B. The ability of an emergency start to override idle start circuit is demonstrated by placing DG 2B-B in a ready to load condition from an idle condition. (Step 6.2.2[21])



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**5.8.2 Appendix G, Preoperational Test Criteria, (Page 2 of 3),  
Paragraph 2.5, Integrated ESF System Test**

For integrated ESF System Test with loss of offsite power test, the safety-related pumps must be aligned for full flow conditions. Prior to or immediately following this test with the pumps operating at full flow, an identical test will be performed with the pumps operating under miniflow conditions. Results from the full flow and miniflow tests will establish a baseline for each DG's dynamic loading response.  
**(Step 6.3.2[40.1], 6.3.2[49])**

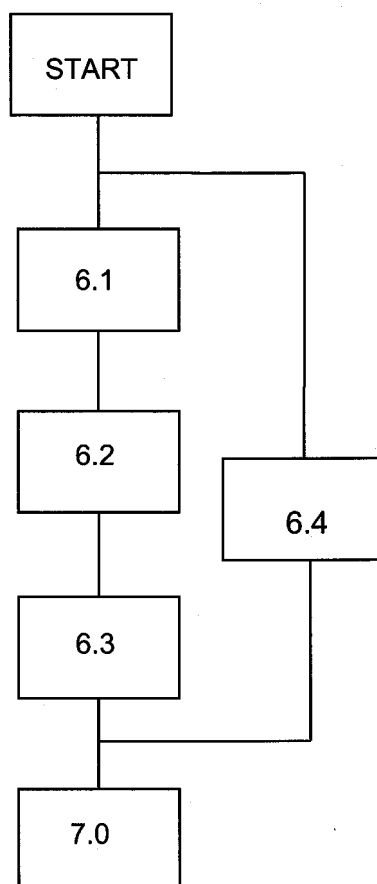
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## 6.0 PERFORMANCE

### NOTES

- 1) Subsections should be performed in the following order.
- 2) Subsection 6.4 is performed independently and gathers data for inclusion in this Instruction.



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## 6.1 Loss of Offsite Power (LOOP) - Train 2B - No ESF Actuation

### NOTES

This Section initiates the following test evolutions:

- 1) Synchronize 6.9KV Shutdown Board 2B-B and DG 2B-B, transfer loads between DG and Offsite (Preferred) power source for both Normal and Alternate 6.9KV Shutdown Board feeders;
- 2) Loss of Offsite Power to 6.9KV Shutdown Board 2B-B while on Alternate Offsite power supply;
- 3) Verification of DG 2B-B non-emergency trips bypassed while operating in emergency mode;
- 4) Verification of loads to sequence onto 6.9KV Shutdown Board while powered from associated DG;
- 5) H-B ERCW pump to strip and auto load sequence on Loss of Offsite Power.

### 6.1.1 Preliminary Actions Required for Subsection 6.1

- [1] **VERIFY** prerequisites in Section 4.0, Preliminary Actions, completed. \_\_\_\_\_
- [2] **ALIGN** components to their "PRE-TEST" REQUIRED positions per Appendix K, Loss of Offsite Power - Train 2B, Section 6.1. \_\_\_\_\_
- [3] **VERIFY** DG Recorder(s) installation and connection COMPLETED:
  - Appendix G, DG 2B-B Chart Recorder Connections \_\_\_\_\_
  - Appendix H, DG 2B-B Chart Recorder Hookup \_\_\_\_\_
  - Appendix Y, DG DAQ Connections, Operation, Disconnection \_\_\_\_\_
- [4] **VERIFY** SER recorders installation and connection COMPLETED:
  - Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
  - Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

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#### 6.1.1 Preliminary Actions Required for Subsection 6.1 (continued)

##### NOTE

Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

- [5] IF DG has **NOT** been operated within past 12 hours  
**THEN**

[5.1] **ROLL** DG 2B-B to check for water in cylinders by  
performing 0-SOI-82.04, Section 8.2. \_\_\_\_\_

[5.2] **RECORD** in 0-SI-82-9, DIESEL GENERATOR START  
HISTORY, time of inoperability for roll of DG 2B-B. \_\_\_\_\_

[6] **ENSURE** DG 2B-B is in Standby Alignment using 0-SOI-82.04. \_\_\_\_\_

[7] **PLACE** H-B ERCW pump in service using 0-SOI-67.01 **AND**  
**ENSURE** Handswitch 0-XS-67-287, ERCW PMP F-B/H-B DG  
POWER SEL, at 0-M-27A, is in PUMP H-B position. \_\_\_\_\_

[8] **ENSURE** Handswitch CSST D LTC-X REMOTE CONTROL, at  
[0-ECB-3], is in OFF (PULL FOR AUTO) position. \_\_\_\_\_

[9] **ENSURE** Handswitch CSST D LTC-Y REMOTE CONTROL, at  
[0-ECB-3], is in OFF (PULL FOR AUTO) position. \_\_\_\_\_

##### NOTE

Performance of Step 6.1.1[10] may be delayed until the LOOP test actuation is imminent.

- [10] **WHEN** initiation of Loss of Offsite Power test is imminent,  
**THEN**

**SHUT DOWN** U2 glycol system circ pumps and chillers per  
0-SOI-61.01, ICE CONDENSER SYSTEM. \_\_\_\_\_

[11] **ENSURE** Breaker 11, FIRE PUMP CONTROL 120V ac  
Preferred Dist Bd, 0-DBD-3 [Main Control Room] in the ON  
POSITION. \_\_\_\_\_

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**6.1.1 Preliminary Actions Required for Subsection 6.1 (continued)**

[12] **ENSURE** 2-PDIC-3-132A, AFW PMP B-B DISCH PRESS CONTROL, is in AUTO. \_\_\_\_\_

[13] **ENSURE** U-2 Steam Generator levels are less than or equal to 30% to support 2B-B MD AFW pump operation. \_\_\_\_\_

**NOTE**

Due to the many possible configurations that SFP cooling could be aligned to, 0-SOI-78.01 should be reviewed for the appropriate section(s) to align the SFP Pump C-S as required in Step 6.1.1[14]

[14] **ENSURE** C-S SFP pump is powered from the Train 2B power supply as follows:

[14.1] B-TRAIN DISCONNECT (EMERGENCY) at 0-XS-78-36B, SFP CIRC PMP C-S ALT PWR XFER SW (EMERGENCY), is ON \_\_\_\_\_

[14.2] 0-XSW-78-36, SFP CIRC PUMP C-S XFER SW (EMERGENCY) Red Light is LIT. (A10W/737). \_\_\_\_\_

[15] **GO TO** Section 6.1.2, Performance of Loss of Offsite power (LOOP) - Train 2B. \_\_\_\_\_

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## 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B

### NOTE

Steps 6.1.2[2] through 6.1.2[21.11] demonstrate capability of DG 2B-B and 6.9KV Shutdown Board 2B-B to transfer loads to DG then back to Offsite Power using either 6.9KV Shutdown Board 2B-B normal feeder or alternate feeder. These steps may be performed independently, in sequence, with Test Directors' concurrence while final alignment and final setup for Section 6.1.2 is being completed.

- [1] **VERIFY** all prerequisites listed in Section 6.1.1 have been completed. \_\_\_\_\_
- [2] **WHEN** ready to start DG 2B-B, **THEN:**
  - [2.1] **ANNOUNCE** starting of DG 2B-B over plant PA. \_\_\_\_\_
  - [2.2] **START** DG 2B-B, **AND**  
**RAISE** engine speed to Rated speed using 0-SOI-82.04, Section 8.1. \_\_\_\_\_
  - [2.3] **SYNCHRONIZE AND LOAD** DG 2B-B with offsite power through 1828 - NORMAL FROM CSST D, using 0-SOI-82.04, Section 8.1.4. \_\_\_\_\_
- [3] **WHEN** DG 2B-B is loaded to greater than or equal to 1.1 Megawatts, as indicated on 2-EI-82-100A, DG MEGAWATTS, **THEN:**
  - [3.1] **STOP** loading DG 2B-B. \_\_\_\_\_
  - [3.2] **MAINTAIN** DG MEGAVARS between 0.75 to 1.25 OUTGOING, as indicated on 2-EI-82-101A, using 2-HS-82-102, VOLTAGE REGULATOR. \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

**NOTE**

When offsite power is disconnected from Shutdown Board in Step 6.1.2[4], DG voltage, frequency, and amp parameters may change rapidly requiring manual adjustment of DG speed and voltage to nominal 6950 VAC and 60 HZ.

- [4] **PLACE** Handswitch 2-HS-57-71B, 1828 - NORMAL FROM CSST D, at 0-M-26 in TRIP position. \_\_\_\_\_
- [5] **VERIFY** by indicating lights at 2-HS-57-71B, 1828 - NORMAL FROM CSST D (0-M-26), breaker is OPEN.  
(ACC Crit 5.1C.1.a) \_\_\_\_\_
- [6] **VERIFY** by indicating lights at 2-HS-57-73A, 1924 - DG TO SD BD 2B-B (0-M-26) breaker remains CLOSED.  
(ACC Crit 5.1C.1.a) \_\_\_\_\_
- [7] **RESTORE** offsite power to 6.9KV SD Bd 2B-B from 1828 - NORMAL FROM CSST D: \_\_\_\_\_
- [7.1] **ENSURE** 2-XS-57-70, 6.9 SD BD 2B-B XFER SELECTOR, in MAN. \_\_\_\_\_
- [7.2] **ENSURE** the following sync switches for DG 2B-B in OFF: \_\_\_\_\_

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2C SYNC SWITCH	0-M-26	OFF	2-HS-57-69	
NORMAL - CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-72	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-74	
ALTERNATE CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-115	

- [7.3] **PLACE** 2-HS-57-72, NORMAL - CSST D SYNC SWITCH, to SYN position. \_\_\_\_\_

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## 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

### NOTE

Small adjustments in DG 2B-B voltage provide better control of voltage limiting overshooting of required DG 2B-B voltage. Voltage control response is approximately five times faster than speed control response.

- [7.4] **MATCH** generator INCOMING FREQUENCY (2-XI-82-92) with RUNNING FREQUENCY (2-XI-82-93) using 2-HS-82-103, SPEED CONTROL. \_\_\_\_\_
- [7.5] **MATCH** generator INCOMING VOLTAGE (2-EI-82-94) with RUNNING VOLTAGE (2-EI-82-95) using 2-HS-82-102, VOLTAGE REGULATOR. \_\_\_\_\_
- [7.6] **PLACE** 2-HS-82-108, DG MODE SELECTOR, in PARALLEL. \_\_\_\_\_
- [7.7] **ENSURE** DG 2B-B Frequency and Voltage are MATCHED with 6.9 kV SD BD 2B-B. \_\_\_\_\_
- [7.8] **ADJUST** 2-HS-82-103, SPEED CONTROL, 0-M-26 to obtain desired clockwise rotation of greater than or equal to 15 seconds on 2-XI-82-91, TRAIN 2B-B SYNCHROSCOPE. \_\_\_\_\_

CV

### Start of Critical Step(s)

- [7.9] **WHEN** TRAIN 2B-B SYNCHROSCOPE (2-XI-82-91) reaches 12 o'clock, **THEN**

**CLOSE** 2-HS-57-71B, 1828 - NORMAL FROM CSST D. \_\_\_\_\_

### End of Critical Step(s)



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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[7.10] **RECORD** clock time 1828 - NORMAL FROM CSST D is  
CLOSED.

Clock Time \_\_\_\_\_

[7.11] **PLACE** 2-HS-57-72, NORMAL - CSST D SYNC  
SWITCH, in OFF position.

[8] **IF** DG 2B-B operated at less than or equal to 1.32 megawatts  
load for greater than four hours but less than eight hours,  
**THEN:**

[8.1] **RAISE** DG 2B-B load to greater than or equal to  
2.2 Megawatts.

[8.2] **OPERATE** DG 2B-B for greater than or equal to  
30 minutes at greater than 2.2 megawatts load.

[9] **IF** DG 2B-B operated at less than or equal to 1.32 megawatts  
load for greater than or equal to eight hours, **THEN:**

[9.1] **RAISE** load gradually until exhaust smoke is about twice  
as dense as normal.

[9.2] **MAINTAIN** load until exhaust clears.

[9.3] **REPEAT** Steps 6.1.2[9.1] and 6.1.2[9.2] until full load  
can be carried with a clear exhaust.

**CAUTION**

If load is lowered to zero or below zero, a reverse power trip is possible.

[10] **REDUCE** megawatts as indicated on 2-EI-82-100A, using  
2-HS-82-103, SPEED CONTROL, to near ZERO.

[11] **REDUCE** megavars as indicated on 2-EI-82-101A, using  
2-HS-82-102, VOLTAGE REGULATOR, to near ZERO.

[12] **WHEN** DG 2B-B load is near ZERO, **THEN**

**OPEN** 1924 - DG TO SD BD 2B-B, using 2-HS-82-73A.  
(Acc Crit 5.1C.3.a)

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B**  
**(continued)**

- [13] **VERIFY** by indicating lights at 2-HS-57-71B, 1828 - NORMAL FROM CSST D, breaker is CLOSED. \_\_\_\_\_
- [14] **VERIFY** by indicating lights at 2-HS-57-73A, 1924 - DG TO SD BD 2B-B, is OPEN. \_\_\_\_\_
- [15] **TRANSFER** 6.9KV SD Bd 2B-B from 1828 - NORMAL FROM CSST D, to 1938 - ALTERNATE FROM CSST C, using 2-SOI-211.04. \_\_\_\_\_
- [16] **SYNCHRONIZE AND LOAD** DG 2B-B with offsite power through 1938 - ALTERNATE FROM CSST C, using 0-SOI-82.04, Section 8.1.4. \_\_\_\_\_
- [17] **WHEN** DG 2B-B is loaded to greater than or equal to 1.1 Megawatts, as indicated on 2-EI-82-100A, DG MEGAWATTS, **THEN:**
  - [17.1] **STOP** loading DG 2B-B. \_\_\_\_\_
  - [17.2] **MAINTAIN** DG MEGAVARS between 0.75 to 1.25 OUTGOING on 2-EI-82-17A, using 2-HS-82-102, VOLTAGE REGULATOR. \_\_\_\_\_
- [18] **PLACE** Handswitch 2-HS-57-98B, 1938 - ALTERNATE FROM CSST C, in TRIP position. \_\_\_\_\_
- [19] **VERIFY** by indicating lights at 2-HS-57-98B, 1938 - ALTERNATE FROM CSST C [0-M-26], breaker is OPEN. (Acc Crit 5.1C.2.a) \_\_\_\_\_
- [20] **VERIFY** by indicating lights at 2-HS-57-73A, 1924 - DG TO SD BD 2B-B [0-M-26], breaker remains CLOSED. (Acc Crit 5.1C.2.a) \_\_\_\_\_
- [21] **RESTORE** offsite power to 6.9KV SD Bd 2B-B from 1938 - ALTERNATE FROM CSST C, as follows:
  - [21.1] **ENSURE** 2-XS-57-70, 6.9 SD BD 2B-B XFER SELECTOR, [2-M-1], in MAN. \_\_\_\_\_

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### 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

[21.2] **ENSURE** the following sync switches for DG 2B-B in OFF:

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2C SYNC SWITCH	0-M-26	OFF	2-HS-57-69	
NORMAL - CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-72	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-74	
ALTERNATE CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-115	

[21.3] **PLACE** 2-HS-57-115, NORMAL - CSST C SYNC SWITCH, to SYN position. \_\_\_\_\_

#### NOTE

Small adjustments in DG 2B-B voltage provide better control of voltage limiting overshooting of required DG 2B-B voltage. Voltage control response is approximately five times faster than speed control response.

[21.4] **MATCH** generator INCOMING FREQUENCY (2-XI-82-92) with RUNNING FREQUENCY (2-XI-82-93) using 2-HS-82-103, SPEED CONTROL. \_\_\_\_\_

[21.5] **MATCH** generator INCOMING VOLTAGE (2-EI-82-94) with RUNNING VOLTAGE (2-EI-82-95) using 2-HS-82-102, VOLTAGE REGULATOR. \_\_\_\_\_

[21.6] **PLACE** 2-HS-82-108, DG MODE SELECTOR, in PARALLEL. \_\_\_\_\_

[21.7] **ENSURE** DG 2B-B Frequency and Voltage are MATCHED with 6.9 kV SD BD 2B-B. \_\_\_\_\_

[21.8] **ADJUST** 2-HS-82-103, SPEED CONTROL, [0-M-26] to obtain desired clockwise rotation of greater than or equal to 15 seconds, on 2-XI-82-91, TRAIN 2B-B SYNCHROSCOPE. \_\_\_\_\_

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

**Start of Critical Step(s)**

[21.9] **WHEN** TRAIN 2B-B SYNCHROSCOPE (2-XI-82-91)  
reaches 12 o'clock, **THEN**

**CLOSE** 2-HS-57-98B, 1938 - ALTERNATE FROM  
CSST C.

**End of Critical Step(s)**

[21.10] **RECORD** clock time 1938 - ALTERNATE FROM  
CSST C, is CLOSED.

Clock Time \_\_\_\_\_

[21.11] **PLACE** 2-HS-57-115, ALTERNATE - CSST C SYNC  
SWITCH, in OFF position.

[22] **VERIFY** by indicating lights at 2-HS-57-98B,  
1938 - ALTERNATE FROM CSST C, is CLOSED.

[23] **IF** DG 2B-B operated at less than or equal to 1.32 megawatts  
load for greater than four hours but less than eight hours,  
**THEN:**

[23.1] **RAISE** DG 2B-B load to greater than or equal to  
2.2 Megawatts.

[23.2] **OPERATE** DG 2B-B for greater than or equal to  
30 minutes at greater than 2.2 megawatts load.

[24] **IF** DG 2B-B operated at less than or equal to 1.32 megawatts  
load for greater than or equal to eight hours, **THEN:**

[24.1] **RAISE** load gradually until exhaust smoke is about two  
times normal density.

[24.2] **MAINTAIN** load until exhaust clears.

[24.3] **REPEAT** Steps 6.1.2[24.1] and 6.1.2[24.2] until full load  
can be carried with a clear exhaust.

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Date \_\_\_\_\_

**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B**  
**(continued)**

- [25] **REDUCE** megawatts as indicated on 2-EI-82-100A, using  
2-HS-82-103, SPEED CONTROL, to near ZERO. \_\_\_\_\_
- [26] **REDUCE** megavars as indicated on 2-EI-82-101A, using  
2-HS-82-102, VOLTAGE REGULATOR, to near ZERO. \_\_\_\_\_
- [27] **PLACE** 2-HS-82-104, START-STOP control switch, in STOP. \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[28] **CHECK** the following: (Acc Crit 5.1C.4.a)

- A. Generator ACB 1924 OPEN (2-HS-57-73A indicating lights). \_\_\_\_\_
- B. Generator Voltage ZERO (2-EI-82-96A) by placing 2-XS-82-96A to DG 2B-B position. \_\_\_\_\_
- C. Engine Speed dropped to 450 rpm (440 to 460 rpm). [2-PNL-82-B] \_\_\_\_\_
- D. Crankcase lube oil dipstick level at 7 day mark or greater. \_\_\_\_\_
- E. Engine Speed holds at 450 rpm (440 to 460 rpm) for 10 minutes. [2-PNL-82-B] \_\_\_\_\_
- F. Engine Speed drops to ZERO after 10 minutes. [2-PNL-82-B] \_\_\_\_\_
- G. Soak back pump RUNNING by oil pressure 10 psig or more on 2-IPI-82-1045/2B1, DG ENG 2B1 TURBOCHARGER SOAK BACK OIL PRESS, and 2-IPI-82-1045/2B2, DG ENG 2B2 TURBOCHARGER SOAK BACK OIL PRESS. \_\_\_\_\_

[29] **PLACE** 2-HS-57-73A, 1924 - DG TO SD BD 2B-B, in TRIP position to clear breaker disagreement. \_\_\_\_\_

[30] **PLACE** 2-HS-82-108, DG MODE SELECTOR, in UNIT. \_\_\_\_\_

[31] **RECORD** DG 2B-B operational information in 0-SI-82-9. \_\_\_\_\_

[32] **ENSURE** DG 2B-B in STANDBY ALIGNMENT in accordance with 0-SOI-82.04, Section 5.2. \_\_\_\_\_

[33] **ENSURE** Appendix C is complete and each of the pumps listed in Step 6.1.2[37] have verified flow paths prior to starting. \_\_\_\_\_

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### 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

#### NOTE

With Test Director approval, Step 6.1.2[34] may be performed at any time prior to starting pumps.

- [34] **VERIFY** each of pumps listed in Step 6.1.2[37] recirc flow paths have been walked down with pump flowpath aligned for starting pumps. \_\_\_\_\_
- [35] **ENSURE**, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, for CS Pump 2B-B RWST recirc flow is **CLOSED** \_\_\_\_\_
- [36] **MAKE** a plant announcement for the starting of the following pumps. \_\_\_\_\_

#### CAUTION

Damage may occur for any pump not meeting minimum flow requirements.

- [37] **START** the following pumps **AND**

**VERIFY** by HS indicating lights associated pumps are **RUNNING** on recirc and handswitches are in A AUTO:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS	DATE
2-M-4	2-HS-3-128A	AFW PMP B-B		
2-M-5	2-HS-62-104A	CCP B-B (ECCS)		
2-M-6	2-HS-63-15A	SI PMP B (ECCS)		
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)		
2-M-6	2-HS-72-10A	CNTMT SPRAY PMP B		

- [38] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI FLOW [2-M-6] valve is **OPEN**. \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

- [39] **ENSURE** C-S CCS pump aligned to NORMAL (TR 2B) power supply in accordance with 0-SOI-70.01, Section 8.7. \_\_\_\_\_
- [40] **START** C-S CCS pump using 2-HS-70-51A [0-M-27B] IAW 0-SOI-70.01 and verify pump running by indicating lights. \_\_\_\_\_
- [41] **ENSURE** HPFP Pump 2B-B is running AND 0-HS-26-11A is in A-P Auto. \_\_\_\_\_
- [42] **REVIEW** Appendix K for completion and sign for pumps started in Step 6.1.2[37]. \_\_\_\_\_
- [43] **PERFORM** Appendix W Electrical Support, Step 1.0[18] to install jumper to place automatic start signal to HPFP 2B-B. \_\_\_\_\_

**NOTE**

All individual heater element breakers are opened in preliminary actions, Steps 4.4[16] and 4.4[17], no power will be transmitted to the pressurizer heater elements.

- [44] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in MANUAL **AND**  
  
**LOWER** 2-PIC-68-340A, PZR PRESS MASTER CONTROL to 0% to allow BACKUP HEATERS B-B (2-HS-68-341D) and BACKUP HEATER C (2-HS-68-341H) to ENERGIZE. \_\_\_\_\_
- [45] **VERIFY** 2-HS-68-341D, BACKUP HEATERS B-B, indicates breaker closed by RED light LIT. \_\_\_\_\_
- [46] **CLOSE** backup heater C breaker using 2-HS-68-341H, BACKUP HEATER C, **AND**  
  
**VERIFY** breaker indicates breaker closed by RED light LIT. \_\_\_\_\_

**NOTE**

Steps 6.1.2[45] through 6.1.2[51] may be performed concurrently or in any order.

- [47] **TRANSFER** 6.9KV SD Bd 1A-A from 1716 Normal - 6.9 SD BD 1A-A FROM CSST C, to 1932 - ALT 6.9 SD BD 1A-A FROM CSST D, using 0-SOI-211.01, Section 8.1. \_\_\_\_\_



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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[48] **ENSURE** Handswitch 2-XS-57-70, 6.9 SD BD 2B-B XFER  
SELECTOR, at 2-M-1, is in MAN position. \_\_\_\_\_

[49] **EVALUATE** LCO 3.8.9 for entry conditions met for 6.9 kV  
Shutdown Board 2B-B with AUTO/MAN switch in MAN. \_\_\_\_\_

U2 SRO

[50] **VERIFY** Ice Condenser chillers and pumps removed from  
service. \_\_\_\_\_

[51] **NOTIFY** U2 SRO to evaluate TS 3.3.7 for entry conditions for  
inhibiting CRI Train B function in Step 6.1.2[53] for  
0-RM-90-126. \_\_\_\_\_

**CAUTION**

With RCPs in service, alignment of 1B-B CCS Pump to the "B" train CCS header increases the vulnerability of Unit 1 to a single point failure. The loss of the 1A-A CCS Pump impacts the RCP oil coolers for Unit 1. Evaluation of the need for the alignment and the potential impact should be conducted prior to performing this alignment.

[52] **ENSURE** the following alignment:

[52.1] **ALIGN** 1B-B CCS pump to supply Train B CCS in  
accordance with 0-SOI-70.01, Section 8.1. \_\_\_\_\_

[53] **SELECT** 0-HS-90-136A2, VENT ISOL RAD MON BLOCK, to  
0-126 **AND** \_\_\_\_\_

**PLACE** in PULL OUT, to inhibit Train B CRI when 2B-B  
Shutdown Board is deenergized. \_\_\_\_\_

CV

[54] **PERFORM** the following for sequence of Events Recorder (SER):

[54.1] **OBTAIN** a SER status summary printout. \_\_\_\_\_

[54.2] **ENSURE** SER is in Standby Mode. \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

- [55] **VERIFY** Test personnel are stationed for performance of Steps 6.1.2[61], Loss of Offsite Power, Train 2B. \_\_\_\_\_

**NOTE**

Steps 6.1.2[56] and 6.1.2[57] may be performed concurrently.

- [56] **ANNOUNCE** over paging system the following message:

Attention in the plant, Attention in the plant: Unit 2 will be initiating a Loss of Offsite Power to 6.9kV Shutdown Board 2B-B resulting in Diesel Generator 2B-B automatically starting and reenergizing 2B-B 6.9kV Shutdown Board. All personnel should remain clear of U2 operating equipment and electrical boards. (repeat message)

Ops. \_\_\_\_\_

- [57] **NOTIFY** U1 SRO to evaluate entry conditions for LCO 3.8.1, 3.8.4, 3.8.7, 3.8.9, upon performance of Step 6.1.2[61]. \_\_\_\_\_

\_\_\_\_\_  
U1 SRO

\_\_\_\_\_  
Date

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

- [58] **ENSURE** 2-XS-82-66, 6.9 SD BD 2B-B VOLTMETER SELECTOR selected to SHTDN BD 2B-B position to provide indication of 6.9 kV SD BD 2B-B voltage on 2-EI-57-66, 6.9 SDB 2B-B VOLTS.

**NOTES**

- 1) ERCW pumps are started and stopped as required to adjust header pressures and/or flows. Flow rates are also adjusted by adding or removing flow paths and/or adjusting the CCS HX outlet valves (**REFER** to 0-SOI-70.01, CCS for CCS Heat Exchanger flow adjustment.) Normal pressure is 95 to 110 PSIG.
- 2) If desired to change position of 1-FCV-67-146, 0-FCV-67-151, or 0-FCV-67-152, the valve should be repositioned from FULL CLOSED or MORE CLOSED position, using the MCR handswitch.
- 3) If 0-FCV-67-152 changes position from CLOSED due to a Black Out or a 2B-B SD BD transfer, 0-HS-67-152A must be taken to the OPEN position, PULL TO RESET, to break the seal-in, PUSH IN, then taken back to CLOSE.

- [59] **MAINTAIN** ERCW and CCS Train 2B powered pumps running,  
**AND**

**ADJUST** ERCW and CCS system pressure as necessary by  
adjusting system flows.

- [60] **NOTIFY** personnel to start the following recorders:

[60.1] DG Recorder

[60.2] Sequence of Events Recorder

[60.3] **REQUEST** acknowledgement that BOTH recorders are  
running.

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

**NOTE**

Step 6.1.2[61] initiates Loss of Offsite Power load strip and load sequence for DG 2B-B and 6.9kV SD Bd 2B-B.

- [61] **PERFORM** a five second countdown over paging system,  
**THEN**

**OPEN** Breaker 1712, NORM FEEDER FOR 6.9KV SHDN BD  
1A-A & ALT FEEDER FOR 6.9KV SHDN BD 2B-B, at  
0-ECB-2, to initiate Train 2B Loss of Offsite Power.

- [62] **RECORD** time:

Clock Time \_\_\_\_\_

- [63] **VERIFY** by indicating lights at 2-HS-57-98B, 1938 -  
ALTERNATE FROM CSST C [0-M-26] that breaker is open.

- [64] **VERIFY** 6.9 kV SD BD 2B-B voltage reduces to ZERO on  
2-EI-57-66, 6.9 SDB 2B-B VOLTS. (**Acc Crit 5.2A.1**)

- [65] **VERIFY** 1924-DG TO SD BD 2B-B RED light is LIT. [0-M-26].  
(**Acc Crit 5.1-C.6.a**)

- [66] **NOTIFY** U2 SRO to perform 0-SI-82-2, 8 HOUR DG AC  
POWER SOURCE OPERABILITY VERIFICATION, within one  
hour of time recorded in Step 6.1.2[62].

- [67] **INITIATE** verification of DG 2B-B non-emergency trips  
bypassed while operating in Emergency Mode using Appendix  
W, Section 2.0

Date \_\_\_\_\_

### 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

- [68] **VERIFY** components listed below started.  
(Acc Crit 5.2B), 5.2A.3.b)

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
CCP B-B (ECCS)	2-HS-62-104A	[2-M-5]	
ERCW PMP H-B	0-HS-67-51A	[0-M-27A]	
CCS PMP C-S	2-HS-70-51A	[0-M-27B]	
THRM BAR BSTR PMP 2B (TBBP)	2-HS-70-130A	[0-M-27B]	
AFW PMP B-B	2-HS-3-128A	[2-M-4]	
HPFP PMP 2B-B	2-HS-26-11A	[1-M-15]	
BACKUP HEATERS B-B	2-HS-68-341D	[2-M-4]	

- [69] **VERIFY** Channel IV Inverters voltage and frequency are normal:

#### FREQUENCY - 59.5 TO 60.5 HZ

- 1-INV-235-4

Frequency	HZ
-----------	----

- 2-INV-235-4

Frequency	HZ
-----------	----

#### VOLTAGE - 118V TO 126V

- 1-INV-235-4

Voltage	VAC
---------	-----

- 2-INV-235-4

Voltage	VAC
---------	-----

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[70] **WHEN** all loads have sequenced ON (Chillers - approximately 7 minutes), **THEN**

[70.1] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[70.2] **START** stopwatch to time 5 minute DG 2B-B run. \_\_\_\_\_

[71] **RECORD** "POST-LOOP" status of components per Appendix K. \_\_\_\_\_

[72] **WHEN** a minimum of five (5) minutes has elapsed from time stop watch started in Step 6.1.2[70.2], **THEN**:

[72.1] **RECORD** clock time. \_\_\_\_\_

Clock Time \_\_\_\_\_

[72.2] **RECORD** DG 2B-B load indicated by 2-EI-82-100A, DG MEGAWATTS. \_\_\_\_\_

DG 2B-B	MW
---------	----

[72.3] **CALCULATE** DG 2B-B run time as determined from clock times recorded in Step 6.1.2[70.1] and 6.1.2[72.1]:

CV

-	=	mins	secs
Clock Time Step 6.1.2[72.1]	Clock Time Step 6.1.2[70.1]	DG 2B-B Runtime	

[72.4] **VERIFY** time calculated in Step 6.1.2[72.3] is greater than or equal to five minutes. (**Acc Crit 5.2A.3.e**) \_\_\_\_\_

[72.5] **STOP** DG 2B-B Chart Recorder(s). \_\_\_\_\_

[72.6] **VERIFY** DG 2B-B load recorded in Step 6.1.2[72.2] is less than or equal to 4400 kW. (**Acc Crit 5.1B.6.a(1)**) \_\_\_\_\_

[73] **ENSURE** 2-FCV-3-359, AFWP 2B-B Recirc Valve is OPENED. \_\_\_\_\_

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### 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

[74] **PERFORM** the following:

[74.1] **VERIFY** by RED/GREEN indicating lights at  
2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL (2-M-4),  
Level Bypass Control Valve LCV-3-148A is **NOT**  
CLOSED (Modulating/Open) \_\_\_\_\_

[74.2] **VERIFY** by RED/GREEN indicating lights at  
2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL (2-M-4)  
Level Bypass Control valve LCV-3-171A is **NOT**  
CLOSED (Modulating/Open) \_\_\_\_\_

[75] **PERFORM** the following for each handswitch listed below:

[75.1] **ROTATE** TO ACC RESET MODULATE, **THEN**  
**ROTATE** to CLOSE **THEN**

**PULL** handswitch to PULL-TO-LOCK position. \_\_\_\_\_

- 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL \_\_\_\_\_
- 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL \_\_\_\_\_

[75.2] **VERIFY** by indicating lights associated Level Bypass  
Control Valve is CLOSED:

- LCV-3-148A CLOSED (2-HS-3-148A) \_\_\_\_\_
- LCV-3-171A CLOSED (2-HS-3-171A) \_\_\_\_\_

[76] **CHECK** verification of DG 2B-B trips being bypassed,  
initiated in Step 6.1.2[67], is COMPLETE. \_\_\_\_\_

[77] **VERIFY** breakers are OPEN by Green light is Lit:

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
1938-ALTERNATE FROM CSST C	2-HS-57-98B	0-M-26	
1716-NORMAL FROM CSST C	1-HS-57-41B	0-M-26	

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### 6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B (continued)

- [78] **PLACE** Breaker 1712 Handswitch, NORM FEEDER FOR 6.9K SHDN BD 1A-A & ALT FEEDER FOR 6.9KV SHDN BD 2B-B, at 0-ECB-2 in CLOSED position. \_\_\_\_\_

#### NOTE

The Common Emergency Start Relay for DG 2B-B (CES2BY) did not energize upon loss of board voltage due to fuses being removed enabling DG 2B-B 86LOR relay to be reset without placing 43T(L) for DG 2B-B, or any DG, in Test position.

- [79] **PERFORM** the following to restore offsite power to 6.9KV SD Bd 2B-B from 1938 - ALTERNATE FROM CSST C:

- [79.1] **CHECK** 2-RLY-82-86LOR2, DG 2B-B EMERGENCY START LOCKOUT, (red) indicating light is **NOT** illuminated. [2-ARB-82-B/1, Diesel Generator 2B-B Relay Board] \_\_\_\_\_

- [79.2] **RESET** 2-RLY-82-86LOR2, DG 2B-B EMERGENCY START LOCKOUT, [2-ARB-82-B/1, Diesel Generator 2B-B Relay Board] \_\_\_\_\_

- [79.3] **ENSURE** 2-XS-57-70, 6.9 SD BD 2B-B XFER SELECTOR, [2-M-1], in MAN. \_\_\_\_\_

- [79.4] **ENSURE** the following sync switches for DG 2B-B in OFF:

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
MAINTENANCE 6.9 UNIT BD 2C SYNC SWITCH	0-M-26	OFF	2-HS-57-69	
NORMAL - CSST D SYNC SWITCH	0-M-26	OFF	2-HS-57-72	
DG SYNC SWITCH	0-M-26	OFF	2-HS-57-74	
ALTERNATE CSST C SYNC SWITCH	0-M-26	OFF	2-HS-57-115	



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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

- [79.5] **PLACE** 2-HS-57-115, ALTERNATE CSST C SYNC SWITCH, in SYN position. \_\_\_\_\_

**NOTE**

Small adjustments in DG 2B-B voltage provide better control of voltage limiting overshooting of required DG 2B-B voltage. Voltage control response is approximately five times faster than speed control response.

- [79.6] **MATCH** generator INCOMING FREQUENCY (2-XI-82-92) with RUNNING FREQUENCY (2-XI-82-93) using 2-HS-82-103, SPEED CONTROL. \_\_\_\_\_

- [79.7] **MATCH** generator INCOMING VOLTAGE (2-EI-82-94) with RUNNING VOLTAGE (2-EI-82-95) using 2-HS-82-102, VOLTAGE REGULATOR. \_\_\_\_\_

- [79.8] **PLACE** 2-HS-82-108, DG MODE SELECTOR, in PARALLEL. \_\_\_\_\_

- [79.9] **ENSURE** DG 2B-B Frequency and Voltage are MATCHED with 6.9 kV SD BD 2B-B, **AND** \_\_\_\_\_

**ADJUST** 2-HS-82-103, SPEED CONTROL, 0-M-26 to obtain desired clockwise rotation (15 or more seconds) on 2-XI-82-91, TRAIN 2B-B SYNCHROSCOPE. \_\_\_\_\_

CV

**Start of Critical Step(s)**

- [79.10] **WHEN** TRAIN 2B-B SYNCHROSCOPE (2-XI-82-91) reaches 12 o'clock, **THEN**

**CLOSE** 1938 - ALTERNATE FROM CSST C. \_\_\_\_\_

**End of Critical Step(s)**

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[79.11] **RECORD** clock time 1938 - ALTERNATE FROM CSST C, is CLOSED.

Clock Time \_\_\_\_\_

[79.12] **PLACE** 2-HS-57-115, ALTERNATE CSST C SYNC SWITCH, in OFF.

[80] **IF** DG 2B-B operated at less than or equal to 1.32 megawatts load for more than four hours but less than eight hours, **THEN:**

[80.1] **RAISE** DG 2B-B load to greater than or equal to 2.2 Megawatts.

[80.2] **OPERATE** DG 2B-B load greater than or equal to 30 minutes at greater than or equal to 2.2 megawatts.

[81] **IF** DG 2B-B operated at or below 1.32 megawatts load for greater than or equal to eight hours, **THEN:**

[81.1] **RAISE** load gradually until smoke is about two times normal density.

[81.2] **MAINTAIN** load until exhaust clears.

[81.3] **REPEAT** Steps 6.1.2[81.1] and 6.1.2[81.2] until full load can be carried with a clear exhaust.

[82] **PRESS** BLACK-OUT RELAYS BO-RESET pushbutton resetting BO Relays on SD Bd 2B-B Logic Relay Panel.

[83] **CHECK** Window 220-E, DIESEL GEN 2B-B (0-XA-55-26D), LOGIC PANEL 2B-B LOAD STRIP RELAYS OUT OF SYNC OR UV TEST, **NOT** LIT.

**CAUTION**

If load is lowered to zero or below zero, a reverse power trip is possible.

[84] **REDUCE** megawatts (2-EI-82-100A) using 2-HS-82-103, SPEED CONTROL, to near ZERO.

[85] **REDUCE** megavars (2-EI-82-101A) using 2-HS-82-102, VOLTAGE REGULATOR, to near ZERO.

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

- [86] **PLACE** 2-HS-82-104, START-STOP control switch, in STOP. \_\_\_\_\_
- [87] **CHECK** the following:
- A. Generator ACB 1924 OPEN (2-HS-57-73A indicating lights). **(Acc Crit 5.1B.9.a)** \_\_\_\_\_
  - B. Generator Voltage ZERO (2-EI-82-96A) by placing 2-XS-82-96A to DG 2B-B position. \_\_\_\_\_
  - C. Engine Speed dropped to 450 rpm (440 to 460 rpm). [2-PNL-82-B] \_\_\_\_\_
  - D. Crankcase lube oil dipstick level at 7 day mark or greater. \_\_\_\_\_
  - E. Engine Speed holds at between 450 rpm (440 to 460 rpm) for 10 minutes. [2-PNL-82-B] \_\_\_\_\_
  - F. Engine Speed drops to ZERO after 10 minutes of idle. [2-PNL-82-B] \_\_\_\_\_
  - G. Soak back pump RUNNING by oil press. 10 psig or more on 2-IPI-82-1045/2B1, DG ENG 2B1 TURBOCHARGER SOAK BACK OIL PRESS, and 2-IPI-82-1045/2B2, DG ENG 2B2 TURBOCHARGER SOAK BACK OIL PRESS. \_\_\_\_\_
- [88] **PLACE** 2-HS-57-73A, 1924 - DG TO SD BD 2B-B, in TRIP position to clear breaker disagreement. \_\_\_\_\_
- [89] **PLACE** 2-HS-82-108, DG MODE SELECTOR, in UNIT. \_\_\_\_\_
- [90] **RECORD** DG 2B-B operating information in 0-SI-82-9. \_\_\_\_\_
- [91] **NOTIFY** load coordinator that DG 2B-B is secured. \_\_\_\_\_
- [92] **IF** DG 2B-B run time is greater than one hour, **THEN**
- REQUEST** Chemistry to sample Day Tanks 2B1 & 2B2 for condensate. \_\_\_\_\_

Chemistry Contact

Date

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[93] **PERFORM** 0-SOI-82.04, Section 5.2, Verification of Standby Conditions. (Acc Crit 5.1B.9.a) \_\_\_\_\_

[94] **NOTIFY** U1 SRO to evaluate exit conditions for LCO 3.8.1, 3.8.4, 3.8.7, 3.8.9. \_\_\_\_\_

U1 SRO

Date

[95] **STOP** the following pumps and place handswitch in Pull-To-Lock:

DESCRIPTION	HANDSWITCH	LOCATION	INITIALS
AFW PMP B-B	2-HS-3-128A	[2-M-4]	
CCP B-B (ECCS)	2-HS-62-104A	[2-M-5]	
ERCW PMP H-B	0-HS-67-59A	[0-M-27A]	
CCS PMP C-S	2-HS-70-51A	[0-M-27B]	
HPFP PMP 2B-B	2-HS-26-11A	[1-M-15]	
THRM BAR BSTR PMP 2B (TBBP)	2-HS-70-130A	[0-M-27B]	

[96] **REMOVE** jumper for HPFP 2B-B using Appendix W, Electrical Support, 1.0[19]. \_\_\_\_\_

[97] **WHEN** Step 6.1.2[96] is COMPLETE, **THEN**

**PLACE** 2-HS-26-11A, HPFP PMP 2B-B, in STOP, **AND**

**RETURN** handswitch to one of the following positions clearing annunciator WINDOW 172-B, TR B HPFP PMP CNTL SWITCH MISALIGNED:

- A Auto (STANDBY)

\_\_\_\_\_  
CV

- Pull A-P AUTO

\_\_\_\_\_  
CV

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[98] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL output to 25-30% to allow BACKUP HEATERS B-B (2-HS-68-341D) to DEENERGIZE. \_\_\_\_\_

[99] **TURN** 2-HS-68-341D, BACKUP HEATERS B-B, to OFF, **THEN**

**RETURN** 2-HS-68-341D, BACKUP HEATERS B-B to A-P AUTO position. \_\_\_\_\_

[100] **TURN** 2-HS-68-341H, BACKUP HEATER C, to OFF, **THEN**

**RETURN** handswitch to P AUTO. \_\_\_\_\_

**NOTE**

Appendix L and M contain required positions for testing in Section 6.2 and may be used to align equipment for the required positions rather than to the AS-FOUND positions of Appendix K.

[101] **ALIGN** components to their "AS-FOUND" positions per Appendix K. \_\_\_\_\_

[102] **CHECK** Step 6.1.2[78] is COMPLETE. \_\_\_\_\_

[103] **TRANSFER** 6.9kV SD Bd 1A-A from Alternate (Breaker 1932) to Normal (Breaker 1716) per Section 8.3 of 0-SOI-211.01. \_\_\_\_\_

[104] **TRANSFER** 6.9KV SD Bd 2B-B from Alternate (Breaker 1938), to Normal (Breaker 1828), per section 8.3 of 2-SOI-211.04. \_\_\_\_\_

**NOTE**

Remaining steps in this subsection are data reduction steps and need **NOT** be completed prior to beginning next test subsection.

[105] **COMPLETE** Appendix O using sequence of Events Recorder (SER) printout(s). \_\_\_\_\_

[106] **VERIFY** by successful completion of Appendix W, Section 2.0, DG 2B-B non-emergency trips are bypassed when operating in Emergency Mode. (Acc Crit 5.1B.8.a) \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[107] **COMPLETE** Appendix R using DG 2B-B Chart Recorder trace(s). \_\_\_\_\_

[108] **VERIFY** "Actual" Post-LOOP component status recorded on Appendix K matches "Required" status specified by Appendix. (Acc Crit 5.1A.2.a(1)) \_\_\_\_\_

[109] **REVIEW** Elapsed Time calculations performed on Appendix O and **PERFORM** the following:

[109.1] **VERIFY** "BUS STRIP" components properly STOPPED (load-shed) as specified by Appendix O (Acc Crit 5.1A.2.a(2), 5.2A.2) \_\_\_\_\_

[109.2] **VERIFY** "DG 2B-B BKR 1924" CLOSED in equal to or less than ten seconds following receipt of LOOP start signal. (Acc Crit 5.1B.2.a, 5.2A.3.a) \_\_\_\_\_

[109.3] **VERIFY** "LOOP-SEQ" calculated times are within Acceptable ranges specified by Appendix O. (Acc Crit 5.1A.2.a(3), 5.2A.3.b) \_\_\_\_\_

[110] **REVIEW** DG 2B-B Chart Recorder trace(s) for diesel response following LOOP, **THEN**

**RECORD** minimum DG 2B-B voltage and frequency which occurred during load sequencing: \_\_\_\_\_

Generator Minimum Voltage	VAC	≥5213 VAC
Generator Minimum Frequency	Hz	≥57 Hz

[111] **VERIFY** data recorded in Step 6.1.2[110] meets Generator Minimum Voltage and Frequency required response of DG 2B-B during sequencing of LOOP loads. Acc Crit 5.1B.3.a(1)) \_\_\_\_\_

[112] **VERIFY** Actual Voltage and Frequency Recovery Times recorded on Appendix R for LOOP loading sequence meet acceptance criteria following each step load increase. (Acc Crit 5.1B.4.a(1)) \_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[113] **REVIEW** DG 2B-B Chart Recorder trace(s) for diesel response following LOOP, **AND**

**RECORD** minimum and maximum steady state DG 2B-B voltage and frequency which occurred during run (minimum period of five minutes):

Parameter	Acceptance Criteria	Actual Value	Initials
Minimum Voltage	$\geq 6800$ VAC	VAC	
Maximum Voltage	$\leq 7260$ VAC		
Minimum Frequency	$\geq 59.8$ Hz	HZ	
Maximum Frequency	$\leq 60.1$ Hz		

[114] **VERIFY** minimum and maximum steady state DG 2B-B voltage and frequency meet acceptance criteria following minimum five minute run.  
(Acc Crit 5.1B.5.b(1), 5.2A.3.c, 5.2A.3.d)

\_\_\_\_\_

[115] **VERIFY** emergency loads transferred from DG 2B-B to 6.9kV SD BD 2B-B and offsite power source.  
(Acc Crit 5.1B.9.a)

\_\_\_\_\_

[116] **PERFORM** U2 and Common Main Control Room board walkdown for plant configuration issues in preparation for Section 6.2.

\_\_\_\_\_

[117] **ENSURE** U-2 Steam Generator levels are equal to or less than 30% as indicated on 2-M-3 indicators.

\_\_\_\_\_

[118] **ENSURE** 2-PDIC-3-132A, AFW PMP B-B DISCH PRESS CONTROL, is in AUTO.

\_\_\_\_\_

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**6.1.2 Performance of Loss of Offsite Power (LOOP) - Train 2B  
(continued)**

[119] **IF** Chemistry sampled DG 2B-B Day Tanks, **THEN**

**RECORD** results of Chemistry sampling for condensate in DG 2B-B Day Tanks.

<b>Day Tank</b>	<b>Results</b>	<b>Initials</b>	<b>Results</b>	<b>Initials</b>
Engine 1	No Condensate Found		Condensate Found and Removed	
Engine 2	No Condensate Found		Condensate Found and Removed	

[120] **IF** Ice Condenser conditions require chillers and pumps returned to service prior to Section 6.2.2, **THEN**

**RESTORE** Ice Condenser chillers and pumps using 0-SOI-61-01.

[121] **GO TO** Section 6.2.

\_\_\_\_\_  
\_\_\_\_\_



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## 6.2 Safety Injection (SI) — Train 2B

### NOTES

- 1) This Section initiates the following tests:
  - Safety Injection with ESF pumps full flow to the Reactor Vessel.
  - Containment Sump Swapover initiated manually by actuation of the appropriate SSPS output relay with Safety Injection Signal present.
  - DG 1B-B and 2B-B Test Mode Override from initiation of a U2 Safety Injection Signal.
  - Initiation of a Safety Injection Signal concurrent with ØB actuation with ESF pumps on recirculation flow.
  - H-B & E-B ERCW pumps auto starts on an ESF signal.
  - G-B & F-B ERCW pumps auto starts on an ESF signal.
- 2) C-S CCS pump is aligned to the Normal Train 2B power source to test actuation by U2 Train B Safety Injection Signal.
- 3) 1B-B CCS pump is aligned to the U1 Train B CCS for operability considerations.

### 6.2.1 Preliminary Actions Required for Subsection 6.2

- [1] **ALIGN** components to the "Pre-Test" positions per Appendix L, Safety Injection (SI) - TR. 2B, Section 6.2. \_\_\_\_\_
- [2] **ALIGN** components to the "Pre-Test" positions per Appendix M, Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2. \_\_\_\_\_
- [3] **ENSURE** at least one Unit 1 Train B ERCW pump in service to allow starting and stopping Unit 2 Train B ERCW pumps during this test. \_\_\_\_\_
- [4] **ENSURE** DG 2B-B CES2BY relay fuses remain pulled to prevent starting other diesel generators in the performance of this test section. \_\_\_\_\_
- [5] **NOTIFY** US/SRO to enter tracking for LCO 3.3.7 for CRI Train B function disabled in the Step 6.2.1[6]. \_\_\_\_\_

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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

- [6] **NOTIFY** Electrical support to install jumpers across terminals of Relay VKEB-1 [1-R-78] per Appendix W, Step 1.0[14], for CRI jumper installation. \_\_\_\_\_
- [7] **NOTIFY** Electrical support to install a jumper across terminals of Relay CPD2 [2-R-76, Row G, Slot 9] per Appendix W, Step 1.0[15], to bypass ABI trip of U2 Containment Purge Fan and Incore Instrument Room Fan. \_\_\_\_\_

#### NOTE

Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

- [8] **IF** DG 2B-B has **NOT** been operated in the past 12 hours,  
**THEN**  
  
**ROLL** DG 2B-B to check for water in cylinders by performing Section 8.2 of 0-SOI-82.04. \_\_\_\_\_
- [9] **ENSURE** DG 2B-B is in STANDBY ALIGNMENT per Section 5.0 of 0-SOI-82.04 to support test: \_\_\_\_\_

#### NOTE

Performance of the diesel rolling will require entry into the actions of T.S. 3.8.1

- [10] **IF** DG 1B-B has **NOT** been operated in the past 12 hours,  
**THEN**  
  
**ROLL** DG 1B-B to check for water in cylinders by performing Section 8.2 of 0-SOI-82.02. \_\_\_\_\_
- [11] **ENSURE** DG 1B-B is in STANDBY ALIGNMENT per Section 5.0 of 0-SOI-82.02. \_\_\_\_\_
- [12] **RECORD** DG 1B-B and 2B-B roll time information in 0-SI-82-9. \_\_\_\_\_
- [13] **INFORM** U1 SRO of alignment requirements of CCS **AND**  
  
**REQUEST** U1 SRO evaluate U1 TS for potential LCO 3.7.7 entry conditions. \_\_\_\_\_
- [14] **ENSURE** 1B-B CCS pump in service to Train B CCS in accordance with 0-SOI-70.01, Section 8.1. \_\_\_\_\_

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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

- [15] **ENSURE** C-S CCS pump in standby alignment on CCS Train B. \_\_\_\_\_
- [16] **ALIGN** CCS PMP 2B-B to Supply Header 2A in accordance with 0-SOI-70.01, Section 8.14. \_\_\_\_\_
- [17] **ENSURE** C-S CCS pump power supply aligned to Normal, 480V SD BD 2B2-B, using 0-SOI-70.01, Section 8.7, if required. \_\_\_\_\_
- [18] **ENSURE** 0-XS-67-288, ERCW PMPS F-B/H-B DG POWER SEL, is in H-B [0-M-27]. \_\_\_\_\_
- [19] **ENSURE** 0-XS-67-287, ERCW PMPS E-B/G-B DG POWER SEL, is in E-B [0-M-27]. \_\_\_\_\_
- [20] **ENSURE** U2 Steam Generator levels are less than or equal to 30% as indicated by [2-M-3] indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
T-D AFW PMP SG1 LEVEL	2-LI-3-174		
T-D AFW PMP SG2 LEVEL	2-LI-3-173		
T-D AFW PMP SG3 LEVEL	2-LI-3-172		
T-D AFW PMP SG4 LEVEL	2-LI-3-175		
AFW PMP A-A SG1 LEVEL	2-LI-3-164		
AFW PMP A-A SG2 LEVEL	2-LI-3-156		
AFW PMP B-B SG3 LEVEL	2-LI-3-148		
AFW PMP B-B SG4 LEVEL	2-LI-3-171		

- [21] **ENSURE** U2 Refueling Water Storage Tank (RWST) levels are greater than or equal to 70% as indicated by [2-M-6] indicators:

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
RWST LEVEL	2-LI-63-50		

Date \_\_\_\_\_

**6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)**

DESCRIPTION	INDICATOR	LEVEL (%)	INITIALS
RWST LEVEL	2-LI-63-51		
RWST LEVEL	2-LI-63-52		
RWST LEVEL	2-LI-63-53		

- [22] **ENSURE** U2 Condensate Storage Tank (CST) level is greater than or equal to 200,000 gallons as indicated on 2-M-2 indicator:

DESCRIPTION	INDICATOR	LEVEL (gals)	INITIALS
CST B LEVEL	2-LI-2-233D		

- [23] **ENSURE** all REACTOR TRIP FIRST OUT alarms, 2-XA-55-4D, [2-M-4] are **NOT** LIT.

- [24] **ENSURE** 2-XA-55-4A-70A, [2-M-4] SI ACTUATED, is **NOT** LIT.

- [25] **PERFORM** the following alignment:

PUMP	HANDSWITCH	STOPPED	HANDSWITCH POSITION	INITIALS
AFW PMP B-B	2-HS-3-128A [2-M-4]	STOP	A-P AUTO	
CCP B-B (ECCS)	2-HS-62-104A [2-M-5]	STOP	A AUTO	
RHR PMP B (ECCS)	2-HS-74-20A [2-M-6]	STOP	A AUTO	
SI PMP B (ECCS)	2-HS-63-15A [2-M-6]	STOP	A AUTO	
CNTMT SPRAY PMP B	2-HS-72-10A [2-M-6]	STOP	A AUTO	
ERCW PMP H-B (1)	0-HS-67-59A [0-M-27A]	STOP	A AUTO	

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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

PUMP	HANDSWITCH	STOPPED	HANDSWITCH POSITION	INITIALS
ERCW PMP E-B (1)	0-HS-67-47A [0-M-27A]	STOP	A AUTO	
CCS PMP 2B-B	2-HS-70-33A [0-M-27B]	STOP	A AUTO	
CCS PMP C-S NOR ACB	2-HS-70-51A [0-M-27B]	STOP	A-P AUTO	

- (1) Other ERCW pumps should be started and pressure adjusted as needed to allow stopping of the ERCW pumps.

[26] **ENSURE** the following room cooler fans are **NOT** running and their breakers are aligned for pre-test positions as shown:

DESCRIPTION	BREAKER COMPT NUMBER	BREAKER RED LIGHT	INIT
<b>C&amp;A VENT BD 2B1-B</b>			
RHR PUMP 2B-B RM CLR (2-PMCL-30-176)	2-BKR-30-176 C/9A	BREAKER: ON RED LIGHT: OFF	
SIS PUMP 2B-B RM CLR (2-PMCL-30-179)	2-BKR-30-179 C/8A	BREAKER: ON RED LIGHT: OFF	
CENT CHG PUMP 2B-B RM CLR (2-PMCL-30-182)	2-BKR-30-182 C/10A	BREAKER: ON RED LIGHT: OFF	
CS PUMP 2B-B RM CLR (2-PMCL-30-178)	2-BKR-30-178 C/3C	BREAKER: ON RED LIGHT: OFF	

[27] **VERIFY** DG Recorder(s) installation and connection  
COMPLETED:

- Appendix G, DG 2B-B Chart Recorder Connections \_\_\_\_\_
- Appendix H, DG 2B-B Chart Recorder Hookup \_\_\_\_\_

[28] **VERIFY** SER recorders installation and connection  
COMPLETED:

- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
- Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

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**6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)**

- [29] **ENSURE** Handswitch CSST D LTC-Y REMOTE CONTROL, at 0-ECB-3, is in OFF (PULL FOR AUTO) position. \_\_\_\_\_
- [30] **ENSURE** Handswitch CSST D LTC-X REMOTE CONTROL, at 0-ECB-3, is in OFF (PULL FOR AUTO) position. \_\_\_\_\_
- [31] **ENSURE** Reactor Trip Breakers at 2-L-116 are racked into CONNECTED position, and OPEN:
- Reactor Trip Breaker A (2-BKR-99-L116/1B) \_\_\_\_\_
  - Reactor Trip Breaker B (2-BKR-99-L116/1C) \_\_\_\_\_
- [32] **ENSURE** the A RX TRIP BYPASS BKR ( BYA) is racked into the connected position. \_\_\_\_\_
- [33] **ENABLE** U-2 Train B Solid State Protection System (SSPS) by performing the following:
- [33.1] **ENSURE** Mode SELECTOR switch at SSPS Train B (2-R-51) in OPERATE position. \_\_\_\_\_
- [33.2] **ENSURE** Mode SELECTOR switch at SSPS Train A (2-R-48) in TEST position. \_\_\_\_\_
- [34] **ENSURE** the following Inst Rm CIng CIVs are OPEN:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL
2-HS-31-326 CIRC PMP B SUCT CIV-ØA	2-M-9	OPEN	2-FCV-31-326	
2-HS-31-327 CIRC PMP B SUCT CIV-ØA	2-M-9	OPEN	2-FCV-31-327	
2-HS-31-329 CIRC PMP B DISCH CIV-ØA	2-M-9	OPEN	2-FCV-31-329	
2-HS-31-330 CIRC PMP B DISCH CIV-ØA	2-M-9	OPEN	2-FCV-31-330	

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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

[35] **ENSURE** the following equipment and handswitches meets the required condition:

DESCRIPTION	HANDSWITCH	CONDITION	POS	INIT
SD BD ROOM A PRESS FAN C-B	0-HS-31-67A [2-M-9]	RUNNING RED LIGHT LIT	P AUTO	
SD BD ROOM B PRESS FAN D-B	0-HS-31-68A [2-M-9]	RUNNING RED LIGHT LIT	P AUTO	
INSTR ROOM CLG B AHU CIRC PMP & FCO	2-HS-31-266A [2-M-9]	RUNNING RED LIGHT LIT	A AUTO	
CNTMT PURGE SUP & EXH FANS 2A AND FCO-30-1A & 1B	2-HS-30-1A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	
CNTMT PURGE SUP & EXH FANS 2B AND FCO-30-4A & 4B	2-HS-30-4A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	
INSTR RM PURGE SUP & EXH FANS AND FCO-30-11A & 11B	2-HS-30-11A [2-M-9]	SUP & EXH RED LIGHTS LIT	A AUTO	
ANN VAC FAN 2B & SUCT FCO	2-HS-65-74A [0-M-27B]	RED LIGHT LIT	A-P AUTO	
RX BLDG F & EQ SUMP PMP B	2-HS-77-125B1 [2-M-15]	RED LIGHT LIT	PULL A-P AUTO	
HPFP PMP 2B-B	0-HS-26-11A [1-M-15]	RED LIGHT LIT	PULL A-P AUTO	
RCDT PUMP 2B	2-HS-77-6A [0-PNL-77-L2]	RED LIGHT LIT	PULL P AUTO	

[36] **VERIFY** components aligned to their "PRE-TEST" positions per Appendix L, Safety Injection (SI) - Train 2B, Section 6.2

[37] **VERIFY** components aligned to their "PRE-TEST" positions per Appendix M, Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2.

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## 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

[38] **VERIFY** the following:

- [38.1] ECCS pumps recirc paths aligned per Appendix C. \_\_\_\_\_
- [38.2] ESF pumps available for starting. \_\_\_\_\_
- [38.3] CST level is greater than 200,000 gal to ensure AFW pumps have adequate suction. \_\_\_\_\_
- [38.4] RWST level is greater than 70% to ensure ECCS pumps have adequate suction. \_\_\_\_\_

### NOTE

In the following step, no power will be transmitted to the pressurizer heater elements because all the individual heater element breakers are opened in preliminary actions, Steps 4.4[16] and 4.4[17]

[39] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL in MANUAL **AND**

**LOWER** controller output to 0% to allow BACKUP HEATERS B-B (2-HS-68-341D) and BACKUP HEATER C (2-HS-68-341H) to ENERGIZE. \_\_\_\_\_

[40] **VERIFY** 2-HS-68-341D, BACKUP HEATERS B-B, indicates breaker closed by RED light LIT. \_\_\_\_\_

[41] **CLOSE** backup group 2C breaker by using 2-HS-68-341H, BACKUP HEATER C, **AND**

**VERIFY** breaker indicates closed by RED light LIT. \_\_\_\_\_

[42] **VERIFY** U2 CRDM MG sets are removed from service, IAW 2-SOI-85.01. \_\_\_\_\_

[43] **VERIFY** individual annunciators for Reactor Trip First Out Panel 2-XA-55-4D are **NOT** LIT. \_\_\_\_\_

[44] **VERIFY** annunciator window, 70-A, SI Actuated, Panel 2-XA-55-4A, is clear \_\_\_\_\_



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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

[45] **PLACE** 2-RT-1, REACTOR TRIP, [2-M-4] in CLOSE position,  
**AND**

**VERIFY** the following by indicating lights:

- RX TRIP BKR A [2-M-4] indicates CLOSED \_\_\_\_\_
- RX TRIP BKR B [2-M-4] indicates CLOSED \_\_\_\_\_

[46] **CLOSE** A RX TRIP BYPASS BKR (BYA) and **VERIFY**  
CLOSED indication on [2-M-4] \_\_\_\_\_

[47] **PLACE** handswitches at [2-M-3] in RESET position:

- 2-HS-3-99A1, MFW ISOL ACT RESET TR-A \_\_\_\_\_
- 2-HS-3-99B1, MFW ISOL ACT RESET TR-B \_\_\_\_\_

[48] **PRESS** MFW ISOL RESET pushbuttons at [2-M-3]:

- 2-HS-3-99A2, RESET TR-A MFW ISOL \_\_\_\_\_
- 2-HS-3-99B2, RESET TR-B MFW ISOL \_\_\_\_\_

[49] **VERIFY** status of 2-XX-55-6D, Train B Master ISOL SIGNAL  
STATUS PNL (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI Window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- MFW Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_
- CS Window is **NOT** LIT \_\_\_\_\_

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### 6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)

[50] **VERIFY** the following Feedwater valves position:

DESCRIPTION	COMPONENT	LOCATION	POSITION	INITIALS
MFW REG FCV 3-35	2-FCV-3-35	2-XX-3-35	OPEN	
MFW REG FCV 3-48	2-FCV-3-48	2-XX-3-35	OPEN	
MFW REG FCV 3-90	2-FCV-3-90	2-XX-3-35	OPEN	
MFW REG FCV 3-103	2-FCV-3-103	2-XX-3-35	OPEN	
BYP REG FCV 3-35A	2-FCV-3-35A	2-XX-3-35A	OPEN	
BYP REG FCV 3-90A	2-FCV-3-90A	2-XX-3-35A	OPEN	
2-FCV-3-236 SG 1 MFW BYP ISOL	2-FCV-3-236	2-XI-3-236	OPEN	
2-FCV-3-239 SG 2 MFW BYP ISOL	2-FCV-3-239	2-XI-3-239	OPEN	
2-HS-3-47A, SG 2 MFW ISOL VLV	2-FCV-3-47-B	2-M-3	OPEN	
2-FCV-3-242, SG 3 MFW BYP ISOL	2-FCV-3-242	2-XI-3-242	OPEN	
2-FCV-3-245, SG 4 MFW BYP ISOL	2-FCV-3-245	2-XI-3-245	OPEN	
2-HS-3-100A SG 4 MFW ISOL VLV	2-FCV-3-100-B	2-M-3	OPEN	
FCV 3-185 CKV BYP-REV FLUSH	2-FCV-3-185	2-XX-3-235	OPEN	
FCV 3-187 CKV BYP-REV FLUSH	2-FCV-3-187	2-XX-3-235	OPEN	

[51] **ENSURE** C-S CCS pump 2-HS-70-51A, CCS PMP C-S ALT  
ACB, at 0-M-27B, in A-P AUTO position, **AND**

**VERIFY** by GREEN indication light pump is STOPPED.

[52] **ENSURE** Ice Condenser chillers and pumps are out of service,  
IAW 0-SOI-61.01.

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**6.2.1 Preliminary Actions Required for Subsection 6.2 (continued)**

[53] **ENSURE** the following valves are OPEN:

- 2-FCV-77-9, RCDT PUMP DISCHARGE FLOW  
CONTROL VALVE. \_\_\_\_\_
- 2-FCV-77-10, RCDT PUMP DISCHARGE FLOW  
CONTROL VALVE. \_\_\_\_\_

[54] **GO TO** Section 6.2.2, Performance - Safety Injection (SI) -  
Train 2B. \_\_\_\_\_

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## 6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available

### NOTES

OUTGOING amps are indicated upon loading DG 1B-B while monitoring NORMAL ACB 1728 AMPS dropping to zero then begin rising.

- [1] **START and LOAD** DG 1B-B to obtain a maximum indication of 40 to 50 Amps OUTGOING on 1-EI-57-65B, DG AMPS, using 0-SOI-82.02. \_\_\_\_\_

### NOTE

Steps 6.2.2[3] through 6.2.2[8] may be performed concurrently.

- [2] **START** DG 2B-B using 0-SOI-82.04, Section 8.1.2, Idle Start, **AND** \_\_\_\_\_

**WARM** DG 2B-B for at least 10 minutes, staying in Idle. \_\_\_\_\_

- [3] **PERFORM** the following for sequence of Events Recorder (SER):

[3.1] **OBTAIN** a SER status summary printout. \_\_\_\_\_

[3.2] **ENSURE** SER is in Standby Mode. \_\_\_\_\_

- [4] **ENSURE** appropriate Operations personnel are stationed, and briefed, for performance of Steps 6.2.2[9], 6.2.2[12], 6.2.2[15], and 6.2.2[24]. \_\_\_\_\_

- [5] **ANNOUNCE** to plant personnel the following:

Attention all plant personnel - Unit 2 is preparing to initiate a Safety Injection signal as part of Unit 2 Integrated Safeguards Tests. Plant equipment will be automatically starting. Unit 2 2B-B Diesel Generator and Emergency Core Cooling equipment will be starting and operating. There will be Auxiliary Building ventilation changes occurring and all personnel should use caution when opening and closing any doors. (repeat) \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[6] **RECORD** CSST D Load Tap Changer (LTC) positions from each of the following indicators at 0-ECB-2:

- CSST D LTC-Y TAP POSITION

\_\_\_\_\_ (TAP) \_\_\_\_\_

- CSST D LTC-X TAP POSITION

\_\_\_\_\_ (TAP) \_\_\_\_\_

[7] **RECORD** 6.9KV Shutdown Board 1B-B and 2B-B voltages from each of the following digital indicators:

Description	Value (VAC)	Acceptance Criteria	INITIALS
1-EI-57-66, 6.9 SDB 1B-B VOLTS [1-M-1]		(6928 to 7214 VAC)	
2-EI-57-66, 6.9 SDB 2B-B VOLTS [2-M-1]			

[8] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI FLOW (2-M-6) valve is CLOSED. \_\_\_\_\_

**NOTE**

To minimize gravity fill of reactor vessel from RWST, the following steps 6.2.2[9] through 6.2.2[12] require close coordination and performance.

[9] **PLACE SIMULTANEOUSLY** the following handswitches at [2-M-6] in OPEN position **AND**

**VERIFY** by indicating lights associated valves are OPEN:

[9.1] 2-HS-63-93A, RHR TO CL 2 & 3 \_\_\_\_\_

[9.2] 2-HS-63-94A, RHR TO CL 1 & 4 \_\_\_\_\_

[9.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4 \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[10] **PLACE** Handswitch 2-HS-62-135, RWST TO CHARGING PMPS SUCTION, at [2-M-5], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

[11] **NOTIFY** personnel to start the following recorders:

- DG Recorder \_\_\_\_\_
- Sequence of Events Recorder \_\_\_\_\_

[11.1] **REQUEST** acknowledgement that BOTH recorders are running. \_\_\_\_\_

**NOTES**

- 1) Countdown is recommended as follows: 5, 4, 3, 2, 1, START.
- 2) The Safety Injection actuation is initiated upon the word START.

[12] **PERFORM** a five (5) second countdown over the page system, **THEN**

**INITIATE** Train 2B Safety Injection (SI) by placing Handswitch 2-HS-63-133A, SI ACTUATE TR A & B, at [2-M-6] in ACTUATE position.

[12.1] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[12.2] **START** a stopwatch to time DG 2B-B greater than or equal to five minutes unloaded at rated speed. \_\_\_\_\_

[12.3] **VERIFY** Annunciator Window, 70-A, SI ACTUATED, Panel 2-XA-4A,[2-M-4] is LIT. \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- [12.4] **VERIFY** Unit 2 Reactor Trip Breakers are OPEN.  
(AC5.3B)

Description	Required Position	Actual Position	Initials
2-52RTA RX TRIP BKR A	OPEN		
2-52RTB RX TRIP BKR B	OPEN		
2-52BYA BYPASS BKR A	OPEN		

**NOTE**

Train 2A MISSP may have lights lit due to actuation of master relays on Train 2A SSPS from manual SIS. No actions are required on Train 2A MISSP.

- [13] **VERIFY** status of Train B Master Isolation Signal Status Panel (MISSP) windows at 2-M-6 as follows: (Acc Crit 5.7D, 5.7H, 5.7L)

[13.1] ØA Window is LIT

\_\_\_\_\_

[13.2] CVI window is LIT

\_\_\_\_\_

[13.3] MFW Window is LIT

\_\_\_\_\_

[13.4] ABI Window is LIT (Acc Crit 5.7B)

\_\_\_\_\_

[13.5] CRI Window is LIT

\_\_\_\_\_

- [14] **VERIFY** status of Train B Master Isolation Signal Status Panel (MISSP) at 2-M-6:

• ØB Window is **NOT** LIT.

\_\_\_\_\_

• CS Window is **NOT** LIT

\_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

**NOTE**

CSST Tap position indicators show position on left and right of top dead center N position. Readings below may be recorded as either Lx or Rx of N, with "x" representing tap number. For example, if tap position is on the left side and maximum deviation occurring reaches "16", tap position would be recorded as "L16".

- [15] **MONITOR** CSST D Load Tap Changer (LTC) positions for a period of approximately twenty (20) seconds following initiation of SI, **THEN**

**RECORD** tap position corresponding to maximum deviation from neutral (N) which occurs during transient from each of the following indicators [0-ECB-3]:

CSST D LTC-Y TAP POSITION	
CSST D LTC-X TAP POSITION	

- [16] **WHEN** 30 seconds from time recorded in Step 6.2.2[12.1] elapse, **THEN**

**VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI FLOW [2-M-6] valve is CLOSED.

- [17] **RECORD** "POST-SI" status of components per Appendix L. (Acc Crit 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7L, 5.7O)

- [18] **VERIFY** DG 1B-B returned to standby operation by observing the following indications at [0-M-26]: (Acc Crit 5.1B.7.a(2), 5.1B.7.b(2), 5.4A)

- DG RUN Light (DG 1B-B) is LIT.
- 1-HS-57-73A, 1914-DG TO SD BD 1B-B, indicates breaker is OPEN.
- 1-HS-57-71B, 1728, NORMAL-FROM CSST D, indicates breaker is CLOSED.



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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[19] **INITIATE** DG 1B-B removal from service using 0-SOI-82.02, Section 8.3. \_\_\_\_\_

[20] **PLACE** 2-HS-57-74, DG SYNC SWITCH, in SYN position. \_\_\_\_\_

[21] **VERIFY** DG 2B-B in standby, ready to load operation by observing the following indications [0-M-26]: **(Acc Crit 5.8.1B, 5.7E)**

- DG 2B-B accelerated from Idle speed to rated speed by RUN Light (DG 2B-B) is LIT. \_\_\_\_\_
- 2-HS-57-73A, 1924-DG TO SD BD 2B-B, indicates Breaker OPEN. \_\_\_\_\_
- 2-HS-57-71B, 1828-NORMAL FROM CSST D, indicates breaker is, CLOSED. \_\_\_\_\_
- DG 2B-B achieved steady state voltage and frequency: \_\_\_\_\_

[21.1] **RECORD** DG 2B-B Voltage and Frequency \_\_\_\_\_

Description	Indicator	Value
Generator Voltage $\geq$ 6800 VAC	2-EI-82-94A	VAC
Generator Frequency $\geq$ 59.8 Hz	2-EI-82-92A	Hz

[22] **PLACE** 2-HS-57-74, DG SYNC SWITCH, in OFF position. \_\_\_\_\_

**NOTE**

If refueling cavity level is rising at a rate that precludes a full five minute vessel injection, Step 6.2.2[24] is performed in a timely manner to prevent water intrusion into duct work around top of cavity.

[23] **WHEN** a minimum of five minutes has elapsed, **THEN:**

[23.1] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[23.2] **CALCULATE** DG 2B-B run time as determined from clock times recorded in Step 6.2.2[12.1] and 6.2.2[23.1]:

\_\_\_\_\_

CV

	-	=	mins	secs
Clock Time Step 6.2.2[23.1]		Clock Time Step 6.2.2[12.1]		DG 2B-B Runtime

[23.3] **VERIFY** DG 2B-B run time as calculated in Step 6.2.2[23.2] is greater than or equal to five minutes. (Acc Crit 5.3A.3)

[23.4] **VERIFY** offsite power connected to 6.9KV SD BD 2B-B: (Acc Crit 5.3A.5)

- **CHECK** Breaker 1828-NORMAL FROM CSST D is CLOSED.
- **CHECK** 1924 - DG TO SD BD 2B-B breaker is OPEN.

[24] **PLACE** handswitches at [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights associated valves are CLOSED:

[24.1] 2-HS-63-93A, RHR TO CL 2 & 3

[24.2] 2-HS-63-94A, RHR TO CL 1 & 4

[24.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4

[25] **CLOSE**, locally, 2-FCV-63-40, SIS BORON INJ TNK IN ISOL.

\_\_\_\_\_

CV

[26] **VERIFY** by indicating lights at 2-HS-74-24A RHR PMP B MINI FLOW, [2-M-6], valve is OPEN.

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[27] **PERFORM** the following:

[27.1] **VERIFY** by indicating lights at 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL [2-M-4], Level Bypass Control Valve LCV-3-148A is **NOT** CLOSED (Modulating/Open) \_\_\_\_\_

[27.2] **VERIFY** by indicating lights at 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL [2-M-4] Level Bypass Control valve LCV-3-171A is **NOT** CLOSED (Modulating/Open) \_\_\_\_\_

[27.3] **ROTATE** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** to CLOSE **THEN**

**PULL** handswitch to PULL-TO-LOCK position. \_\_\_\_\_

[27.4] **ROTATE** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** to CLOSE **THEN**

**PULL** handswitch to PULL-TO-LOCK position. \_\_\_\_\_

[27.5] **VERIFY** by indicating lights associated Level Bypass Control Valve is CLOSED:

[27.5.1] LCV-3-148A CLOSED (2-HS-3-148A) \_\_\_\_\_

[27.5.2] LCV-3-171A CLOSED (2-HS-3-171A) \_\_\_\_\_

[28] **WHEN** greater than or equal to 10 minutes has elapsed from time recorded in Step 6.2.2[12.1], **THEN**

**PERFORM** the following:

[28.1] **STOP** DG 2B-B Chart Recorder(s) \_\_\_\_\_

[28.2] **RECORD** CSST D Load Tap Changer (LTC) positions from each indicator at 0-ECB-3: \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

Description	Value
CSST D LTC-Y TAP POSITION	
CSST D LTC-X TAP POSITION	

[28.3] **RECORD** 6.9KV Shutdown Board 1B-B and 2B-B voltages from each of the following digital indicators:

Description	Value (VAC)	ACC- CRIT	INITIALS
1-EI-57-66, 6.9 SDB 1B-B VOLTS [1-M-1]		(6928 to 7214 VAC)	
2-EI-57-66, 6.9 SDB 2B-B VOLTS [2-M-1]			

[28.4] **RECORD** clock time: \_\_\_\_\_  
Clock Time \_\_\_\_\_

[29] **WHEN** Appendix L, "Post- SI" status is completed, **THEN**

**PLACE** 2-HS-74-20A, RHR PMP B (ECCS), [2-M-6], in STOP PULL-TO-LOCK position. \_\_\_\_\_

**NOTES**

- 1) Step 6.2.2[30] actuates Train 2B Containment Sump auto Swapover.
- 2) Once the accident signals are reset in Step 6.2.2[31], Step 6.2.2[32], realignment of containment sump back to RHR normal suction, should be accomplished expeditiously to minimize voiding in the containment sump RHR suction lines.

[30] **INITIATE** Cntmt Sump Swapover:

[30.1] **PLACE** 2-HS-63-1A, RWST TO RHR ECCS SUCTION, [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights valve is CLOSED. \_\_\_\_\_

[30.2] **VERIFY** by indicating lights at 2-HS-74-21A, RHR PMP B SUCTION [2-M-6] valve is OPEN. \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power  
Available (continued)**

- [30.3] **VERIFY** by indicating lights at 2-HS-63-73A, CNTMT  
SUMP TO RHR PMP B SUCT [2-M-6] valve is CLOSED. \_\_\_\_\_

**NOTE**

Some leakage is expected into Containment Sump following performance of the following step.

- [30.4] **ACTUATE MANUALLY** Relay K648 at Train B SSPS  
Cabinet 2-R-51 to simulate RWST low-level and  
Containment Sump high level. \_\_\_\_\_
- [30.5] **VERIFY** by indicating lights at 2-HS-74-21A, RHR PMP  
B SUCTION (2-M-6) valve is CLOSED.  
**(Acc Crit 5.1A.1.a(3))** \_\_\_\_\_
- [30.6] **VERIFY** by indicating lights at 2-HS-63-73A, CNTMT  
SUMP TO RHR PMP B SUCT [2-M-6], valve is OPEN.  
**(Acc Crit 5.1A.1.a(3))** \_\_\_\_\_

[31] **RESET** ESF actuation signals:

- [31.1] **PRESS** RESET pushbuttons at [2-M-6]:

- [31.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_
- [31.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_
- [31.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_
- [31.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_
- [31.1.5] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_
- [31.1.6] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_
- [31.1.7] 2-HS-63-73D, RWST-CNTMT SUMP  
SWITCHOVER SI SIG TO FCV-63-73 \_\_\_\_\_

- [31.2] Place handswitches in RESET position [2-M-6]

- [31.2.1] 2-HS-31-177B, MCR ISOL TR-B \_\_\_\_\_
- [31.2.2] 2-HS-30-101B, AUX BLDG ISOL TR-B \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[31.3] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6D, (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_
- CS Window is **NOT** LIT \_\_\_\_\_

[31.4] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6D (MISSP) window for MFW is LIT [2-M-6]. \_\_\_\_\_

[32] **PERFORM** the following:

[32.1] **VERIFY** by indicating lights at 2-HS-74-21A, RHR PMP B SUCTION [2-M-6], valve remained CLOSED. (Acc Crit 5.1A.3.d) \_\_\_\_\_

[32.2] **VERIFY** by indicating lights at 2-HS-63-73A, CNTMT SUMP TO RHR PMP B SUCT [2-M-6] valve remained OPEN. (Acc Crit 5.1A.3.d) \_\_\_\_\_

[32.3] **PLACE** Handswitch 2-HS-63-73A, CNTMT SUMP TO RHR PMP B SUCT, [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights valve is CLOSED. \_\_\_\_\_

[32.4] **PLACE** Handswitch 2-HS-74-21A, RHR PMP B SUCTION, [2-M-6], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

[32.5] **PLACE** Handswitch 2-HS-63-1A, RWST TO RHR ECCS SUCTION, [2-M-6], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[33] **INITIATE** recording "POST-Reset" status of components per Appendix L. \_\_\_\_\_

[34] **VERIFY** by indicating lights at each of the following 1-M-9 handswitches, associated fan is STOPPED:

- 0-HS-31-67A, SD BD ROOM A PRESS FAN C-B \_\_\_\_\_
- 0-HS-31-68A, SD BD ROOM B PRESS FAN D-B \_\_\_\_\_

[35] **VERIFY** by indicating lights at each of the following 1-M-9 handswitches, associated damper is CLOSED:

- 0-HS-30-123, CASK LOAD AREA EXHAUST \_\_\_\_\_
- DAMPER 0-XI-31-4, FCO-31-4 \_\_\_\_\_
- DAMPER 0-XI-31-9 FCO-31-9 \_\_\_\_\_
- DAMPER 0-XI-31-16, FCO-31-16 \_\_\_\_\_

[36] **STOP** CB EMERG PRESS FAN B-B & SUCT FCV-31-5, using 0-HS-31-5A, **AND**

**VERIFY** Green light is LIT. \_\_\_\_\_

[37] **STOP** CB EMERG CLEANUP FAN B-B & SUCT FCO-31-7, using 0-HS-31-7A, **AND**

**VERIFY** Green light is LIT. \_\_\_\_\_

[38] **STOP** the following pumps **AND**

**PLACE** handswitches in the required position:

LOCATION	HANDSWITCH	DESCRIPTION	Required Position	INITIALS
2-M-4	2-HS-3-128A	AFW PMP B-B	A AUTO	
2-M-5	2-HS-62-104A	CCP B-B (ECCS)	A AUTO	
2-M-6	2-HS-63-15A	SI PMP B (ECCS)	A AUTO	

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

LOCATION	HANDSWITCH	DESCRIPTION	Required Position	INITIALS
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)	A AUTO	

[39] **RESET** DG 2B-B to restore DG controls:

[39.1] **CHECK** 2-RLY-82-86LOR2, DG 2B-B EMERGENCY START LOCKOUT (red) indicating light **NOT** illuminated. [2-ARB-82-B/1, Diesel Generator 2B-B Relay Board] \_\_\_\_\_

[39.2] **RESET** 2-RLY-82-86LOR2, DG 2B-B EMERGENCY START LOCKOUT. [2-ARB-82-B/1, Diesel Generator 2B-B Relay Board] \_\_\_\_\_

[40] **SYNCHRONIZE and LOAD** DG 2B-B using 0-SOI-82.04 to obtain a nominal loading of 4200 kW, (4.2MW) 3960kW to 4400kW, on 2-EI-82-100A. \_\_\_\_\_

[41] **RECORD** DG 2B-B loading as indicated on 2-EI-82-100A. **ACC Crit 5.5B.1** \_\_\_\_\_

2-EI-82-100A, DG MEGAWATTS	MW
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[42] **ADJUST** DG 2B-B reactive loading to obtain greater than or equal to 2970kVar to less than or equal to 3300kVar, OUTGOING, on 2-EI-82-101A. **ACC CRIT 5.5B.2** \_\_\_\_\_

2-EI-82-101A, DG MEGAVARS	kVARs
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[43] **ENSURE** Handswitch 0-XS-67-288, ERCW PMP F-B/H-B DG POWER SEL, [0-M-27A] in pump F-B position. \_\_\_\_\_

[44] **ENSURE** Handswitch 0-XS-67-287, ERCW PMP E-B/G-B DG POWER SEL, [0-M-27A] in pump G-B position. \_\_\_\_\_

[45] **VERIFY** by GREEN indicating light at 2-HS-74-24A, RHR PMP B MINI FLOW, valve is CLOSED [2-M-6]. \_\_\_\_\_



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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- [46] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL in MANUAL, **AND**

**LOWER** controller output to 0% to allow BACKUP HEATERS B-B (2-HS-68-341D) and BACKUP HEATER C (2-HS-68-341H) to ENERGIZE.

- [47] **VERIFY** 2-HS-68-341D, BACKUP HEATERS B-B, indicates breaker closed by RED light LIT.

- [48] **CLOSE** backup heater group 2C breaker using 2-HS-68-341H, BACKUP HEATER C, **AND**

**VERIFY** breaker closed by RED light LIT.

- [49] **ENSURE** U2 Condensate Storage Tank (CST) level is  $\geq 200,000$  gallons as indicated on the 2-M-2 indicator:

2-LI-2-233D, CST B LEVEL	gals.
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- [50] **ENSURE** all REACTOR TRIP FIRST OUT alarms, 2-XA-55-4D are **NOT** LIT.

- [51] **ENSURE** 2-XA-55-4A-70A, SI ACTUATED, is **NOT** LIT.

- [52] **ENSURE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, is OPEN providing CS Pump recirc flow to the RWST.

- [53] **ENSURE** the following alignment:

PUMP	HANDSWITCH	ENSURE STOPPED	INITIALS	HANDSWITCH POSITION	INITIALS
AFW PMP B-B	2-HS-3-128A [2-M-4]	STOP		A-P AUTO	
CCP B-B (ECCS)	2-HS-62-104A [2-M-5]	STOP		A AUTO	
RHR PMP B (ECCS)	2-HS-74-20A [2-M-6]	STOP		A AUTO	

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

PUMP	HANDSWITCH	ENSURE STOPPED	INITIALS	HANDSWITCH POSITION	INITIALS
SI PMP B (ECCS)	2-HS-63-15A [2-M-6]	STOP		A AUTO	
CNTMT SPRAY PMP B	2-HS-72-10A [2-M-6]	STOP		A AUTO	
ERCW PMP F-B (2)	0-HS-67-51A [0-M-27A]	STOP		A AUTO	
ERCW PMP G-B (2)	0-HS-67-55A [0-M-27A]	STOP		A AUTO	
CCS PMP C-S	2-HS-70-51A [0-M-27B]	STOP		A-P AUTO	
CCS PMP 2B-B (1)	2-HS-70-33A [0-M-27B]	STOP		A-P AUTO	

- (1) Loads on CCS may have to be adjusted so that 2B-B CCS pump does **NOT** restart on low HDR pressure.
- (2) Other ERCW pumps should be started and pressure adjusted as needed to allow stopping of the F-B and G-B pumps.

[54] **ENSURE** the following room cooler fans are **NOT** running and breakers are aligned in PRE-TEST positions as shown:

DESCRIPTION	BREAKER COMPT NUMBER	PRE-TEST POSITION	1st	CV
<b>C&amp;A VENT BD 2B1-B</b>				
RHR PUMP 2B-B RM CLR (2-PMCL-30-176)	2-BKR-30-176 C/9A	BREAKER: ON RED LIGHT: OFF		
SIS PUMP 2B-B RM CLR (2-PMCL-30-179)	2-BKR-30-179 C/8A	BREAKER: ON RED LIGHT: OFF		
CENT CHG PUMP 2B-B RM CLR (2-PMCL-30-182)	2-BKR-30-182 C/10A	BREAKER: ON RED LIGHT: OFF		
CS PUMP 2B-B RM CLR (2-PMCL-30-178)	2-BKR-30-178 C/3C	BREAKER: ON RED LIGHT: OFF		

[55] **ENSURE** appropriate Operations personnel are stationed, and briefed, for performance of Steps 6.2.2[58] and 6.2.2[66]. \_\_\_\_\_

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## 6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)

[56] **ANNOUNCE** to plant personnel the following:

Attention all plant personnel - Unit 2 is preparing to initiate a Safety Injection coincident with a Phase B Containment Isolation signal as part of Unit 2 Integrated Safeguards Tests. Plant equipment will be automatically starting. Unit 2 Diesel Generator 2B-B and Emergency Core Cooling equipment as well as Unit 2 Containment Spray will be starting and operating. There will be Auxiliary Building ventilation changes occurring and all personnel should use caution when opening and closing any doors. (repeat)

[57] **PERFORM** the following to start recorders:

[57.1] **OBTAIN** a SER status summary printout.

[57.2] **ENSURE** SER is in Standby Mode.

[57.3] **ANNOTATE** DG chart recorder for performance of Step 6.2.2[58], **THEN**

**START** DG 2B-B Chart Recorder(s).

[57.4] **REQUEST** feedback that DG 2B-B Chart Recorder is running.

[58] **PERFORM** a five second countdown over paging system, **THEN**

**PLACE SIMULTANEOUSLY** each handswitch in ACTUATE position to initiate Train 2B Safety Injection (SI) coincident with Containment Isolation Phase B (CIØB):

[58.1] 2-HS-63-133B, SI ACTUATE TR A & B [2-M-4]

[58.2] 2-HS-30-68A, ØB-CNTMT VENT ISOL [2-M-5]

[58.3] 2-HS-30-68B, ØB-CNTMT VENT ISOL [2-M-5]

[59] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6D, (MISSP) windows at 2-M-6 as follows:  
(Acc Crit 5.7H, 5.7K, 5.7L)

[59.1] ØA Window is LIT

Date \_\_\_\_\_

**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[59.2] CVI window is LIT \_\_\_\_\_

[59.3] ØB Window is LIT \_\_\_\_\_

[59.4] MFW Window is LIT \_\_\_\_\_

[59.5] ABI Window is LIT(Acc Crit 5.7B) \_\_\_\_\_

[59.6] CRI Window is LIT (Acc Crit 5.7D) \_\_\_\_\_

[59.7] CS Window is LIT \_\_\_\_\_

[60] **PLACE** 2-HS-57-74, DG SYNC SWITCH, in SYN position. \_\_\_\_\_

[61] **VERIFY** DG 2B-B returned to standby operation by observing the following indications [0-M-26]:  
(Acc Crit 5.1B.7.a(1), 5.1B.7.b(1), 5.3A.4)

- DG RUN Light (DG 2B-B) is LIT. \_\_\_\_\_
- 2-HS-57-73A, 1924-DG TO SD BD 2B-B, indicates Breaker OPEN. \_\_\_\_\_
- 2-HS-57-71B, 1828 - NORMAL FROM CSST D, indicates breaker CLOSED. \_\_\_\_\_
- DG 2B-B achieved Minimum voltage and frequency: \_\_\_\_\_

Description	Indicator	Value
Generator Voltage $\geq$ 6800 VAC	2-EI-82-94A	VAC
Generator Frequency $\geq$ 59.8 Hz	2-EI-82-92A	Hz

[62] **PLACE** 2-HS-57-74, DG SYNC SWITCH, in OFF position. \_\_\_\_\_

[63] **VERIFY** by indicating lights associated pumps are RUNNING:  
(Acc Crit 5.3C, 5.7D,5.7F, 5.7P)

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS	DATE
2-M-4	2-HS-3-128A	AFW PMP B-B		

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS	DATE
2-M-5	2-HS-62-104A	CCP B-B (ECCS)		
2-M-6	2-HS-63-15A	SI PMP B (ECCS)		
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)		
2-M-6	2-HS-72-10A	CNTMT SPRAY PMP B		
0-M-27A	0-HS-67-51A	ERCW PMP F-B		
0-M-27A	0-HS-67-55A	ERCW PMP G-B		
0-M-27B	2-HS-70-51A	CCS PMP C-S		
0-M-27B	2-HS-70-33A	CCS PMP 2B-B		

[64] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI FLOW [2-M-6], valve is OPEN. \_\_\_\_\_

**NOTE**

Air Return Fan starts approximately 9 minutes after ØB signal initiated.

[65] **RECORD** "POST-CIØB" status of components per Appendix M. (**Acc Crit 5.7J, 5.7K, 5.7M, 5.7N, 5.7P**) \_\_\_\_\_

[66] **STOP** ERCW PMP F-B, [0-M-27A], using 0-HS-67-51A. \_\_\_\_\_

[67] **VERIFY** 0-HS-67-51A, ERCW PMP F-B, in PULL TO LOCK position, **AND**

**VERIFY** by indicating lights pump STOPPED. \_\_\_\_\_

[68] **VERIFY** K644 relay contacts for operation of 2-FCV-72-39A are closed by performing the following: (2-TSD-63-1)

- **LOCATE** TB641, terminals 1 and 2, in 2-R-51 in the Aux Instrument Room \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- **VERIFY** wires 14A04 (BK) is landed on terminal 1 and 14A05 (W) is landed on terminal 2 \_\_\_\_\_
  - **VERIFY** continuity between points 1 & 2 on TB641 \_\_\_\_\_
- [69] **ROTATE** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to ACC RESET MODULATE, **THEN**
- ROTATE** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to CLOSE **THEN**
- PULL** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to PULL-TO-LOCK position. \_\_\_\_\_
- [70] **ROTATE** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to ACC RESET MODULATE, **THEN**
- ROTATE** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to CLOSE **THEN**
- PULL** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to PULL-TO-LOCK position. \_\_\_\_\_
- [71] **VERIFY** by indicating lights associated Level Bypass Control Valve is CLOSED:
- [71.1.1] LCV-3-148A CLOSED (2-HS-3-148A) \_\_\_\_\_
- [71.1.2] LCV-3-171A CLOSED (2-HS-3-171A) \_\_\_\_\_
- [72] **WHEN** "POST-CIØB" status of components per Appendix M is COMPLETE, **THEN:**
- [72.1] **PRESS** RESET pushbuttons at [2-M-6]:
- [72.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_
- [72.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_
- [72.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_
- [72.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_
- [72.1.5] 2-HS-30-64D, ØB CNTMT ISOL RESET TR-A \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- [72.1.6] 2-HS-30-64E, ØB CNTMT ISOL RESET TR-B \_\_\_\_\_
- [72.1.7] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_
- [72.1.8] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_
- [72.1.9] 2-HS-72-43, CNTMT SPRAY A RESET \_\_\_\_\_
- [72.1.10] 2-HS-72-42, CNTMT SPRAY B RESET \_\_\_\_\_
- [72.2] **PLACE** each of the following handswitches in RESET position at [2-M-6]:
- [72.2.1] 2-HS-31-177B, MCR ISOL TR-B \_\_\_\_\_
- [72.2.2] 2-HS-30-101B, AUX BLDG ISOL TR-B \_\_\_\_\_
- [73] **WHEN** Step, 6.2.2[72] RESET of ACCIDENT signals is COMPLETE, **THEN**
- RECORD** "POST-Reset" status of components per Appendix M. \_\_\_\_\_
- [74] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6D, (MISSP) windows [2-M-6] as follows:
- [74.1] ØA Window is NOT LIT \_\_\_\_\_
- [74.2] CVI window is NOT LIT \_\_\_\_\_
- [74.3] ØB Window is NOT LIT \_\_\_\_\_
- [74.4] ABI Window is NOT LIT \_\_\_\_\_
- [74.5] CRI Window is NOT LIT \_\_\_\_\_
- [74.6] CS Window is NOT LIT \_\_\_\_\_
- [75] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL, 2-XX-55-6D, (MISSP) windows for MFW is LIT [2-M-6]. \_\_\_\_\_

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- [76] **PLACE** each of the following handswitches in STOP position **AND** return to A AUTO position **AND**

**VERIFY** by indicating lights pumps are STOPPED:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-128A	AFW PMP B-B	
2-M-5	2-HS-62-104A	CCP B-B(ECCS)	
2-M-6	2-HS-63-15A	SI PMP B (ECCS)	
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)	
2-M-6	2-HS-72-10A	CNTMT SPRAY PMP B	
2-M-9	2-HS-30-39A	AIR RETURN FAN B-B	

- [77] **WHEN** "POST-Reset" status of components per Appendix M is COMPLETE, **THEN**

**ALIGN** components to their "Post-Test" positions per Appendix M.

- [78] **ALIGN** components to their "Post-Test" positions per Appendix L.

- [79] **REMOVE** DG 2B-B from service using 0-SOI-82.04, Section 8.3.

- [80] **IF** DG 2B-B has operated for greater than one hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 2B1 & 2B2 for condensate.

- [81] **IF** DG 1B-B has operated for greater than one hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 1B1 & 1B2 for condensate.



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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[82] **WHEN** 2-FCV-63-25, BIT OUTLET, has been closed in Appendix L, **THEN**

**OPEN**, locally, 2-FCV-63-40, SIS BORON INJ TNK IN ISOL.

\_\_\_\_\_

CV

[83] **PLACE** 2-HS-74-28, RHR HX B OUTLET FCV SI SIGNAL RESET, at [2-M-6], in RESET position.

[84] **COMPLETE** Appendix P using sequence of Events Recorder (SER) printout(s).

**NOTES**

- 1) Remaining steps in this subsection are data reduction steps and need NOT be completed prior to beginning another test subsection.
- 2) Remaining steps in this subsection may be performed in any order with Test Director's permission.

[85] **VERIFY** "ACTUAL" Post-SI component status recorded on Appendix L matches "Required" status specified by Appendix. (Acc Crit 5.1A.1.a(1), 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F, 5.7G, 5.7H, 5.7I, 5.7L, 5.7O)

[86] **VERIFY** "ACTUAL" Post-Reset component status recorded on Appendix L matches "Required" status specified by Appendix. (Acc Crit 5.1A.3.a)

[87] **VERIFY** "ACTUAL" Post-CIØB component status recorded on Appendix M matches "Required" status specified by Appendix. (Acc Crit 5.1A.1.b(1), 5.7J, 5.7M, 5.7N)

[88] **VERIFY** "ACTUAL" Post-Reset component status recorded on Appendix M matches "Required" status specified by Appendix. (Acc Crit 5.1A.3.b)

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[89] **REVIEW** Elapsed Time calculations performed on Appendix P and **PERFORM** the following:

[89.1] **VERIFY** "SI-SEQ" calculated times are within Acceptable ranges specified by Appendix. **(Acc Crit 5.1A.1.a(2))** \_\_\_\_\_

[89.2] **VERIFY** "CIØB-SEQ" calculated times are within Acceptable ranges specified by Appendix. **(Acc Crit 5.1A.1.b(2))** \_\_\_\_\_

[90] **REVIEW** DG 2B-B Chart Recorder trace(s) for DG "standby" run following receipt of SI Train 2B start signal **AND**  
**PERFORM** the following:

[90.1] **RECORD** time required for DG 2B-B voltage and frequency to achieve equal to or greater than 6800 VAC and 58.8 Hz respectively: **(Acc Crit 5.1B.1.a)(5.3A.1)** \_\_\_\_\_

Description	Value (seconds)	Acceptance Criteria
Generator Voltage $\geq$ 6800 VAC		$\leq$ 10 seconds
Generator Frequency $\geq$ 58.8 Hz		

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power  
Available (continued)**

**NOTE**

For the purpose of the following step, "steady state" is defined as the period subsequent to return of Shutdown Board voltage to within below listed limits following block load sequencing.

[90.2] **RECORD** minimum and maximum steady-state DG  
2B-B voltage and frequency which occurred during run  
(minimum period of five minutes):  
**(Acc Crit 5.1B.5.a(1), 5.3A.2)**

<b>Description</b>	<b>Value</b>	<b>Acceptance Criteria</b>
Generator Minimum Voltage	VAC	≥ 6800 VAC
Generator Maximum Voltage	VAC	≤ 7260 VAC
Generator Minimum Frequency	Hz	≥ 59.8 Hz
Generator Maximum Frequency	Hz	≤ 60.1 Hz

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[91] **REVIEW** DG 2B-B Chart Recorder trace(s) for 6.9KV Shutdown Board 2B-B voltage response following SI **AND**

**PERFORM** the following: \_\_\_\_\_

**NOTES**

- 1) A single LTC tap position change (step) results in a 6.9KV Shutdown Board voltage increase/decrease of approximately 86 VAC.
- 2) If the Shutdown Board Post-SI voltage transient was insufficient to induce LTC operation (i.e. Shutdown Board voltage did **NOT** decrease below 6928 VAC for at least 2.33 seconds) the following step is marked "N/A".

[91.1] **RECORD** time required for Load Tap Changer CSST D LTC-X to complete one step following SI, as indicated by a 6.9KV SD BD 2B-B voltage step increase following block-load sequencing: \_\_\_\_\_

Description	Value (seconds)	Acceptance Criteria
Tap Changer CSST D LTC-X		≥ 3.5 seconds

**NOTE**

If Shutdown Board voltage remained above 6672 VAC, "0" seconds is to be recorded in the following step.

[91.2] **RECORD** time required for 6.9KV SD BD 2B-B voltage to be restored to ≥6672 VAC following SI: \_\_\_\_\_

Description	Value (seconds)	Acceptance Criteria
6.9KV SD BD 2B-B VAC		≤ 5.5 seconds

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

[91.3] **RECORD** maximum DG 2B-B voltage which occurred during performance of Step 6.2.2[58.1] following a load rejection of: \_\_\_\_\_

- Greater than or equal to 3960 kW and less than or equal to 4400kW
- Greater than or equal to 2970 kVAR and less than or equal to 3300 kVAR:

Description	Value	Acceptance Criteria
Maximum Voltage	VAC	≤ 8880 VAC

[92] **VERIFY** DG 2B-B proper response following full load rejection during performance of Step 6.2.2 [58.1].(Acc Crit 5.1B.10.a, 5.5B)

[92.1] DG 2B-B running RED light lit. \_\_\_\_\_

[92.2] DG 2B-B voltage is maintained less than or equal to 8880 VAC. \_\_\_\_\_

**NOTE**

The remaining steps in this section may be performed concurrently or as directed by the Test Director.

[93] **RETURN** Refueling Cavity and Reactor Vessel level to desired level to accommodate performance of Section 6.3:

[93.1] **PERFORM** 2-SOI-74.01 to place Train 2B RHR in service on recirc with suction from the RCS. \_\_\_\_\_

[93.2] **THROTTLE** 2-HCV-74-34, RWST RETURN, as required to pump Refueling Cavity and Reactor Vessel level to the desired level, **THEN**

**CLOSE AND LOCK** 2-HCV-74-34. \_\_\_\_\_

CV

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**6.2.2 Performance - Safety Injection (SI) - Train 2B, Offsite Power Available (continued)**

- [94] **PLACE** Train 2B RHR in alignment specified in Appendix C, Section 5.0 for further testing as required. \_\_\_\_\_

**NOTE**

A review of Appendix N should help in restoration of equipment for performance of Section 6.3 while completing Steps 6.2.2[95] through 6.2.2[101].

- [95] **INITIATE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS, Section 8.8. \_\_\_\_\_
- [96] **INITIATE** recovery from CRI per 0-SOI-31.01. \_\_\_\_\_
- [97] **EVALUATE** restoration of Ice Condenser chillers and pumps. \_\_\_\_\_
- [98] **PERFORM** 2-SOI-65.02, Sections 7.1, and 5.1 to restore EGTS and Annulus Vacuum System. \_\_\_\_\_
- [99] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL output to 25-30% to allow BACKUP HEATERS B-B (2-HS-68-341D) and BACKUP HEATER C (2-HS-68-341H) to DEENERGIZE. \_\_\_\_\_
- [100] **PLACE** 2-HS-68-341D, BACKUP HEATERS B-B, in OFF. \_\_\_\_\_
- [101] **PLACE** 2-HS-68-341H, BACKUP HEATER C, in OFF. \_\_\_\_\_
- [102] **ENSURE** U-2 Steam Generator levels are equal to or less than 30% by draining Steam Generators using 2-SOI-41 series instructions. \_\_\_\_\_
- [103] **GO TO** Section 6.3. \_\_\_\_\_

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### 6.3 Coincident LOOP/Safety Injection (SI)/Containment Isolation (CI) ØB - Train 2B

#### NOTES

- 1) This Section will initiate the following tests:
  - Simultaneous Safety Injection Signal, ØB actuation, Train 2B Loss of Offsite Power;
  - Both ESF pump full flow and ESF pump recirc flow DG loading information;
  - Largest single load rejection by stopping the running ERCW pump (F-B);
  - Ability of DG 2B-B to accept a random load by manual starting of the 2B-B HPFP;
  - Transfer DG 2B-B emergency loads to the Offsite power source.
  - F-B ERCW pump to strip and auto load sequence following a loss of offsite power as well as auto start from a SI signal.

#### 6.3.1 Preliminary Actions Required for Subsection 6.3

#### CAUTION

During this test, there will be ERCW pump starts and stops with the potential to lift ERCW relief valves on the lower Auxiliary Building areas. Operators should take actions as required to adjust flows to maintain normal ERCW header pressures.

- [1] **VERIFY** all prerequisites listed in Section 4.0 met for performance of this section. \_\_\_\_\_
- [2] **ALIGN** components to their "PRE-TEST" positions per Appendix N, Coincident LOOP/SI/CIØB - Train 2B, Section 6.3. \_\_\_\_\_
- [3] **VERIFY** component breakers in "TEST" per Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_

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### 6.3.1 Preliminary Actions Required for Subsection 6.3 (continued)

#### NOTE

If 2B DG requires rolling in the next step, ENSURE the SRO evaluates LCO 3.8.1 applicability.

- [4] **IF** DG 2B-B has **NOT** been operated within past 12 hours,  
**THEN:**

[4.1] **ROLL** DGs 2B-B to check for water in cylinders by  
performing Section 8.2 of 0-SOI-082.04. \_\_\_\_\_

[4.2] **RECORD** DG 2B-B information in 0-SI-82-9. \_\_\_\_\_

- [5] **PERFORM** 0-SOI-82.04, Section 5.2, Verification of Standby  
Alignment, for DG 2B-B. \_\_\_\_\_

- [6] **ENSURE** Handswitch 0-XS-67-288, ERCW PMP F-B/H-B DG  
POWER SEL, at [0-M-27A] is in PUMP F-B position. \_\_\_\_\_

- [7] **ENSURE** Handswitch 0-HS-67-51A, ERCW PMP F-B, at  
[0-M-27A] is in A AUTO position. \_\_\_\_\_

- [8] **VERIFY** DG Recorder(s) installation and connection  
COMPLETED:

- Appendix G, DG 2B-B Chart Recorder Connections \_\_\_\_\_
- Appendix H, DG 2B-B Chart Recorder Hookup \_\_\_\_\_

- [9] **VERIFY** SER recorders installation and connection  
COMPLETED:

- Appendix I, Test Equipment Connections (SER) \_\_\_\_\_
- Appendix J, Sequence of Events Recorder (SER) Hookup \_\_\_\_\_

- [10] **ENSURE** 6.9KV SD Bd 1A-A is ENERGIZED from Normal  
(Breaker 1716) per 0-SOI-211.01. \_\_\_\_\_

- [11] **ENSURE** 6.9KV SD Bd 1B-B is ENERGIZED from Normal  
(Breaker 1728) per 0-SOI-211.02. \_\_\_\_\_

- [12] **ENSURE** 6.9KV SD Bd 2A-A is ENERGIZED from Normal  
(Breaker 1816) per 2-SOI-211.03. \_\_\_\_\_



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### 6.3.1 Preliminary Actions Required for Subsection 6.3 (continued)

- [13] **ENSURE** 6.9KV SD Bd 2B-B is ENERGIZED from Normal (Breaker 1828) per 2-SOI-211.04. \_\_\_\_\_
- [14] **ENSURE** breakers at 2-L-116 are available, racked into CONNECTED position, and OPEN: \_\_\_\_\_
- Reactor Trip Breaker A (2-BKR-99-L116/1B) \_\_\_\_\_
  - Reactor Trip Breaker B (2-BKR-99-L116/1C) \_\_\_\_\_
  - A Rx Trip Bypass Breaker (BYA) (2-BKR-99-L116/2B) \_\_\_\_\_
- [15] **ENSURE** all REACTOR TRIP FIRST OUT alarms, 2-XA-55-4D, are **NOT** LIT. \_\_\_\_\_
- [16] **ENSURE** Window 70-A, SI ACTUATED, is **NOT** LIT. \_\_\_\_\_
- [17] **ENABLE** U-2 Train B Solid State Protection System (SSPS) by performing the following: \_\_\_\_\_
- [17.1] **PLACE** Mode SELECTOR switch at SSPS Train B (2-R-51) in OPERATE position. \_\_\_\_\_
- [17.2] **PLACE** Mode SELECTOR switch at SSPS Train 2A (2-R-48) in TEST position. \_\_\_\_\_
- [18] **ENSURE** 2-PDIC-3-132A, AFW PMP B-B DISCH PRESS CONTROL,[2-M-4], is in AUTO. \_\_\_\_\_
- [19] **CONDUCT** a pretest briefing with Test and Operations personnel in accordance with SMP-9.0. \_\_\_\_\_
- [20] **ENSURE** DG 2B-B CES2BY relay fuses remain pulled to prevent starting other diesel generators in performance of this test section. \_\_\_\_\_
- [21] **ENSURE** Handswitch CSST D LTC-Y REMOTE CONTROL, at 0-ECB-3, is in OFF (PULL FOR AUTO) position. \_\_\_\_\_
- [22] **ENSURE** Handswitch CSST D LTC-X REMOTE CONTROL, at 0-ECB-3, is in OFF (PULL FOR AUTO) position. \_\_\_\_\_
- [23] **ENSURE** U2 Ice Condenser chillers and pumps are out of service. \_\_\_\_\_

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### 6.3.1 Preliminary Actions Required for Subsection 6.3 (continued)

#### NOTES

- 1) 1B-B CCS pump in service to Train B will maintain cooling water flow throughout this test section but does not allow backup to Train 1A CCS.
- 2) Aligning CCS C-S pump to the alternate power supply, Train 1A, maintains Train B CCS cooling water in service to U1 and U2 requiring evaluation of LCO 3.7.7, Condition A, applicability.
- 3) CCS C-S Pump tests were completed in Sections 6.1 (LOOP) and 6.2 (SI). Previous surveillance performances have tested successfully CCS C-S pump on Train 1A for both LOOP and SI start.
- 4) CCS Pump 2B-B will be tested for both auto start by SIS and load strip and restart in Section 6.3, aligned for service to Train 2A.

[24] **ENSURE** the following alignment for CCS Train B:

- [24.1] **ALIGN** 1B-B CCS Pump as required for U1 & U2, Train B service. \_\_\_\_\_
- [24.2] **ALIGN** 2B-B CCS Pump on Train 2A for service and testing in this Section. \_\_\_\_\_
- [24.3] **REQUEST** U1 SRO evaluate LCO 3.7.7, Component Cooling System, applicability for placing CCS C-S pump on Alternate, Train 1A, power supply for the duration of this section test. \_\_\_\_\_
- [24.4] **ALIGN** CCS C-S Pump to U1, Train A power supply using 0-SOI-70.01, Section 8.7. \_\_\_\_\_
- [24.5] **PLACE** CCS C-S Pump in standby to Train B CCS, U1 and U2. \_\_\_\_\_
- [24.6] **ENSURE** 1-HS-70-51A, CCS PMP C-S ALT ACB, in A-P AUTO. \_\_\_\_\_
- [24.7] **ENSURE** 2-HS-70-51A, CCS PMP C-S NORMAL ACB, in PULL TO LOCK. \_\_\_\_\_

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### 6.3.1 Preliminary Actions Required for Subsection 6.3 (continued)

[25] **VERIFY** SFP Cooling aligned as follows:

[25.1] SFP Pump A aligned to SFP Heat Exchanger A as  
primary cooling loop using 0-SOI-78.01. \_\_\_\_\_

[25.2] SFP Pump C-S aligned to TR B power and in service to  
SFP Heat Exchanger using 0-SOI-78.01. \_\_\_\_\_

[26] **ENSURE** 0-XS-78-36B, SFP CIRC PMP C-S ALT PWR XFER  
SW (NORMAL), is CLOSED at 0-XSW-78-36, SFP CIRC  
PUMP C-S XFER SW (A9W/737). \_\_\_\_\_

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### 6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB

- [1] **PLACE** 2-RT-1, REACTOR TRIP, [2-M-4] in CLOSE position,  
**AND**

**VERIFY** the following indicating lights:

- RX TRIP BKR A, 2-52RTA, [2-M-4] indicates CLOSED \_\_\_\_\_
- RX TRIP BKR B, 2-52RTB, [2-M-4] indicates CLOSED \_\_\_\_\_

- [2] **CLOSE** U-2 A RX TRIP BYPASS BKR, 2-BKR-99-L116/2B,  
 locally. \_\_\_\_\_

- [3] **VERIFY** A RX TRIP BYPASS BKR, 2-52-BYA, [2-M-4]  
 indicates CLOSED. \_\_\_\_\_

- [4] **PLACE** handswitches [2-M-3] in RESET position:

- 2-HS-3-99A1, MFW ISOL ACT RESET TR-A \_\_\_\_\_
- 2-HS-3-99B1, MFW ISOL ACT RESET TR-B \_\_\_\_\_

- [5] **PRESS** MFW ISOL RESET pushbuttons [2-M-3]:

- 2-HS-3-99A2, RESET TR-A. MFW ISOL \_\_\_\_\_
- 2-HS-3-99B2, RESET TR-B MFW ISOL \_\_\_\_\_

- [6] **VERIFY** status of Train 2B MASTER ISOL SIGNAL STATUS  
 PNL (MISSP) windows [2-M-6] as follows:

- ØA Window is **NOT** LIT \_\_\_\_\_
- CVI window is **NOT** LIT \_\_\_\_\_
- ØB Window is **NOT** LIT \_\_\_\_\_
- MFW Window is **NOT** LIT \_\_\_\_\_
- ABI Window is **NOT** LIT \_\_\_\_\_
- CRI Window is **NOT** LIT \_\_\_\_\_
- CS Window is **NOT** LIT \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[7] **VERIFY** the following Feedwater valves position:

DESCRIPTION	COMPONENT	LOCATION	POSITION	INITIALS
MFW REG FCV 3-35	2-FCV-3-35	2-XX-3-35	OPEN	
MFW REG FCV 3-48	2-FCV-3-48	2-XX-3-35	OPEN	
MFW REG FCV 3-90	2-FCV-3-90	2-XX-3-35	OPEN	
MFW REG FCV 3-103	2-FCV-3-103	2-XX-3-35	OPEN	
BYP REG FCV 3-35A	2-FCV-3-35A	2-XX-3-35A	OPEN	
BYP REG FCV 3-90A	2-FCV-3-90A	2-XX-3-35A	OPEN	
2-FCV-3-236 SG 1 MFW BYP ISOL	2-FCV-3-236	2-XI-3-236	OPEN	
2-FCV-3-239 SG 2 MFW BYP ISOL	2-FCV-3-239	2-XI-3-239	OPEN	
2-HS-3-47A, SG 2 MFW ISOL VLV	2-FCV-3-47-B	2-M-3	OPEN	
2-FCV-3-242, SG 3 MFW BYP ISOL	2-FCV-3-242	2-XI-3-242	OPEN	
2-HS-3-100A SG 4 MFW ISOL VLV	2-FCV-3-100-B	2-M-3	OPEN	
2-FCV-3-245, SG 4 MFW BYP ISOL	2-FCV-3-245	2-XI-3-245	OPEN	
FCV 3-185 CKV BYP-REV FLUSH	2-FCV-3-185	2-XX-3-235	OPEN	
FCV 3-187 CKV BYP-REV FLUSH	2-FCV-3-187	2-XX-3-235	OPEN	

[8] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B  
MINI FLOW, [2-M-6] valve is CLOSED.

\_\_\_\_\_

[9] **MAKE** a plant announcement for the following pump starts in  
Step 6.3.2[12] .

\_\_\_\_\_

[10] **ENSURE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE  
ISOLATION, is CLOSED for CS Pump 2B-B recirc.

\_\_\_\_\_

[11] **VERIFY**, locally, 2-FCV-63-40, SIS BORON INJ TNK IN ISOL,  
is OPEN.

\_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

**CAUTION**

Damage may occur for any pump not meeting minimum flow requirements.

- [12] **PLACE** each of the following handswitches in START position  
**AND**

**VERIFY** by indicating lights associated pumps are RUNNING:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-128A	AFW PMP B-B	
2-M-5	2-HS-62-104A	CCP B-B (ECCS)	
2-M-6	2-HS-63-15A	SI PMP B (ECCS)	
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)	
2-M-6	2-HS-72-10A	CNTMT SPRAY PMP B	
0-M-27B	2-HS-70-33A	CCS PMP 2B-B	

- [13] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI  
FLOW [2-M-6] valve is OPEN. \_\_\_\_\_

**NOTE**

No power will be transmitted to the pressurizer heater elements because all individual heater element breakers are opened in preliminary actions, Step 4.4[16] and 4.4[17].

- [14] **PLACE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL, in  
MANUAL **AND**

**LOWER** controller output to 0% to allow BACKUP HEATERS  
B-B (2-HS-68-341D) and BACKUP HEATER C  
(2-HS-68-341H) to ENERGIZE. \_\_\_\_\_

- [15] **VERIFY** 2-HS-68-341D, BACKUP HEATERS B-B, indicates  
breaker closed by RED light LIT. \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB**  
**(continued)**

- [16] **CLOSE** backup group 2C breaker using 2-HS-68-341H,  
BACKUP HEATER C, **AND**

**VERIFY** breaker indicates closed by RED light LIT. \_\_\_\_\_

- [17] **ENSURE** appropriate Operations personnel are stationed, and  
briefed, for performance of Steps 6.3.2[21], 6.3.2[24],  
6.3.2[35], and 6.3.2[40]. \_\_\_\_\_

**NOTE**

Steps 6.3.2[18] through 6.3.2[21] may be performed concurrently or in any order.

- [18] **PERFORM** the following for Sequence of Events Recorder  
(SER):

[18.1] **OBTAIN** a SER status summary printout. \_\_\_\_\_

[18.2] **ENSURE** SER is in Standby Mode. \_\_\_\_\_

**NOTE**

Evaluate LCO 3.8.9 for entry conditions when Step 6.3.2[19] is completed.

- [19] **ENSURE** Handswitch 2-XS-57-70, 6.9 SD BD 2B-B XFER  
SELECTOR, at 2-M-1, is in MAN position. \_\_\_\_\_

- [20] **ANNOUNCE** a warning over the page system Unit 2, Train B  
Safety Injection and Containment Isolation Phase B coincident  
with a Unit 2 Train B Loss of Offsite Power will be initiated. \_\_\_\_\_

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### 6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB (continued)

#### NOTES

1) Upon performing step 6.3.2[21], a flowpath will exist from the RWST to the Reactor Vessel.

2) To minimize gravity fill of reactor vessel from RWST, the following step should be performed as close as practicable to performance of Step 6.3.2[24].

[21] **PLACE** handswitches at [2-M-6] in OPEN position **AND**

**VERIFY** by indicating lights valves are OPEN:

[21.1] 2-HS-63-93A, RHR TO CL 2 & 3 \_\_\_\_\_

[21.2] 2-HS-63-94A, RHR TO CL 1 & 4 \_\_\_\_\_

[21.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4 \_\_\_\_\_

[22] **PLACE** Handswitch 2-HS-62-135A, RWST TO CHARGING PMPS SUCTION, [2-M-5], in OPEN position **AND**

**VERIFY** by indicating lights valve is OPEN. \_\_\_\_\_

[23] **NOTIFY** personnel to start the following recorders:

- DG Recorder \_\_\_\_\_
- Sequence of Events Recorder \_\_\_\_\_

[23.1] **REQUEST** feedback BOTH recorders are running. \_\_\_\_\_

#### NOTE

Steps 6.3.2[24] through 6.3.2[35] are time critical and require careful coordination of personnel. Manual start of HPFP Pump 2B-B is performed to demonstrate Diesel Generator capability to start and carry random loads.

[24] **PERFORM** a five (5) second countdown over the page system, **THEN** **INITIATE** the following:

- Train 2B Safety Injection (SI) **AND**



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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- Containment Isolation Phase B (CIØB) **AND**
- Train 2B Loss of Offsite Power (LOOP) \_\_\_\_\_

[24.1] **PLACE SIMULTANEOUSLY** each of the following  
handswitches in ACTUATE position, [2-M-6]:

- 2-HS-63-133A, SI ACTUATE TR A & B \_\_\_\_\_
- 2-HS-30-64A, ØB & CNTMT VENT ISOL \_\_\_\_\_
- 2-HS-30-64B, ØB & CNTMT VENT ISOL \_\_\_\_\_

[24.2] **PLACE** 1812, NORM FEEDER FOR 6.9KV SHDN BD  
2B-B & ALT FEEDER FDR 6.9KV SHDN BD 1A-A,  
[0-ECB-3] in TRIP. \_\_\_\_\_

[25] **RECORD** clock time: \_\_\_\_\_

Clock Time \_\_\_\_\_

[26] **VERIFY** 6.9 kV SD BD 2B-B voltage reduces to ZERO on  
2-EI-57-66, 6.9 SDB 2B-B VOLTS. (2-M-1) (**Acc Crit 5.6A.1**) \_\_\_\_\_

[27] **VERIFY** Annunciator Window, 70-A, SI ACTUATED, Panel  
2-XA-4A, is LIT. \_\_\_\_\_

[28] **VERIFY** Reactor Trip Breakers are OPEN.

Description	Required Position	Actual Position	Initials
2-52RTA RX TRIP BKR A	OPEN		
2-52RTB RX TRIP BKR B	OPEN		
2-52BYA BYPASS BKR A	OPEN		

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[29] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS PNL (MISSP) windows [2-M-6] as follows: (**Acc Crit 5.7D, 5.7H, 5.7K, 5.7L**)

- ØA Window is LIT \_\_\_\_\_
- CVI window is LIT \_\_\_\_\_
- ØB Window is LIT \_\_\_\_\_
- MFW Window is LIT \_\_\_\_\_
- ABI Window is LIT (**ACC Crit 5.7B**) \_\_\_\_\_
- CRI Window is LIT \_\_\_\_\_
- CS Window is LIT \_\_\_\_\_

[30] **VERIFY** by indicating lights at 2-HS-57-71B [0-M-26], 1828 - NORMAL FROM CSST D is OPEN. \_\_\_\_\_

[31] **VERIFY** 1924-DG TO SD BD 2B-B RED light is LIT.  
(**Acc Crit 5.1C.5.a**) \_\_\_\_\_

[32] **VERIFY** by indicating lights at 0-HS-26-11A, HPFP PMP 2B-B (1-M-15) pump is STOPPED. (**Acc Crit 5.7E**) \_\_\_\_\_

[33] **WHEN** 60 seconds from time recorded in Step 6.3.2[25],  
**THEN**

**RECORD** RHR System Injection flow rates as indicated by each of the following [2-M-6] indicators: \_\_\_\_\_

2-FI-63-91B, RHR TO CL 2 & 3 WR FLOW	GPM
2-FI-63-92B RHR TO CL 1 & 4 WR FLOW	GPM

[34] **PERFORM** the following:

[34.1] **VERIFY** by GREEN indicating light at 2-HS-74-24A, RHR PMP B MINI FLOW [2-M-6], valve is CLOSED. \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- [34.2] **VERIFY** by indicating lights at 2-HS-3-148A, SG 3  
SUPPLY LCV-3-148 CNTL [2-M-4], Level Bypass  
Control Valve LCV-3-148A is **NOT** CLOSED  
(Modulating/Open) \_\_\_\_\_
- [34.3] **VERIFY** by indicating lights at 2-HS-3-171A, SG 4  
SUPPLY LCV-3-171 CNTL [2-M-4] Level Bypass Control  
Valve LCV-3-171A is **NOT** CLOSED (Modulating/Open) \_\_\_\_\_
- [35] **WHEN** 2-HS-72-10A, CNTMT SPRAY PMP B, indicates Pump  
RUNNING at [2-M-6] (approximately three minutes after DG  
2B-B Breaker closure), **THEN:**
- PLACE** 0-HS-26-11A, HPFP PMP 2B-B, at [1-M-15] in START  
position **AND**
- VERIFY** by indicating lights pump is RUNNING.  
(Acc Crit 5.8.1A) \_\_\_\_\_
- [36] **OPEN** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE  
ISOLATION, to place CS Pump 2B-B on RWST recirc. \_\_\_\_\_

**NOTE**

Air Return Fan starts approximately 9 minutes after ØB signal initiated.

- [37] **WHEN** all loads have sequenced on, **THEN**
- START** a stopwatch to time five minute DG run. \_\_\_\_\_
- [38] **RECORD** clock time. \_\_\_\_\_
- Clock Time \_\_\_\_\_
- [39] **RECORD** "POST-EVENT" status of components per  
Appendix N. (Acc Crit 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F,  
5.7G, 5.7H, 5.7I, 5.7J, 5.7K, 5.7L, 5.7M, 5.7N, 5.7O, 5.7P) \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

**CAUTION**

If refueling cavity level is rising at a rate that precludes a full five minute run, Step 6.3.2[40] should be performed in a timely manner to prevent water intrusion into the duct work around the cavity.

[40] **When** five minutes elapsed on stopwatch, **THEN**  
**PERFORM** the following:

[40.1] **RECORD** DG 2B-B load as indicated by 2-EI-82-100A,  
DG MEGAWATTS, at 0-M-26: **(Acc Crit 5.8.2)**

DG 2B-B	MW
---------	----

[40.2] **STOP** DG 2B-B Chart Recorder(s)

[40.3] **RECORD** clock time:

Clock Time \_\_\_\_\_

[40.4] **CALCULATE** DG 2B-B run time as determined from  
clock times recorded in Step 6.3.2[38] and 6.3.2[40.3]:

CV

-	=	mins	secs
Clock Time Step 6.3.2[40.3]	Clock Time Step 6.3.2[38]	DG 2B-B Runtime	

[40.5] **VERIFY** DG 2B-B run time as determined in  
Step 6.3.2[40.4] is greater than or equal to five minutes.  
**(Acc Crit 5.6A.3.e)**

[41] **VERIFY** DG 2B-B load recorded in Step 6.3.2[40.1] is less  
than or equal to 4400 kW. **(Acc Crit 5.1B.6.b(1))**

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

**NOTE**

Steps 6.3.2[42] and 6.3.2[43] are performed concurrently.

[42] **CLOSE** locally, 2-ISV-72-502, CNTMT SPRAY TEST LINE ISOLATION, to place CS Pump 2B-B on recirc. \_\_\_\_\_

[43] **PLACE** each of the following handswitches [2-M-6] in CLOSE position **AND**

**VERIFY** by indicating lights associated valves are CLOSED:

[43.1] 2-HS-63-93A, RHR TO CL 2 & 3 \_\_\_\_\_

[43.2] 2-HS-63-94A, RHR TO CL 1 & 4 \_\_\_\_\_

[43.3] 2-HS-63-22A, SI PMPS TO CL 1-2-3-4 \_\_\_\_\_

[44] **CLOSE**, locally, 2-FCV-63-40, SIS BORON INJ TNK IN ISOL. \_\_\_\_\_

[45] **VERIFY** by indicating lights at 2-HS-74-24A, RHR PMP B MINI FLOW, (2-M-6), valve is OPEN. \_\_\_\_\_

[46] **ROTATE** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to CLOSE **THEN**

**PULL** 2-HS-3-148A, SG 3 SUPPLY LCV-3-148 CNTL, to PULL-TO-LOCK position. \_\_\_\_\_

[47] **ROTATE** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to ACC RESET MODULATE, **THEN**

**ROTATE** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to CLOSE **THEN**

**PULL** 2-HS-3-171A, SG 4 SUPPLY LCV-3-171 CNTL, to PULL-TO-LOCK position. \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[48] **VERIFY** by indicating lights associated Level Bypass Control Valve is CLOSED:

- LCV-3-148A CLOSED (2-HS-3-148A) \_\_\_\_\_
- LCV-3-171A CLOSED (2-HS-3-171A) \_\_\_\_\_

[49] **RECORD** DG 2B-B load indicated by 2-EI-82-100A, DG MEGAWATTS, with ESF pumps on recirc. (**Acc Crit 5.8.2**) \_\_\_\_\_

DG 2B-B	MW
---------	----

[50] **ANNOTATE** DG 2B-B recorder for logging single largest load rejection response. \_\_\_\_\_

[51] **NOTIFY** personnel to start DG 2B-B recorder. \_\_\_\_\_

**NOTE**

The F-B ERCW Pump must be placed in PULL TO LOCK in the next step because of Blackout start signal. It will restart if released to mid position. Placing ERCW Pump F-B in PULL TO LOCK simulates largest single load rejection.

[52] **STOP** ERCW Pump F-B using 0-HS-67-51A, ERCW PMP F-B, [0-M-27A], **AND**

**PLACE** in PULL-TO-LOCK position. \_\_\_\_\_

[53] **NOTIFY** DG-DAQ Operator to STOP DG-DAQ **AND**

**ANNOTATE** recorder with completion of single largest load rejection test. \_\_\_\_\_

[54] **RESET** ESF actuation signals:

[54.1] **PRESS** RESET pushbuttons at [2-M-6]:

[54.1.1] 2-HS-63-134A, SI RESET TR A \_\_\_\_\_

[54.1.2] 2-HS-63-134B, SI RESET TR B \_\_\_\_\_

[54.1.3] 2-HS-30-63D ØA CNTMT ISOL RESET TR-A \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- [54.1.4] 2-HS-30-63E ØA CNTMT ISOL RESET TR-B \_\_\_\_\_
- [54.1.5] 2-HS-30-65A, CNTMT VENT ISOL RESET TR-A \_\_\_\_\_
- [54.1.6] 2-HS-30-65B, CNTMT VENT ISOL RESET TR-B \_\_\_\_\_
- [54.1.7] 2-HS-30-64D, ØB CNTMT ISOL RESET TR-A \_\_\_\_\_
- [54.1.8] 2-HS-30-64E, ØB CNTMT ISOL RESET TR-B \_\_\_\_\_
- [54.1.9] 2-HS-72-42, CNTMT SPRAY PMP B RESET \_\_\_\_\_
- [54.2] **TURN** 2-HS-74-28, RHR HX B OUTLET FCV SI  
SIGNAL RESET, [2-M-6, to RESET position. \_\_\_\_\_
- [54.3] **VERIFY** status of Train B MASTER ISOL SIGNAL  
STATUS PNL (MISSP) windows at 2-M-6 as follows:
  - ØA Window is **NOT** LIT \_\_\_\_\_
  - CVI window is **NOT** LIT \_\_\_\_\_
  - ØB Window is **NOT** LIT \_\_\_\_\_
  - CS Window is **NOT** LIT \_\_\_\_\_
- [54.4] **VERIFY** status of Train B MASTER ISOL SIGNAL  
STATUS PNL, 2-XX-55-6D, (MISSP) windows at 2-M-6  
as follows: (**ACC Crit 5.7B, 5.7H**)
  - MFW Window is LIT \_\_\_\_\_
  - ABI Window is LIT \_\_\_\_\_
  - CRI Window is LIT \_\_\_\_\_
- [55] **VERIFY** by indicating lights at 0-HS-31-68A, SD BD ROOM B  
PRESS FAN D-B, [1-M-9], fan is STOPPED: \_\_\_\_\_
- [56] **VERIFY** by indicating lights at 0-HS-30-123 CASK LOAD  
AREA EXHAUST, [1-M-9], damper is CLOSED: \_\_\_\_\_
- [57] **VERIFY** by [1-M-9] indicating lights, dampers are CLOSED: \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[57.1.1] DAMPER 0-XI-31-4, FCV-31-4 \_\_\_\_\_

[57.1.2] DAMPER 0-XI-31-9, FCO-31-9 \_\_\_\_\_

[57.1.3] DAMPER 0-XI-31-16, FCO-31-16 \_\_\_\_\_

[58] **TURN** handswitches to RESET position at [2-M-6]: \_\_\_\_\_

[58.1.1] 2-HS-31-177B, MCR ISOL TR-B \_\_\_\_\_

[58.1.2] 2-HS-30-101B, AUX BLDG ISOL TR-B \_\_\_\_\_

[59] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS  
PNL, 2-XX-55-6D, (MISSP) windows at [2-M-6]:

[59.1.1] ABI Window is **NOT** LIT \_\_\_\_\_

[59.1.2] CRI Window is **NOT** LIT \_\_\_\_\_

[60] **VERIFY** status of Train B MASTER ISOL SIGNAL STATUS  
PNL, 2-XX-55-66D, (MISSP) Window, [2-M-6], MFW Window  
is LIT \_\_\_\_\_

[61] **RECORD** "POST-Reset" status of components per  
Appendix N. \_\_\_\_\_

[62] **VERIFY** by indicating lights breakers are OPEN:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS	DATE
0-M-26	1-HS-57-97B	1932-ALTERNATE FROM CSST D		
0-M-26	2-HS-57-71B	1828- NORMAL FROM CSST D		

[63] **PLACE** Breaker 1812 Handswitch, NORM FEEDER FOR  
6.9KV SHDN BD 2B-B & ALT FEEDER FOR 6.9KV SHDN BD  
1A-A, [0-ECB-3], in CLOSED position **THEN**

**VERIFY** by indicating lights breaker is CLOSED. \_\_\_\_\_



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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- [64] **PRESS** BLACK-OUT RELAYS BO-RESET pushbutton  
resetting BO Relays on SD BD 2B-B Logic Relay Panel. \_\_\_\_\_
- [65] **CHECK** Window 220-E, DIESEL GEN 2B-B (0-XA-55-26D),  
LOGIC PNL 2B-B LOAD STRIP RELAYS OUT OF SYNC OR  
UV TEST, **NOT** LIT. \_\_\_\_\_
- [66] **RESTORE** offsite power to 6.9KV SD Bd 2B-B from  
1828-NORMAL FROM CSST D, using 0-SOI-82.04, Section  
8.3.1. (Acc Crit 5.1B.9.a, 5.2C.1, 5.2C.2) \_\_\_\_\_
- [67] **REMOVE** DG 2B-B from service using 0-SOI-82.04, Section  
8.3.1. (Acc Crit 5.1B.9.a, 5.2C.3) \_\_\_\_\_

**NOTE**

Performance of Step 6.3.2[68] may **NOT** begin until the DG 2B-B is disconnected from the  
2B-B 6.9kV Shutdown Board.

[68] **WHEN** Step ,6.3.2[66] is completed, **THEN**:

[68.1] **PLACE** handswitches in STOP PULL-TO-LOCK:

LOCATION	HANDSWITCH	DESCRIPTION	INITIALS
2-M-4	2-HS-3-128A	AFW PMP B-B	
2-M-5	2-HS-62-104A	CCP B-B (ECCS)	
2-M-6	2-HS-63-15A	SI PMP B (ECCS)	
2-M-6	2-HS-74-20A	RHR PMP B (ECCS)	
2-M-6	2-HS-72-10A	CNTMT SPRAY PMP B	
2-M-9	2-HS-30-39A	Air Return Fan B-B	

[69] **IF** DG 2B-B has operated for greater than 1 hour, **THEN**

**NOTIFY** Chemistry to sample Day Tanks 2B1 & 2B2 for  
condensate. \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- [70] **ALIGN** components to their "Post-Test" positions per Appendix N. \_\_\_\_\_
- [71] **NOTIFY** Electrical support to remove jumper in 2-R-76, from relay CPD2 by performing Appendix W, Step 1.0[16]. \_\_\_\_\_
- [72] **NOTIFY** Electrical support to remove jumper in 1-R-78 affecting SD BD Rm pressurizing fans by performing Appendix W, Step 1.0[17] \_\_\_\_\_
- [73] **NOTIFY** Electrical support to remove jumper in 1-R-79 for HPFP 2B-B Fire Pump by performing Appendix W, Step 1.0[19]. \_\_\_\_\_

**NOTE**

Steps 6.3.2[74] through 6.3.2[81] may be performed concurrently or in any order.

- [74] **WHEN** 2-FCV-63-25, BIT OUTLET, HAS BEEN CLOSED IN Appendix N, **THEN**  
  
**OPEN**, locally, 2-FCV-63-39, SIS BORON INJ TNK IN ISOL. \_\_\_\_\_  
CV
- [75] **INITIATE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS, Section 8.8. \_\_\_\_\_
- [76] **INITIATE** recovery from CRI using 0-SOI-31.01. \_\_\_\_\_
- [77] **INHIBIT** Train B Solid State Protection System (SSPS) by placing Mode SELECTOR switch at 2-R-51 in TEST position. \_\_\_\_\_
- [78] **PLACE** Handswitch CSST D LTC-Y REMOTE CONTROL, [0-ECB-3], in OFF (PULL FOR AUTO) position. \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[79] **PLACE** Handswitch CSST D LTC-X REMOTE CONTROL,  
[0-ECB-3], in OFF (PULL FOR AUTO) position. \_\_\_\_\_

[80] **PLACE** 0-HS-26-9B, HPFP PMP 2B-B, in STOP, **AND**

**RETURN** handswitch to one of the following positions clearing  
annunciator WINDOW 172-B, TR B HPFP PMP CNTL  
SWITCH MISALIGNED:

- A Auto (STANDBY) \_\_\_\_\_

CV

- Pull A-P AUTO \_\_\_\_\_

CV

[81] **COMPLETE** Appendix Q using sequence of Events Recorder  
(SER) printout(s). \_\_\_\_\_

**NOTE**

Remaining steps in this subsection are data reduction steps and need **NOT** be completed  
prior to beginning another test subsection.

[82] **VERIFY** "Actual" Post-Event component status recorded on  
Appendix N matches "required" status specified by Appendix.  
(Acc Crit 5.1A.2.b(1), 5.7A, 5.7B, 5.7C, 5.7D, 5.7E, 5.7F,  
5.7G, 5.7H, 5.7I, 5.7J, 5.7K, 5.7L, 5.7M, 5.7N, 5.7O, 5.7P) \_\_\_\_\_

[83] **VERIFY** "Actual" Post-Reset component status recorded on  
Appendix N matches "Required" status specified by Appendix.  
(Acc Crit 5.1A.3.c) \_\_\_\_\_

[84] **REVIEW** Elapsed Time calculations performed on Appendix Q  
and **PERFORM** the following:

[84.1] **VERIFY** "2B-B BUS STRIP" components properly  
STOPPED (load-shed) as specified by Appendix Q  
(Acc Crit 5.1A.2.b(2), 5.6A.2) \_\_\_\_\_

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[84.2] **VERIFY** "DG 2B-B BKR 1924" CLOSED in less than or equal to 10 seconds following receipt of LOOP/SI start signal. (Acc Crit 5.1B.2.a, 5.6A.3.a) \_\_\_\_\_

[84.3] **VERIFY** "2B-B LOOP/SI/CIØB-SEQ" calculated times are within Acceptable ranges specified by Appendix Q (Acc Crit 5.1A.2.b(3), 5.6A.3.b) \_\_\_\_\_

[85] **REVIEW** DG 2B-B chart Recorder trace(s) for diesel response following LOOP/SI/CIØB, **AND**

**RECORD** minimum DG 2B-B voltage and frequency which occurred during load sequencing. \_\_\_\_\_

Generator Minimum Voltage	VAC	≥5213 VAC
Generator Minimum Frequency	Hz	≥57 Hz

[86] **VERIFY** data recorded in Step 6.3.2[85] meets Generator Minimum Voltage and Frequency required response of DG 2B-B during sequencing of LOOP/SI/CIØB loads by performing the following: (Acc Crit 5.1B.3.b(1)) \_\_\_\_\_

[87] **VERIFY** Voltage and Frequency Recovery Times recorded on Appendix S for LOOP/SI/CIØB loading sequence meet the following for each step load increase: (Acc Crit 5.1B.4.b(1)) \_\_\_\_\_

Generator Voltage Recovery	secs	≤ 3 secs
6255 - 7645 VAC		
Generator Frequency Recovery	secs	≤ 3 secs
58.8 - 61.2 HZ		

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**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

[88] **REVIEW** DG 2B-B Chart Recorder trace(s) for diesel response following LOOP/SI/CIØB **AND**

**RECORD** minimum and maximum steady state DG 2B-B voltage and frequency which occurred during run (minimum period of five minutes): (**Acc Crit 5.6A.3.c, 5.6A.3.d, 5.1B.5.c(1)**)

Parameter	Acceptance Criteria	Actual Value	Initials
Minimum Voltage	$\geq 6800$ VAC	VAC	
Maximum Voltage	$\leq 7260$ VAC	VAC	
Minimum Frequency	$\geq 59.8$ Hz	HZ	
Maximum Frequency	$\leq 60.1$ Hz	HZ	

[89] **VERIFY** DG 2B-B proper response following load rejection of largest single load during performance of Step 6.3.2[52]. (**Acc Crit 5.5A), (5.1B.10.b)**

[89.1] DG 2B-B running RED light lit. \_\_\_\_\_

[89.2] DG 2B-B speed is maintained  $\leq 1001$  RPM. \_\_\_\_\_

[89.3] Frequency is less than or equal to 66.75 Hz. \_\_\_\_\_

[89.4] DG 2B-B voltage is greater than or equal to 6555V and less than or equal to 7260V within 3 seconds of load rejection. \_\_\_\_\_

[89.5] DG 2B-B frequency is greater than 58.8 and less than 61.2 Hz within 4 seconds of load rejection. \_\_\_\_\_

[90] **VERIFY** DG 2B-B frequency restored to between 58.8 to 61.2 Hz in less than 60% time of each load-sequence interval for each step load increase. \_\_\_\_\_

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Date \_\_\_\_\_

**6.3.2 Performance - Coincident LOOP/Safety Injection/CIØB  
(continued)**

- [91] **REVIEW** DG 2B-B Chart Recorder trace(s) for RHR Pump 2B response following initiation of LOOP/SI/CIØB **AND**

**RECORD** time required for RHR Pump 2B to reach maximum (peak) flow: \_\_\_\_\_

RHR Maximum Flow \_\_\_\_\_ seconds

- [92] **CALCULATE** total RHR Pump 2B flow by summing injection flow rates recorded in Step 6.3.2[33]: \_\_\_\_\_

CV

gpm	+	gpm	=	gpm
2-FI-63-91B		2-FI-63-92B		Total Flow

- [93] **RETURN** Refueling Cavity and Reactor Vessel level to desired level:

- [93.1] **PERFORM** 2-SOI-74.01 to place Train 2B RHR in service on recirc with suction from the RCS. \_\_\_\_\_

- [93.2] **THROTTLE** 2-HCV-74-34, RWST RETURN, as required to pump Refueling Cavity and Reactor Vessel level to the desired level, **THEN**

**CLOSE AND LOCK** 2-HCV-74-34. \_\_\_\_\_

CV

- [94] **RAISE** 2-PIC-68-340A, PZR PRESS MASTER CONTROL output to 25-30% to de-energize BACKUP HEATERS B-B (2-HS-68-341D) and BACKUP HEATER C (2-HS-68-341H) using 2-HS-68-341H. \_\_\_\_\_

- [95] **PLACE** 2-HS-68-341D, BACKUP HEATERS B-B, to OFF. \_\_\_\_\_

- [96] **PLACE** 2-HS-68-341H, BACKUP HEATER C, to OFF. \_\_\_\_\_

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Date \_\_\_\_\_

[97] **ENSURE** U-2 Steam Generator levels are equal to or less than 30% by draining Steam Generators as necessary using 2-SOI-41 series of instructions.

\_\_\_\_\_

[98] **RESTORE** Ice Condenser system to normal operation using 0-SOI-61-01.

\_\_\_\_\_

[99] **RETURN** Train 2B RHR to alignment specified in Appendix C, Section 5.0.

\_\_\_\_\_

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**6.4 Common Station Service Transformer (CSST) Capacity Verification (continued)**

**6.4 Common Station Service Transformer (CSST) Capacity Verification**

- [1] **RECORD** power reading taken from each CSST Secondary winding as recorded in WO \_\_\_\_\_ during Unit 1 entry into RF10. \_\_\_\_\_
- [2] **RECORD** power reading taken from each CSST Secondary winding as recorded in WO 111062742 during the performance of this instruction. \_\_\_\_\_
- [3] **DETERMINE** that Unit 1 hot standby power recorded does not exceed the CSST Secondary winding rated capacity as follows: **(Acc Crit 5.1D.1)** \_\_\_\_\_

CSST	SECONDARY. WINDING	RMS MEASURED LOADING	RATED CAPACITY	RATING < MEASURED LOADING
A	X		48 MVA	
A	Y		48 MVA	
B	X		48 MVA	
B	Y		48 MVA	
C	X		40 MVA	
C	Y		40 MVA	
D	X		40 MVA	
D	Y		40 MVA	



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**6.4 Common Station Service Transformer (CSST) Capacity Verification (continued)**

- [4] DETERMINE** that Unit 2 ESF loads under accident conditions power recorded on the associated transformers does not exceed the CSST Secondary winding rated capacity as follows: **(Acc Crit 5.1D.2)**

CSST	SEC. WINDING	RMS LOADING	RATED CAPACITY	RATING < MEASURED LOADING
A	X		48 MVA	
A	Y		48 MVA	
B	X		48 MVA	
B	Y		48 MVA	
C	X		40 MVA	
C	Y		40 MVA	
D	X		40 MVA	
D	Y		40 MVA	

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## 7.0 POST PERFORMANCE ACTIVITY

- [1] **RESTORE** U2 glycol system to service in accordance with 0-SOI-61.01. \_\_\_\_\_
- [2] **ENSURE** Post-test calibration of M&TE used to record quantitative acceptance criteria has been satisfactorily performed and results RECORDED on M&TE Log. \_\_\_\_\_
- [3] **ENSURE** Post-test calibration of permanent plant instruments used to record quantitative acceptance criteria has been satisfactorily performed and results RECORDED on Appendix B, Permanent Plant Instrumentation Log. \_\_\_\_\_
- [4] **REMOVE** the following Recorders:
  - [4.1] DG Chart Recorder(s) 2B-B per Appendix G. \_\_\_\_\_
  - [4.2] Sequence of Events Recorder (SER) per Appendix I, Test Equipment Connections (SER). \_\_\_\_\_
- [5] **REMOVE** temporary equipment modifications per Appendix E. \_\_\_\_\_
- [6] **RESTORE** component breakers per Appendix F, Breaker Test Configuration Lineup. \_\_\_\_\_
- [7] **PERFORM** systems restoration per Appendix U. \_\_\_\_\_
- [8] **PERFORM** Appendix W, Section 3.0, Restoration. \_\_\_\_\_
- [9] **REALIGN** Containment Spray System by performing the following:
  - [9.1] **ENSURE** each of the following handswitches are in STOP PULL-TO-LOCK position at 2-M-6:
    - [9.1.1] 2-HS-72-27A, CNTMT SPRAY PMP A \_\_\_\_\_
    - [9.1.2] 2-HS-72-10A, CNTMT SPRAY PMP B \_\_\_\_\_
- [10] **ATTACH** DG chart recorder traces to this procedure, with date, recorder ID, parameters monitored, chart speed, and procedure step reference annotated on the recordings. \_\_\_\_\_

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## 7.0 POST PERFORMANCE ACTIVITY (continued)

- [11] **ATTACH** Sequence of Events Recorder (SER) printouts to this procedure, with date, and procedure step references annotated on the printouts. \_\_\_\_\_
- [12] **RESTORE** Tr 2A SSPS per Appendix D, Section 2.0 \_\_\_\_\_
- [13] **NOTIFY** U2 WCC to retag with a Hold Order 2-BKR-72-2-B, CS HDR B ISOL (2-FCV-72-2) at 480V Reactor MOV Bd 2B1-B, Compt. 14A. \_\_\_\_\_
- [14] **NOTIFY** U2 WCC that ERCW valve breakers in Section 4.4 may be tagged open, if required. \_\_\_\_\_
- [15] **NOTIFY** Fire Ops of completion of testing for Train 2B **AND** **EVALUATE** any outstanding configuration changes and Fire Impairment Permits that need to be closed out. \_\_\_\_\_
- [16] **PERFORM** component realignment per Appendix X, Electrical Isolation Alignment, and inform the Test Director when completed. \_\_\_\_\_
- [17] **REMOVE** from plant equipment any sequentially numbered labels used to denote equipment under control of this Instruction, **AND** **ACCOUNT** for each numbered disc prior to closing out this Instruction. \_\_\_\_\_
- [18] **NOTIFY** maintenance personnel that Ice Condenser Lower Inlet Door blocks may be removed. \_\_\_\_\_
- [19] **ENSURE** pressurizer heater interlocks for 2-BKR-68-341D and 2-BKR-68-341C are restored in Appendix E, Temporary Wire Lift and Jumper Equipment Modifications. \_\_\_\_\_
- [20] **ENSURE** 6.9 KV Breakers are OPEN and RACKED DOWN:
  - 2-BKR-68-341D, 6.9KV SD BD 2B-B, Compt C20 \_\_\_\_\_
  - 2-BKR-68-341H, 6.9KV SD BD 2B-B, Compt C21 \_\_\_\_\_

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## 7.0 POST PERFORMANCE ACTIVITY (continued)

[21] **WHEN** step7.0[19] is complete, **THEN**

**ENSURE** each of the following breakers at 2-DPL-68-341D, PZR BACKUP  
HTR GRP 2B-B DISTRIBUTION PANEL, are **CLOSED** :

[21.1] 2-BKR-68-341D/B1, PRESSURIZER HTR  
(2-HTR-68-341D/B1-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.2] 2-BKR-68-341D/B2, PRESSURIZER HTR  
(2-HTR-68-341D//B2-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.3] 2-BKR-68-341D/B3, PRESSURIZER HTR  
(2-HTR-68-341D//B3-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.4] 2-BKR-68-341D/B4, PRESSURIZER HTR  
(2-HTR-68-341D//B4-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.5] 2-BKR-68-341D/B5, PRESSURIZER HTR  
(2-HTR-68-341D//B5-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.6] 2-BKR-68-341D/B6, PRESSURIZER HTR  
(2-HTR-68-341D//B6-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[21.7] 2-BKR-68-341D/B7, PRESSURIZER HTR  
(2-HTR-68-341D//B7-B)

\_\_\_\_\_  
\_\_\_\_\_  
CV

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## 7.0 POST PERFORMANCE ACTIVITY (continued)

[22] **ENSURE** each of the following breakers at 2-DPL-68-341H, PZR BACKUP HTR GRP 2C DISTRIBUTION PANEL, are CLOSED:

[22.1] 2-BKR-68-341H/C1, PRESSURIZER HTR  
(2-HTR-68-341H/C1)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.2] 2-BKR-68-341H/C2, PRESSURIZER HTR  
(2-HTR-68-341H/C2)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.3] 2-BKR-68-341H/C3, PRESSURIZER HTR  
(2-HTR-68-341H/C3)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.4] 2-BKR-68-341H/C4, PRESSURIZER HTR  
(2-HTR-68-341H/C4)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.5] 2-BKR-68-341H/C5, PRESSURIZER HTR  
(2-HTR-68-341H/C5)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[22.6] 2-BKR-68-341H/C6, PRESSURIZER HTR  
(2-HTR-68-341H/C6)

\_\_\_\_\_  
\_\_\_\_\_  
CV

[23] **ENSURE** the following:

[23.1] **PLACE** C-S CCS pump in service on Train B CCS header.

[23.2] **REALIGN** 1B-B CCS pump to provide backup to Train 1A CCS in accordance with 0-SOI-70.01, Section 8.2.

[23.3] **EVALUATE** alignment required for 2B-B CCS Pump.

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## 7.0 POST PERFORMANCE ACTIVITY (continued)

- [23.4] **NOTIFY** Operations to review ERCW system and ERCW pumps are aligned as required in accordance with 0-SOI-67.01. \_\_\_\_\_
- [24] **ENSURE** each at the following breakers at 2-L-116 are racked OUT and in the DISCONNECTED position:
- [24.1] Reactor Trip Breaker A \_\_\_\_\_
- [24.2] Reactor Trip Breaker B \_\_\_\_\_
- [24.3] A Rx Trip Bypass Bkr (BYA) \_\_\_\_\_
- [25] **WALK DOWN** all Main Control Boards, **AND** **REPORT** any abnormal component or equipment configurations to the Unit SRO and Test Director for resolution. \_\_\_\_\_
- [26] **ENSURE** that all Appendices are complete. \_\_\_\_\_
- [27] **ENSURE** all temporary tags used for this test are removed from plant components. \_\_\_\_\_
- [28] **NOTIFY** SM of test completion and system alignment. \_\_\_\_\_
- [29] **NOTIFY** Unit 1 and Unit 2 WCC of test completion and restoration. \_\_\_\_\_
- [30] **NOTIFY** Chemisrty of test completion and restoration. \_\_\_\_\_
- [31] **NOTIFY** RP of test completion and restoration. \_\_\_\_\_
- [32] **NOTIFY** Fire Ops of test completion and restoration. \_\_\_\_\_
- [33] **NOTIFY** Security of test completion and restoration. \_\_\_\_\_
- [34] **NOTIFY** Load Dispatcher of test completion and restoration. \_\_\_\_\_

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## 8.0 RECORDS

### A. QA Records

1. Appendix A, Test Procedure Reference Review
2. Appendix B, Permanent Plant Instrumentation Log
3. Appendix C, Equipment Alignment
4. Appendix D, Removal and Restoration of Train 2A SSPS
5. Appendix E, Temporary Wire Lift and Jumper Equipment Modifications
6. Appendix F, Breaker Test Configuration Lineup
7. Appendix G, DG 2B-B Chart Recorder Connections
8. Appendix H, DG 2B-B Chart Recorder Hookup
9. Appendix I, Test Equipment Connections (SER)
10. Appendix J, Sequence of Events Recorder (SER) Hookup
11. Appendix K, Loss of Offsite Power - Train 2B, Section 6.1
12. Appendix L, Safety Injection (SI) - Train 2B, Section 6.2
13. Appendix M, Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2
14. Appendix N, Coincident LOOP/SI/CIØB - Train 2B, Section 6.3
15. Appendix O, SER Timing - Subsection 6.1
16. Appendix P, SER Timing - Subsection 6.2
17. Appendix Q, SER Timing - Subsection 6.3
18. Appendix R, Transient Load Response - Subsection 6.1
19. Appendix S, Transient Load Response - Subsection 6.3
20. Appendix T, Potential Technical specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose Calculation Manual (ODCM), Applications

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## 8.0 RECORDS (continued)

21. Appendix U, Return To Normal
22. Appendix V, Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout Testing) on Train 2B
23. Appendix W, Electrical Support
24. Appendix X, Electrical Isolation Alignment
25. Appendix Y, DG DAQ Connections, Operation, Disconnection



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**Appendix A  
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**Test Procedure Reference Review**

Date \_\_\_\_\_

<b>PROCEDURE/INSTRUCTION</b>	<b>REVISION/CHANGES</b>	<b>IMPACT YES/NO</b>	<b>INITIAL and DATE (N/A for not change)</b>
FSAR: Section 6.3, R12 Section 7.3, R11 Section 8.1.5.3, R12 Section 8.3, R12 Section 14.2.7, R11 Table 14.2-1, R11 Sheet 26 Sheet 27 Sheet 44 Sheet 45 Sheet 46 Sheet 47 Sheet 48 Sheet 49			
Reg. Guide 1.9, R4			
Reg. Guide 1.41, 3/16/73			
Reg. Guide 1.68, R3			
U-2 Tech. Spec., RH			
2-TSD-262-2, R1			
2-TSD-63-1, R3			
OPDP-8, R17			
NPG SPP-10.2, R10			
NPG SPP-18.4.6, R5			
0-TI-226, R1			
0-PI-OPS-1.1, R7			
U-1 Tech. Spec., Amendent 97			

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**Test Procedure Reference Review**

Date \_\_\_\_\_

<b>PROCEDURE/INSTRUCTION</b>	<b>REVISION/CHANGES</b>	<b>IMPACT YES/NO</b>	<b>INITIAL and DATE (N/A for not change)</b>
NUREG-0847, supplement 23, section 14.2.2(3)			
NETP-100, R3			
PTI-200-01, U-1			
PTI-262-01, R0, U-1			
SMP-9.0, R5			
WBN2-3B-4002, R2			
WBN2-62-4001, R3			
WBN2-63-4001, R3			
WBN2-68-4001, R4			
WBN2-70-4002, R4			
WBN2-72-4001, R3			
WBN2-74-4001, R5			
WBN2-82-4002, R2			
WBN2-99-4003, R1			
2-27-211-1826E-B, R0			
2-02-062-104-B, R0			
2-02-063-15-B, R0			
2-02-074-20-B, R0			
0-02-067-47-B, R1			
0-02-067-51-B, R1			
0-02-067-55-B, R1			

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**Test Procedure Reference Review**

Date \_\_\_\_\_

<b>PROCEDURE/INSTRUCTION</b>	<b>REVISION/CHANGES</b>	<b>IMPACT YES/NO</b>	<b>INITIAL and DATE (N/A for not change)</b>
0-02-067-59-B, R1			
2-02-003-128-B, R0			
2-02-070-33-B, R2			
0-02-070-51B-B, R2			
2-02-070-130B-B, R1			
2-02-68-341D-B, R1			
2-02-072-10-B, R0			
0-02-031-49/2-B, R1			
2-02-30-39-B, R0			

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**Appendix B  
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**Permanent Plant Instrumentation Log**

Date \_\_\_\_\_

INSTRUMENT OR INSTRUMENT LOOP	FILLED AND * VENTED		PLACED IN * SERVICE		USED FOR QUANTITATIVE ACC CRIT		POST TEST ** CAL DATE	POST TEST ** CALIBRATION ACCEPTABLE	
	INITIAL	DATE	INITIAL	DATE	YES	NO		INITIAL	DATE
2-LI-3-174									
2-LI-3-173									
2-LI-3-172									
2-LI-3-175									
2-LI-3-164									
2-LI-3-156									
2-LI-3-148									
2-LI-3-171									
2-LI-2-230A									
2-LI-2-233A									
2-LI-63-50									
2-LI-63-51									

\* 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)

\*\* May be identified as N/A if instrument was **NOT** used to verify/record quantitative acceptance criteria data.

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Permanent Plant Instrumentation Log

Date \_\_\_\_\_

INSTRUMENT OR INSTRUMENT LOOP	FILLED AND * VENTED		PLACED IN * SERVICE		USED FOR QUANTITATIVE ACC CRIT		POST TEST ** CAL DATE	POST TEST ** CALIBRATION ACCEPTABLE	
	INITIAL	DATE	INITIAL	DATE	YES	NO		INITIAL	DATE
2-LI-63-52									
2-LI-63-53									
0-EI-82-10A									
0-EI-82-40A									
0-EI-82-70A									
0-EI-82-100A									
2-FI-63-91B									
2-FI-63-92B									
2-EI-57-39									
2-EI-57-66									
2-EI-57-39									
2-EI-57-66									

\* 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)

\*\* May be identified as N/A if instrument was **NOT** used to verify/record quantitative acceptance criteria data.

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**Appendix C  
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**Equipment Alignment**

Date \_\_\_\_\_

**NOTES**

- 1) Sections of this appendix may be performed in any sequence with Test Director approval. Steps within each Section should be performed in order.
- 2) Any questions concerning alignment of plant components should be addressed with the Test Director or Unit 2 SRO.

**1.0 AFW 2B RECIRC ALIGNMENT**

- [1] **VERIFY** the following valves are in the correct position.

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
AUX FEEDWATER PUMP CST B SUP HDR ISOL	T15N/718	LOCKED OPEN	2-ISV-2-505		CV
CONDENSATE SUPPLY ISOL TO AUX FEEDWATER	A15Q/723	LOCKED OPEN	2-ISV-3-800		CV
AUX FEEDWATER PMP 2B-B SUCTION ISOL	A13S/713	LOCKED OPEN	2-ISV-3-804		CV
AUX FEEDWATER PMP 2B-B RECIRC ISOL	A13S/713	LOCKED OPEN	2-ISV-3-817		CV
AUX FEEDWATER PMP 2B-B 2-ISV-3-826 BYPASS	A13S/737	CLOSED	2-BYV-3-838		CV
AUX FEEDWATER PMP 2B-B 2-ISV-3-829 BYPASS	A13T/737	CLOSED	2-BYV-3-841		CV

- [2] **ENSURE** the following valves in the position required to allow flow to SGs 3 and 4 from 2B-B MDAFWP:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
MD AFW PUMP 2B-B SG 3 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-826		CV
MD AFW PUMP 2B-B SG 4 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-829		CV
MD AFW PUMP 2B-B SG 3 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-834		CV
MD AFW PUMP 2B-B SG 4 LEVEL CONTROL ISOL	A13T/737	LOCKED OPEN	2-ISV-3-837		CV

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**Appendix C  
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Equipment Alignment**

Date \_\_\_\_\_

**1.0 AFW 2B RECIRC ALIGNMENT (continued)**

- [3] **ENSURE** HS position. (The body of the test will position the HS just prior to start.)

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
AFW PMP B-B	2-M-4	STOP PULL TO LOCK	2-HS-3-128A		CV

- [4] **VERIFY** Step 1.0[3] alignment is signed complete, **THEN**  
**ENSURE** the following:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SHUTDOWN BOARD 2B-B</b>					
AFW PUMP 2B-B (2-PMP-3-128)	C/10	RACKED UP & OPERABLE	2-BKR-3-128		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
AFW PMP 2B LUBE OIL PMP (2-PMP-3-128D)	C/17D	ON	2-BKR-3-128D		CV

- [5] **VERIFY** CST B level >200,000 GALLONS, 2-LI-2-233D,  
[2-M-2] \_\_\_\_\_

- [6] **VERIFY** the following breakers are ON to allow the TD  
AFWP T & TV to open during the test:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>125V VITAL BATTERY BOARD I</b>					
NORM FDR FOR UNIT 2 AFWT PUMP	PANEL 3	ON	0-BKR-236-1/321		CV
<b>125V VITAL BATTERY BOARD II</b>					
ALT FDR FOR UNIT 2 AFWT PUMP	PANEL 3	ON	0-BKR-236-2/321		CV

- [7] **ENSURE** 2-HS-46-56A-S, 2-M-4], T-D AFWP T&T VLV, is  
indicating CLOSED. (GREEN light ON, RED light OFF) \_\_\_\_\_

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**1.0 AFW 2B RECIRC ALIGNMENT (continued)**

[8] **ENSURE** the following:

[8.1] Valve motor drive is LATCHED to the valve stem. \_\_\_\_\_

[8.2] 2-FCV-1-51, T-D AFWP T&T VLV, is CLOSED. \_\_\_\_\_

**2.0 CCP 2B RECIRC ALIGNMENT**

**NOTES**

- 1) CCP 2B-B will be started on recirc flow in the body of the Instruction, when required.
- 2) 2-FCV-62-90 & 91 are closed to prevent flowing water to the Reactor Vessel through the normal charging line.

[1] **ENSURE** HS position. (The body of the test will position the HS just prior to start.)

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
CCP B-B (ECCS)	2-M-5	STOP PULL TO LOCK	2-HS-62-104A		CV

[2] **ENSURE** the following CCP alignment using MCR HS and associated light indication:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
BIT OUTLET	2-M-6	CLOSED	2-HS-63-25		CV
BIT OUTLET	2-M-6	CLOSED	2-HS-63-26		CV
CHARGING LINE ISOL	2-M-6	CLOSED	2-HS-62-90A		CV
CHARGING LINE ISOL	2-M-6	CLOSED	2-HS-62-91A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-132A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-133A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-135A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-136A		CV



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**2.0 CCP 2B RECIRC ALIGNMENT (continued)**

- [3] **VERIFY** the following valves are in the correct position for recirc operation.

<b>NOTE</b>					
2-FCV-62-39 and 2-FCV-62-40 requires manual operation. Power has been removed.					

<b>NOMENCLATURE</b>	<b>LOC</b>	<b>POSITION</b>	<b>UNID</b>	<b>PERF INITIAL</b>	<b>VERIF INITIAL</b>
<b>U2 BIT ROOM</b>					
CCP 2A-A/2B-B MIN FLOW	A11U/715	LOCKED OPEN	2-FCV-62-98		CV
CCP 2A-A/2B-B MIN FLOW	A11U/715	LOCKED OPEN	2-FCV-62-99		CV
BORON INJ TNK IN ISOL	A11U/715	LOCKED OPEN	2-FCV-62-39		CV
BORON INJ TNK IN ISOL	A11U/715	LOCKED OPEN	2-FCV-62-40		CV
<b>CCP ROOM 2B</b>					
CCP 2B-B SUCTION ISOL	A12U/692	LOCKED OPEN	2-ISV-62-510		CV
CCP 2B-B MIN FLOW ISOL	A12U/692	LOCKED OPEN	2-ISV-62-531		CV

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**2.0 CCP 2B RECIRC ALIGNMENT (continued)**

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>CCP ROOM 2B</b>					
CCP 2A-A DISCH 2-FCV-62-93 BYPASS	A12U/702	CLOSED	2-ISV-62-526		CV
CCP 2B-B DISCHARGE ISOL	A12U/692	LOCKED OPEN	2-ISV-62-533		CV
<b>AB EL 713</b>					
CVCS SEAL WATER HX INLET ISOL	A11U/713	LOCKED OPEN	2-ISV-62-647		CV
CVCS SEAL WATER HX OUTLET ISOL	A11U/713	LOCKED OPEN	2-ISV-62-650		CV
CVCS SEAL WTR RETURN CHARGING PMP SUCTION	A11U/713	LOCKED OPEN	2-BYV-62-653		CV

- [4] **ENSURE** the room cooler handswitch, 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, is in AUTO.  
[EL 692, COL A11U, 2-JB-292-1192-B]

\_\_\_\_\_  
CV

- [5] **ENSURE** the following:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SHUTDOWN BOARD 2B-B</b>					
CENT CHARGING PUMP 2B-B (2-PMP-62-104)	C/18	RACKED UP & SPRING CHARGED	2-BKR-62-104		CV
<b>REACTOR MOV BOARD 2B1-B</b>					
CCP AUX OIL PMP 2B (2-PMP-62-244)	C/4D	ON	2-BKR-62-244		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	C/11E	ON	2-BKR-63-25		CV

**NOTE**

The level band set forth in Step 2.0[6] is only a suggested operating band for starting the Charging Pump. Guidance for pump operations are provided in 2-SOI-62.01.

- [6] **ENSURE** sufficient VCT level for CCP pump run (25% - 40%). \_\_\_\_\_

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**2.0 CCP 2B RECIRC ALIGNMENT (continued)**

**3.0 SAFETY INJECTION SYSTEM**

**3.1 SIP 2B ALIGNMENT**

[1] **ENSURE** the following SIP alignment:

NOMENCLATURE	LOC	UNID	POSITION	PERF INITIAL	VERIF INITIAL
SI PMP B (ECCS)	2-M-6	2-HS-63-15A	PULL-TO-LOCK		CV
SI PMPS RECIRC HDR TO RWST	2-M-6	2-HS-63-3A	OPEN		CV
SI PMP A RECIRC TO RWST	2-M-6	2-HS-63-4A	CLOSED		CV
SI PMP B RECIRC TO RWST	2-M-6	2-HS-63-175A	OPEN		CV
RWST TO SI PMPS SUCTION	2-M-6	2-HS-63-5A	OPEN		CV
SI PMP B SUCTION	2-M-6	2-HS-63-48A	OPEN		CV
SI PUMP B TI HL 2 & 4	2-M-6	2-HS-63-157	CLOSED		CV
SI PMP A TO CL 1-2-3-4	2-M-6	2-HS-63-152	CLOSED		CV
SI PMP B TO CL 1-2-3-4	2-M-6	2-HS-63-153	OPEN		CV
SI PMPS TO CL 1-2-3-4	2-M-6	2-HS-63-22	CLOSED		CV
<b>SI PUMP ROOM 2B</b>					
SI PUMP 2B-B DISCHARGE ISOLATION	A11U/692	2-ISV-63-527	LOCKED OPEN		CV

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**3.1 SIP 2B ALIGNMENT (continued)**

- [2] **ENSURE** the room cooler handswitch, 2-HS-30-179, SIS PUMP 2B-B ROOM COOLER, is in AUTO. [EL 692, COL A10U, 2-JB-292-1198-B]

\_\_\_\_\_  
CV

- [3] **WHEN** Step 3.1[1] is complete **THEN**  
**ENSURE** the following:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SD BD 2B-B</b>					
SAFETY INJECTION PUMP 2B-B (2-PMP-63-15)	C/15	Racked UP, Closing Spring CHARGED	2-BKR-63-15		CV

- [4] **ENSURE** RWST filled to  $\geq 370,000$  gals.

**3.2 OTHER SYSTEM 63 ALIGNMENTS**

- [1] **VERIFY** the following CLA MOVs are CLOSED by light indication on [2-M-6]:

NOMENCLATURE	POSITION	UNID	PERF	VERIF
CL ACCUM 1 OUTLET	CLOSED	2-HS-63-118A		CV
CL ACCUM 2 OUTLET	CLOSED	2-HS-63-98A		CV
CL ACCUM 3 OUTLET	CLOSED	2-HS-63-80A		CV
CL ACCUM 4 OUTLET	CLOSED	2-HS-63-67A		CV

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**3.2 OTHER SYSTEM 63 ALIGNMENTS (continued)**

- [2] **VERIFY** the following breaker positions to verify proper operation on SI signals:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>480V REACTOR MOV BOARD 2A1-A</b>					
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	C/3F2	OFF & TAGGED	2-BKR-63-118A		CV
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	C/17F2	OFF & TAGGED	2-BKR-63-80A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	C/11D	OFF & TAGGED	2-BKR-63-26		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	C/3F2	OFF	2-BKR-63-98A		CV
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	C/8D	ON	2-BKR-63-98B		CV
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	C/16F2	OFF	2-BKR-63-67A		CV
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	C/7D	ON	2-BKR-63-67B		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	C/11E	ON	2-BKR-63-25		CV

- [3] **ENSURE** the SI Accumulator outlet valves and BIT outlet valve breakers (listed above as OFF) are tagged with a Hold Order. \_\_\_\_\_
- [4] **ENSURE** RWST filled to  $\geq 370,000$  gals. \_\_\_\_\_

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**4.0 CONTAINMENT SPRAY PUMP 2B RECIRC ALIGNMENT:**

[1] **ENSURE** the following System 72 alignment:

NOMENCLATURE	LOC	HS POSITION	UNID	PERF INITIAL	VERIF INITIAL
CNTMT SPRAY PMP B	2-M-6	STOP PULL-TO LOCK	2-HS-72-10A		CV
RWST TO CS PMP B SUCTION	2-M-6	OPEN	2-HS-72-21A		CV
RWST TO CS PMP A SUCTION	2-M-6	CLOSED	2-HS-72-22A		CV
CNTMT SUMP TO CS PMP B SUCTION	2-M-6	CLOSED	2-HS-72-45A		CV
CNTMT SPRAY PMP B MINI FLOW	2-M-6	(PULL) P AUTO	2-HS-72-13A		CV
CNTMT SPRAY HDR B TO CNTMT	2-M-6	CLOSED	2-HS-72-2A		CV
RHR SPRAY HDR B TO CNTMT	2-M-6	CLOSED	2-HS-72-41A		CV

[2] **VERIFY** the following alignment:

NOMENCLATURE	LOC	VALVE POSITION	UNID	PERF INITIAL	VERIF INITIAL
CNTMT SPRAY HDR A TEST LINE ISOLATION	A11V/719 U2 BIT Rm	LOCKED CLOSED	2-ISV-72-503		CV
CNTMT SPRAY PMP 2B-B DISCH ISOLATION	A11U/718 2B Hx Rm	LOCKED OPEN	2-ISV-72-529		CV

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**4.0 CONTAINMENT SPRAY PUMP 2B RECIRC ALIGNMENT:  
(continued)**

[3] **OPEN** the following valves:

NOMENCLATURE	LOC	VALVE POSITION	UNID	PERF INITIAL	VERIF INITIAL
CNTMT SPRAY HDR B TEST LINE ISOLATION	A11V/719	UNLOCK & OPEN	2-ISV-72-504		CV
CNTMT SPRAY TEST LINE ISOLATION	A11U/715	OPEN	2-ISV-72-502		CV

[4] **ENSURE** the room cooler handswitch, 2-HS-30-178, CS  
PUMP 2B-B ROOM COOLER, is in AUTO. [EL 676, COL  
A10U, 2-JB-292-2501-B]

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\_\_\_\_\_  
CV

[5] **ENSURE** the previous steps of this Section 4.0 are complete,  
**THEN**

**PERFORM** the following alignment:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SHUTDOWN BOARD 2B-B</b>					
CONTAINMENT SPRAY PUMP 2B-B (2-PMP-72-10)	C/13	RACKED UP & OPERABLE	2-BKR-72-10		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
CSP 2B-B MINIFLOW (2-FCV-72-13)	C/9F	ON	2-BKR-72-13		CV
CS HDR B ISOL (2-FCV-72-2)	C/14A	OFF	2-BKR-72-2		CV
CNTMT SUMP TO CSP 2B-B SUCTION (2-FCV-72-45)	C/14E	OFF	2-BKR-72-45		CV
RHR SPRAY HDR B ISOL (2-FCV-72-41)	C/14D	OFF	2-BKR-72-41		CV
<b>480V C&amp;A BLDG VENT BOARD 2B1-B</b>					
RWST TO CSP 2B-B (2-FCV-72-21)	C/7E	ON	2-BKR-72-21		CV

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**4.0 CONTAINMENT SPRAY PUMP 2B RECIRC ALIGNMENT:  
(continued)**

- [6] IF a U2 Refueling Water Purification Pump(s) (RWPP) is in service to RWST, **THEN**  
**STOP RWPP(s):**

NOMENCLATURE	LOCATION	POSITION	UNID	PERF INITIAL
REFUELING WATER PURIFICATION PUMP A	A5W/692	STOP	0-HS-78-19	
REFUELING WATER PURIFICATION PUMP B	A5W/692	STOP	0-HS-78-20	

**5.0 RHR 2B RECIRC ALIGNMENT:**

- [1] **ENSURE** the following RHR alignment:

<b>NOTE</b>	
RHR spray valve 2-FCV-72-41 is verified closed with power off in previous Section for Containment Spray Recirc Alignment.	

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
RHR PMP B (ECCS)	2-M-6	STOP PULL-TO LOCK	2-HS-74-20A		CV
RHR PMP B MINI FLOW	2-M-6	P-AUTO	2-HS-74-24A		CV
RHR PMP B SUCTION	2-M-6	OPEN	2-HS-74-21A		CV
LOOP 4 HL TO RHR SUCTION	2-M-6	CLOSED	2-HS-74-1A		CV
LOOP 4 HL TO RHR SUCTION	2-M-6	CLOSED	2-HS-74-2A		CV
RHR TO CL 2&3	2-M-6	CLOSED	2-HS-63-93A		CV
RHR TO HL 1&3	2-M-6	CLOSED	2-HS-63-172A		CV
RHR TO CL 1&4	2-M-6	CLOSED	2-HS-63-94A		CV



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**5.0 RHR 2B RECIRC ALIGNMENT: (continued)**

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
RHR PMP A SUCTION	2-M-6	CLOSED	2-HS-74-3A		CV
RHR HX A OUTLET XTIE	2-M-6	OPEN	2-HS-74-33A		CV
RHR HX B OUTLET XTIE	2-M-6	OPEN	2-HS-74-35A		CV

[2] **ENSURE** the following:

RHR PUMP 2B-B DISCHARGE ISOLATION	A10U/676 Pmp Rm 2B	LOCKED OPEN	2-ISV-74-521		CV
RHR HEAT EXCHANGER 2B INLET ISOLATION	A9U/713 Hx Rm 2B	LOCKED OPEN	2-ISV-74-525		CV
RHR RWST RETURN	A7W/713 Hx Rm 2B	LOCKED CLOSED	2-HCV-74-34		CV
RHR HEAT EXCHANGER 2B MANUAL BYPASS	A9V/713 Hx Rm 2B	CLOSED	2-HCV-74-37		CV
RHR HX 2B OUTLET TO CVCS	A9U/713 Hx Rm 2B	CLOSED	2-SPV-74-531		CV
RHR HEAT EXCHANGER 2A MANUAL BYPASS	A9W/713 Hx Rm 2A	CLOSED	2-HCV-74-36		CV
RHR HX 2A OUTLET TO CVCS	A9W/713 Hx Rm 2A	CLOSED	2-SPV-74-530		CV

[3] **ENSURE** the room cooler handswitch, 2-HS-30-176, RHR PUMP 2B-B ROOM COOLER, is in AUTO. [EL 676, COL A11V, 2-JB-292-2505-B]

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CV

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**5.0 RHR 2B RECIRC ALIGNMENT: (continued)**

**CAUTIONS**

- 1) If the seal-in on 2-FCV-63-1 is in service, actuating the valve will result in full travel from the current position to the opposite position.
- 2) 2-FCV-63-1 will allow a large volume of water to pass when actuated in the open direction should there be a flowpath available.
- 3) Personnel stationed at the valve breaker to open the breaker and break the seal in would be advantageous to stop undesired valve travel and enable the valve to be returned to a closed position.

- [4] **ENSURE** 2-HS-63-1A, RWST TO RHR ECCS SUCTION,  
indicates OPEN.

\_\_\_\_\_  
CV

**NOTE**

If required, for 2-FCV-74-8 and -9, the breakers may be temporarily turned ON to check valve position and then returned to the OFF position.

- [5] **ENSURE** Steps 5.0[1] through 5.0[3] completed, **THEN**

**PERFORM** following RHR power alignment:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>480V REACTOR MOV BOARD 2A2-A</b>					
2-FCV-74-2 BYPASS RHR SUCTION (2-FCV-74-8)	C/5C	CLOSED POWER OFF	2-BKR-74-8		CV
<b>6.9KV SHUTDOWN BOARD 2B-B</b>					
RHR PUMP 2B-B (2-PMP-74-20)	C/14	RACKED UP & OPERABLE	2-BKR-74-20		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
RHR PMP 2B-B MINIFLOW (2-FCV-74-24)	C/15B	ON	2-BKR-74-24		CV
2-FCV-74-1 BYPASS RHR SUCTION (2-FCV-74-9)	C/5C	CLOSED POWER OFF	2-BKR-74-9		CV

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**5.0 RHR 2B RECIRC ALIGNMENT: (continued)**

<b>480V C&amp;A VENT BOARD 2B1-B</b>					
RHR PUMP 2B-B SUCTION (2-FCV-74-21)	C/7D	ON	2-BKR-74-21		CV

**6.0 FIRE OPERATIONS ALIGNMENTS**

<b>NOTE</b>	
The following steps are usually done by Fire Operations or with their assistance.	

- [1] **ENSURE** 120V Fire Protection Power Distribution Panel 0-DPL-13-1 is aligned with its normal supply breaker, 0-BKR-13-1A, CLOSED, powered from Train 1A. \_\_\_\_\_
- [2] **ENSURE** an NPG-SPP-18.4.6, FPIP has been secured to address the defeat of the 0-FCV-26-320, -3145, and -3146, the loss of all water based suppression components from 2-R-79 and loss of 2B Electric Fire Pump during Blackout. \_\_\_\_\_
- [3] **IF** RSW/DI Process water isolation to Makeup Water Treatment Building is **NOT** desired, **THEN**  
  
**PLACE** breaker to 0-FCV-26-320 in the OFF position.  
(Located in compartment HC of 0-MCC-281-1 in MWTP Control Room).  
\_\_\_\_\_  
\_\_\_\_\_  
CV
- [4] **ENSURE** the following hand switches are in the TEST position:
  - [4.1] 0-HS-26-3145A [MOB Chiller Room, north wall, EI 725 0-JB-294-6889]. \_\_\_\_\_
  - [4.2] 0-HS-26-3146A [Service Bldg, Mech Equip Rm, S4/SM, EI 741 0-JB-295-6890]. \_\_\_\_\_
- [5] **NOTIFY** the Test Director Section 6.0 of Appendix C is complete. \_\_\_\_\_

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**7.0 MISCELLANEOUS SYSTEM ALIGNMENTS:**

[1] **PERFORM** the following:

[1.1] **PLACE** Thermal Barrier Booster Pump 2B in service using 0-SOI-70.01. \_\_\_\_\_

[1.2] **ENSURE** 2-HS-70-130A, TBBP 2B, [0-M-27B] in A-P AUTO. \_\_\_\_\_

[1.3] **RECORD** the AS FOUND position for Thermal Barrier Booster Pump 2A-A handswitch.

NOMENCLATURE	LOCATION	UNID	AS FOUND POSITION	INITIAL
THRM BAR BSTR PMP 2A (TBBP)	0-M-27B	2-HS-70-131A		

[1.4] **PLACE** 2-HS-70-131A THRM BAR BSTR PMP 2A (TBBP) in Stop Pull-to-Lock. \_\_\_\_\_

[2] **ENSURE** MG set breakers are open (or disconnected) on 480V Unit Boards 2A and 2B:

NOMENCLATURE	LOC	POSITION	UNID	PERF INITIAL	VERIF INITIAL
<b>480V UNIT BOARD 2A</b>					
CRD MG SET 2A (2-GEN-85-A)	C/4D	OPEN	2-BKR-85-A		CV
<b>480V UNIT BOARD 2B</b>					
CRD MG SET 2B (2-GEN-85-B)	C/3B	OPEN	2-BKR-85-B		CV

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**7.0 MISCELLANEOUS SYSTEM ALIGNMENTS: (continued)**

**NOTE**

The common line blow down valves in the Turbine Building have been closed. With the individual SG blowdown valves open, there may be some movement of water. Closing the valves in Step 7.0[3] should prevent any level movement from one SG to another.

[3] **IF** the Test Director desires, **THEN**

**CLOSE** the following SG-BD throttle valves:

- SG 1, 2-THV-1-828. \_\_\_\_\_
- SG 2, 2-THV-1-829. \_\_\_\_\_
- SG 3, 2-THV-1-830. \_\_\_\_\_
- SG 4, 2-THV-1-831. \_\_\_\_\_

[4] **ENSURE** the pressure in the RCDT is close to 0 psig and the tank has been pumped down to minimum on 0-L-2. \_\_\_\_\_

[5] **ENSURE** Reactor Coolant Drain Tank Pump 2B is available for service. (0-L-2) \_\_\_\_\_

[6] **REMOVE** Lower Containment Rad Monitor 2-RM-90-106 from service per 0-SOI-90.02. \_\_\_\_\_

[7] **REMOVE** Upper Containment Rad Monitor 2-RM-90-112 from service per 0-SOI-90.02. \_\_\_\_\_

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**7.0 MISCELLANEOUS SYSTEM ALIGNMENTS: (continued)**

**NOTE**

Train B essential air isolation valve 2-FCV-32-103 to containment will close during ØB testing. This step will keep control air in service to containment during testing.

- [8] **UNLOCK AND OPEN** the following train B control air bypass valve in the annulus:

DESCRIPTION	UNID	POSITION	PERF	VERIF
ESSENT CONTROL AIR 2-FCV-32-103 BYPASS [OC/724 AZ 280]	2-BYV-32-318	OPEN		CV

- [9] **RECORD** as-found status of computer trend recorders, 2-UDR-278-760 thru 765 for use in restoration of computer trend recorders by performing the following with UO assistance:

- [9.1] **SELECT** "TREND MENU" on any control room computer monitor. \_\_\_\_\_
- [9.2] **SELECT** "ASSIGN POINTS TO STRIP CHART RECORDER". This displays the STRIP CHART ASSIGNMENT TEMPLATE. \_\_\_\_\_
- [9.3] **PRINT** Screen. \_\_\_\_\_
- [9.4] **PAGE** down to page 2 and **PRINT SCREEN** again. \_\_\_\_\_
- [9.5] **SAVE** these two pages with the test to restore after testing is complete. \_\_\_\_\_

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**7.0 MISCELLANEOUS SYSTEM ALIGNMENTS: (continued)**

**NOTE**

The following is to prevent a loss of SFP cooling during the test. The C-S SFP pump and 2B-B CCS pump will lose power. SFP cooling is required at all times.

- [10] **ENSURE** the following alignment using 0-SOI-78.01, Spent Fuel Pool Cooling and Cleaning System:
  - [10.1] **PLACE** SFP Pump C-S in service to Spent Fuel Pit Heat Exchanger B, with power from Train 2B using 0-SOI-78.01, Section 5.2.3. \_\_\_\_\_
  - [10.2] **PLACE** SFP Pump A-A in service to Heat Exchanger A as the Second Loop using 0-SOI-78.01, Section 5.5.1. \_\_\_\_\_
- [11] **ENSURE** U1 Train A CCS Pump in service to support SFP Hx A cooling. \_\_\_\_\_

**8.0 CONTAINMENT PURGE AND INCORE INSTRUMENT ROOM A/C**

- [1] **NOTIFY** Chemistry and Radiation Protection that one train of Containment Purge will be placed in service for Train 2B testing **AND**

**REQUEST** a purge package. \_\_\_\_\_

\_\_\_\_\_  
Chemistry Contact

\_\_\_\_\_  
Date

\_\_\_\_\_  
RADPROT Contact

\_\_\_\_\_  
Date

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**8.0 CONTAINMENT PURGE AND INCORE INSTRUMENT ROOM A/C**  
**(continued)**

[2] **WHEN** Chemistry has Purge package ready, **THEN:**

[2.1] **PLACE** Train 2B Containment Purge in service to both upper and lower containment including Annulus using 2-SOI-30.02.

[3] Place 2B Incore Instrument Room A/C in service using 2-SOI-30.04.

**9.0 BATTERY CHARGER ALIGNMENT**

[1] **VERIFY** the following aligned to NORMAL supply:

UNID	DESCRIPTION	INITIALS
0-XSW-236-1	480V AC VITAL TRANSFER SWITCH III	
0-XSW-236-2	480V AC VITAL TRANSFER SWITCH IV	
0-BD-236-4	125V VITAL BATTERY BOARD IV	
INST PWR B RACK TRANS SW	120V AC INST POWER RACK B (2-M-7)	

[2] **ENSURE** annunciation system in service.

\_\_\_\_\_  
CV



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**10.0 ABGTS (continued)**

**10.0 ABGTS**

**NOTES**

- 1) Train B ABGTS will run, the U2 shield building exhaust flow FCV will be in MANUAL and the flow set for a combination of ABGTS and EGTS to allow exit of Action G of ODCM 1.1.2 when power is restored.
- 2) Both the Unit 1 and Unit 2 shield building vent monitors should remain operable for this test.

[1] **ENSURE** Train A ABGTS is operable. \_\_\_\_\_

**NOTES**

- 1) A flow rate of 13,000 scfm will likely result from running both ABGTS and EGTS when an ESF signal is initiated in the test. This flow rate represents the 9,000 scfm of the B ABGTS fan plus the 4,000 scfm of the B EGTS fan.
- 2) The FCV does **NOT** have to be adjusted if flow is expected to remain below 7,000 scfm.
- 3) If this controller is set, there should be no planned releases out of the Unit 2 shield building vent until initiated in this test.

[2] **IF BOTH** Train B EGTS and ABGTS will be started and running during the test, **THEN**  
**PERFORM** the following:

[2.1] **NOTIFY** Chemistry group to install a sample cart at 2-RM-90-400. \_\_\_\_\_

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**10.0 ABGTS (continued)**

- [2.2] **NOTIFY** MIG to place 2-FCV-90-452 flow control for the Unit 2 Shield Building Vent Monitor on 2-L-708 in the MANUAL VALVE POSITION function **AND**
- SET** the display to the SAMPLE FLOW RATE (use the manual valve toggle switch to obtain 10.45 on the display).

**NOTE**

Operations keeps a copy of the Appendix C's of TI-215 for hydrocarbon use permits.

- [3] **ENSURE** that no hydrocarbon use permits are outstanding for the Auxiliary Building, Annulus or any areas that are open to EGTS and ABGTS (if the B ABGTS fan is to be run).
- [4] **ENSURE** annulus vacuum is broken (vacuum is less than 0.812 inches of water).
- [5] **ENSURE** 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, in A AUTO.
- [6] **ENSURE** 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, in A AUTO.

**11.0 PZR HEATER SETUP**

- [1] **ENSURE** the following:
- AS FOUND position of the PZR heaters Groups B and C are recorded in Appendix K
  - Required PZR breaker modifications installed per Appendix E completed prior to performing the following step.

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**11.0 PZR HEATER SETUP (continued)**

**[2] ENSURE** Step 11.0[1] is COMPLETE, **THEN**  
**PERFORM** the following:

- |       |  |  |
|-------|--|--|
| [2.1] | <b>ENSURE</b> 2-PIC-68-340A, [2-M-4] PZR PRESS<br>MASTER CONTROL output set to approximately<br>25 - 30% (no output to call for heater breakers to close). | <hr style="border: 0; border-top: 1px solid black;"/>  |
| [2.2] | <b>ENSURE</b> 2-BKR-68-341D, PZR BACKUP HTR GRP<br>2B-B XFMR (2-OXF-68-341D) is in the RACKED UP<br>POSITION. [6.9kV SD Bd 2B-B C/20]                      | <hr style="border: 0; border-top: 1px solid black;"/><br><hr style="border: 0; border-top: 1px solid black;"/> |
|       |  | CV   |
| [2.3] | <b>ENSURE</b> 2-XS-68-341D-B, 125-V DC CONTROL<br>BUS TRANSFER SWITCH PZR HTR BACKUP HTR<br>B-B, is in the NOR POSITION. [6.9kV SD Bd 2B-B<br>C/20]        | <hr style="border: 0; border-top: 1px solid black;"/><br><hr style="border: 0; border-top: 1px solid black;"/> |
|       |  | CV   |
| [2.4] | <b>PLACE</b> 2-XS-68-341H, 125-V DC CONTROL<br>BUS TRANSFER SWITCH PZR HTR BACKUP<br>HTR 2C, is in the NOR POSITION. [6.9kV SD Bd 2B-B<br>C/21]            | <hr style="border: 0; border-top: 1px solid black;"/><br><hr style="border: 0; border-top: 1px solid black;"/> |
|       |  | CV   |
| [2.5] | <b>PLACE</b> 2-BKR-68-341H, PZR BACKUP HTR GRP 2C<br>XFMR, (2-OXF-68-341H) is in the RACKED UP<br>POSITION. [6.9kV SD Bd 2B-B C/21]                        | <hr style="border: 0; border-top: 1px solid black;"/><br><hr style="border: 0; border-top: 1px solid black;"/> |
|       |  | CV   |
| [2.6] | <b>CLOSE</b> 2-BKR-68-341H, PZR BACKUP HEATER C<br>XFMR, [6.9kV SD Bd 2B-B/C21]  | <hr style="border: 0; border-top: 1px solid black;"/><br><hr style="border: 0; border-top: 1px solid black;"/> |
|       |  | CV   |

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**12.0 EBR CHILLER ALIGNMENT (continued)**

**NOTE**

In the following step, the pressurizer heater breakers will close. No power will be transmitted to the pressurizer heater elements because all the individual heater element breakers are opened in preliminary actions, Step 4.4[16] and 4.4[17]

- [2.7]     **LOWER** 2-PIC-68-340A, PZR PRESS MASTER  
CONTROL to 25% to allow BACKUP HEATERS B-B (2-  
HS-68-341D) to ENERGIZE. \_\_\_\_\_

**NOTE**

The following alignments will INOP the A train chiller (prevents A train chiller from auto starting on loss of B train chiller), so that the B train chiller will start back after Blackouts and provide a load on the diesel.

**12.0 EBR CHILLER ALIGNMENT**

- [1]     **ENSURE** EBR Chiller B-B is in service and 0-HS-31-31A EBR  
CHLR & AHU SYS B-B in PULL STANDBY. [1-M-9] \_\_\_\_\_
- [2]     **NOTIFY** US/designee to enter LCO 3.7.11 tracking for placing  
0-HS-31-30A EBR CHLR & AHU SYS A-A in STOP  
PULL-TO-LOCK in the next step. \_\_\_\_\_
- [3]     **ENSURE** the previous step is completed, **THEN**  
**PLACE** 0-HS-31-30A EBR CHLR & AHU SYS A-A in STOP  
PULL-TO-LOCK. [1-M-9] \_\_\_\_\_

**13.0 SUMPS**

- [1]     **ENSURE** Reactor Building Floor & Equipment Drain Sump is  
pumped down [2-M-15]. \_\_\_\_\_

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**NOTE**

The next step is to prevent this sump pump from running during test when its flow path is isolated by containment isolations. It would stop on a Train A SI signal but only a Train B signal will be initiated. The pump can be used prior to SI actuations.

- [2] **ENSURE** 2-HS-77-125A1, RX BLDG F & EQ SUMP PMP 2A,  
in STOP PULL-TO-LOCK. \_\_\_\_\_

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**14.0 STEAM GENERATOR MISCELLANEOUS ALIGNMENT:  
(continued)**

**14.0 STEAM GENERATOR MISCELLANEOUS ALIGNMENT:**

<b>VALVE NUMBER</b>	<b>NOMENCLATURE</b>	<b>LOCATION EL/COL</b>	<b>POSITION</b>	<b>PERF/DATE</b>	<b>VERIFIER/DATE</b>
2-ISV-15-876	SG BLOWDOWN HX 2A INLET	T10F/708	CLOSED		
2-BYV-15-916	SG BLOWDOWN 2-ISV-15-876 BYPASS	T10F/708	CLOSED		
2-ISV-15-920	SG BLOWDOWN FLASH TANK SUP ISOL	T12F/708	CLOSED		
2-FCV-3-250	STEAM GENERATOR 1 FW REG VALVE ISOLATION	T14P/729	CLOSED		
2-FCV-3-251	STEAM GENERATOR 2 FW REG VALVE ISOLATION	T14P/729	CLOSED		
2-FCV-3-252	STEAM GENERATOR 3 FW REG VALVE ISOLATION	T14P/729	CLOSED		
2-FCV-3-253	STEAM GENERATOR 4 FW REG VALVE ISOLATION	T14P/729	CLOSED		
2-IBV-3-532	STEAM GENERATOR 3 FW BYPASS REG ISOLATION	T14M/729	CLOSED		
2-IBV-3-533	STEAM GENERATOR 2 FW BYPASS REG ISOLATION	T15P/729	CLOSED		

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**14.0 STEAM GENERATOR MISCELLANEOUS ALIGNMENT:  
(continued)**

<b>VALVE NUMBER</b>	<b>NOMENCLATURE</b>	<b>LOCATION EL/COL</b>	<b>POSITION</b>	<b>PERF/DATE</b>	<b>VERIFIER/DATE</b>
2-IBV-3-534	STEAM GENERATOR 1 FW BYPASS REG ISOLATION	T15P/729	CLOSED		
2-IBV-3-535	STEAM GENERATOR 4 FW BYPASS REG ISOLATION	T15Q/729	CLOSED		
2-FCV-3-191	MFW DEAERATION LINE LOOP 1 ISOL VLV	YARD	CLOSED		
2-FCV-3-192	MFW DEAERATION LINE LOOP 2 ISOL VLV	YARD	CLOSED		
2-FCV-3-193	MFW DEAERATION LINE LOOP 3 ISOL VLV	YARD	CLOSED		
2-FCV-3-194	MFW DEAERATION LINE LOOP 4 ISOL VLV	YARD	CLOSED		

- [1] **ENSURE** handswitch 2-HS-3-945, HANDSWITCH FOR CONTROL BLDG ISOLATION, 2-JB-292-8205-A, 125V Vital Battery Board Room III is in the ON position. \_\_\_\_\_

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[2] **ENSURE** Aux Building ventilation in service as follows using 0-SOI-30.05:

- U2 General Supply Fan 2B. \_\_\_\_\_
- U2 General Exhaust Fan 2B. \_\_\_\_\_
- U1 General Supply Fan 1B. \_\_\_\_\_
- U1 General Exhaust Fan 1B. \_\_\_\_\_
- Fuel Handling Fan B. \_\_\_\_\_

[3] **ENSURE** Aux Building ventilation fans in standby alignment using 0-SOI-30.05:

- U2 General Supply Fan 2A. \_\_\_\_\_
- U2 General Exhaust Fan 2A. \_\_\_\_\_
- U1 General Supply Fan 1A. \_\_\_\_\_
- U1 General Exhaust Fan 1A. \_\_\_\_\_
- Fuel Handling Fan A. \_\_\_\_\_



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**15.0 TRAIN A ESF COMPONENTS**

**NOTE**

The following Train 2A components are placed in a non-functioning condition to ensure Train 2B components only respond to Train 2B testing.

- [1] **RACK DOWN** the following Train A Equipment Breakers on  
6.9kV Shutdown Board 2A-A:

[1.1] 2-BKR-68-A/21, PRESSURIZER HEATER BACKUP  
GROUP 2D

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.2] 2-BKR-74-10-A, RHR PUMP 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.3] 2-BKR-63-10-A, SAFETY INJECTION PUMP 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.4] 2-BKR-62-108-A, CENTRIFUGAL CHARGING PUMP  
2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.5] 2-BKR-3-118-A, AUX FEEDWATER PUMP 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.6] 2-BKR-72-27-A, CONTAINMENT SPRAY PUMP 2A

\_\_\_\_\_  
\_\_\_\_\_  
CV

[1.7] 2-BKR-68-A/20, PRESSURIZER HEATER BACKUP  
GROUP 2A-A

\_\_\_\_\_  
\_\_\_\_\_  
CV

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**Removal and Restoration of Train 2A SSPS**

Date \_\_\_\_\_

**CAUTION**

Carefully read and perform each step below to ensure the correct train and cabinet is located since both trains are involved in this process.

**NOTES**

- 1) SSPS Train A is removed in the following step so that when an ESF actuation is initiated in this test, the protected train A equipment will **NOT** be affected.
- 2) All references to TS LCOs are provided as information only.
- 3) Should Operations implement compliance with Unit 2 License requirements, the LCOs provided should be referenced and applied as required.

**1.0 REMOVAL OF SSPS TRAIN 2A**

[1] **WHEN** notified by Test Director per Section 4.4 **THEN**

**REMOVE** SSPS Train 2A from service by the following:

- [1.1] **VERIFY** a GENERAL WARNING does **NOT** exist in the opposite train by observing the A108 card edge LEDs [2-R-50] (Train B) and verifying the bottom five LEDs are **NOT** lit. \_\_\_\_\_
- [1.2] **VERIFY** SSPS Train B [2-R-50] GENERAL WARNING lamp is **NOT** LIT. \_\_\_\_\_
- [1.3] **VERIFY** a GENERAL WARNING does **NOT** exist on Train 2A by observing the A108 card edge LEDs [2-R-47] (Train 2A) and verifying the bottom five LEDs are **NOT** lit. \_\_\_\_\_
- [1.4] **VERIFY** SSPS Train 2A [2-R-47] GENERAL WARNING green lamp is LIT. \_\_\_\_\_
- [1.5] **VERIFY** at [2-R-47] OPPOSITE TRAIN (Amber) GENERAL WARNING TEST light is LIT \_\_\_\_\_
- [1.6] **ENSURE** Train B MULTIPLEXER TEST Switch in NORMAL [2-R-50]. \_\_\_\_\_

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Removal and Restoration of Train 2A SSPS

Date \_\_\_\_\_

**1.0 REMOVAL OF SSPS TRAIN 2A (continued)**

**NOTE**

The following Step may be NA if SR Neutron Flux Monitors are not required operable.

- [2] **IF** any part of this test will be performed while in Mode 6,  
**THEN**  
**VERIFY** a jumper is installed at TB 607 -9 (PSCAP) and 10  
(PSCA4) in 2-R-48 to maintain SR Neutron Flux Monitors  
operable (LCO 3.9.3. Hi Flux at Shutdown alarm).

\_\_\_\_\_  
CV

**NOTE**

LCO entries are listed in Appendix S of this instruction which should have been given to the SM/Unit SRO by the Test Director.

- [3] **COORDINATE** train removal from service and entry into the  
applicable LCOs with the UO and SM/Unit SRO. **AND**  
**RECORD** date and time:

Date \_\_\_\_\_ Time \_\_\_\_\_

**NOTE**

An SSPS GENERAL WARNING alarm will be received during the performance of the following step.

- [4] **PLACE** Train 2A MULTIPLEXER TEST switch to INHIBIT  
[2-R-47].

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**Removal and Restoration of Train 2A SSPS**

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- [5] **PLACE** INPUT ERROR INHIBIT switch in INHIBIT [2-R-47]  
**AND**

**VERIFY** the following:

[5.1] GENERAL WARNING RED lamp[2-R-47] LIT \_\_\_\_\_

[5.2] 2-XA-55-6A-114A, SSPS-A GEN WARNING LIT. \_\_\_\_\_

- [6] **PLACE** MODE SELECTOR switch in TEST [2-R-48], **AND**

**VERIFY** green OPERATE lamp [2-R-48] **NOT** LIT. \_\_\_\_\_

**NOTE**

This next step enables an SI from Train 2B of SSPS. Note the change in cabinets.

- [7] **IF** jumper is installed from A-216 UNIVERSAL TP1 to logic ground [2-R-50] Train B SSPS to block auto SI actuation,  
**THEN**

**REMOVE** jumper. \_\_\_\_\_

CV

- [8] **NOTIFY** TD (test director) that removal of Train 2A SSPS is complete and auto SI block for Train 2B has been removed. \_\_\_\_\_

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**Removal and Restoration of Train 2A SSPS**

Date \_\_\_\_\_

**2.0 RESTORATION OF TRAIN 2A SSPS (continued)**

**2.0 RESTORATION OF TRAIN 2A SSPS**

**CAUTION**

Carefully read and perform each step below to ensure the correct train and cabinet is located since both trains are involved in this process.

- [1] **ENSURE** all accident signals on Master Isolation Signals Status Panel, 2-M-6, lights are OFF. \_\_\_\_\_
- [2] **PLACE** MODE SELECTOR Switch [2-R-48] in OPERATE,  
**AND**  
**VERIFY** OPERATE Lamp [2-R-48] is LIT. \_\_\_\_\_  
\_\_\_\_\_
- [3] **REQUEST** UO to momentarily turn the following handswitches [2-M-4] to BLOCK:
  - [3.1] 2-HS-63-135A, LO STEAM PRESS SI BLOCK. \_\_\_\_\_
  - [3.2] 2-HS-63-136A, LO PZR PRESS SI BLOCK P-11. \_\_\_\_\_
- [4] **REQUEST** UO to momentarily turn the following handswitches [2-M-4] to BLOCK:
  - [4.1] 2-N33A, SR TRIP TR A RESET-BLOCK P-6. \_\_\_\_\_
  - [4.2] 2-N38A, IR TRIP BLOCK P-10. \_\_\_\_\_
  - [4.3] 2-N47A, PR LO POWER TRIP BLOCK P-10. \_\_\_\_\_

CV

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**Removal and Restoration of Train 2A SSPS**

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**2.0 RESTORATION OF TRAIN 2A SSPS (continued)**

- [5] **IF** Auto SI Block jumper was removed in this Appendix D, Step 1.0[7] **THEN**

**INSTALL** jumper from A-216 UNIVERSAL TP1 to logic ground [2-R-50] to block auto SI actuation.

\_\_\_\_\_  
CV

- [6] **NOTIFY** UO to expect annunciator windows 2-XA-55-4A-64C, 64D and 65C to alarm when the INPUT ERROR INHIBIT Switch is placed in NORMAL.

- [7] **PLACE AND HOLD** 2-HS-3-99A1, MFW ISOL ACT RESET TR-A, and 2-HS-3-99B1, MFW ISOL ACT RESET TR-B [2-M-3], in RESET UNTIL the next step is complete.

- [8] **PLACE** INPUT ERROR INHIBIT Switch [2-R-47] in NORMAL.

\_\_\_\_\_  
CV

- [9] **RELEASE** 2-HS-3-99A1, MFW ISOL ACT RESET TR-A, and 2-HS-3-99B1, MFW ISOL ACT RESET TR-B [2-M-3].

- [10] **NOTIFY** UO of the following:

[10.1] Status lights and annunciators may flash when Multiplexer test switch is placed through "NORMAL" to "A + B" position.

[10.2] 2-XA-55-4D-77G, SI PZR PRESS LO and 2-XA-55-4D-79G, SI STM PRESS LO will alarm if plant conditions warrant but an actuation will **NOT** occur.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 226 of 569</b>
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**Appendix D  
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**Removal and Restoration of Train 2A SSPS**

Date \_\_\_\_\_

- [11] **PLACE** Train 2A MULTIPLEXER TEST Switch [2-R-47] in  
NORMAL.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [12] **NOTIFY** UO that placing the multiplexer test switch to A + B in  
the next step may momentarily generate a Train A SSPS  
General Warning as the switch is rotated through the INHIBIT  
position.

- [13] **PLACE** Train B MULTIPLEXER TEST Switch [2-R-50] in  
A + B.

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [14] **ENSURE** general warning lamp on 2-R-50 Train 2B SSPS  
**NOT LIT.**

- [15] **NOTIFY** US/SRO of return of SSPS train 2A for possible  
LCO exits.

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<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 227 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED					LOCATION (TERMINALS)	MODIFICATION RESTORATION (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIP -TION		DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
SIS PUMP 2B-B ROOM COOLER TEMP 2-TS-30-179-B SIP 2B-B ROOM					LIFT & TAPE BLACK WIRE	2-TS-30-179	LAND BLACK WIRE				
CENT CHARGING PUMP 2B-B RM COOLER TEMP 2-TS-30-182-B CCP 2B-B ROOM					LIFT & TAPE BLACK WIRE	2-TS-30-182-B	LAND BLACK WIRE				
MDAFWP B-B RELAY TTBB  2-R-77					LIFT & TAPE Black conductor	TB 730 PT 4 Cable TTBB2	LAND Black Conductor				
THERMAL BARRIER BOOSTER PUMP 2B-B FDS-70-81B AUX RELAY 2-R-78					PULL FUSES	2-FU-275-R78-K15 2-FU-275-R78-K16	INSTALL FUSES				



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 228 of 569</b>
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**Appendix E  
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED					LOCATION (TERMINALS)	MODIFICATION RESTORATION (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIP -TION		DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
ELEC BD RM CHLR B-B 692/C13P					JUMPER	TERMINAL BD PT 17 TO PT 30	REMOVE JUMPER				

**(NOTE 2)** Equipment modifications may be temporarily restored following completion of individual test subsection(s) to support plant operations. The Modification Restoration columns of this Table shall **NOT** be completed prior to completion of all associated procedure subsections.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 229 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED				LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)					
	PERFORMED BY		VERIFIED BY			DESCRIPTION	PERFORMED BY		VERIFIED BY		
	INITIAL	DATE	INITIAL	DATE			INITIAL	DATE	INITIAL	DATE	
BLOWDOWN VALVES AFW INTERLOCKS RELAY AFA 2-R-75					JUMPER	TB 541 PT 3 (AFAX) TB 541 PT 4 (AFB1)I	REMOVE JUMPER				
RELAY AFB  2-R-75					JUMPER	TB 541 PT 5 (AFBX) TB 541 PT 6 (AFB1)I	REMOVE JUMPER				
BLOWDOWN VALVES  RELAY BVA 2-R-73					JUMPER	TB 305 PT 3 (BVAX) TB 305 PT 4 (BVA1)I	REMOVE JUMPER				
RELAY BVB 2-R-78					JUMPER	TB 812 PT 9 (BVBX) TB 812 PT 10 (BVB1)I	REMOVE JUMPER				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 230 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED					LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIPTION		DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
PENETRATION ROOM EL 713 COOLER 2B-B 2-HS-30-197 713/A14U					LIFT & TAPE 2C3 (BL)	TB TA PT 6 (2C3)	LAND 2C3 (BL)				
AB EL 692 PIPE CASE COOLER 2B-B FLOW 2-HS-30-202B 692/A14U					LIFT & TAPE 3B3 (R)	TB TA PT 6 (3B3)	LAND 3B3 (R)				
SFP/THERM BARR BSTR PMP CLRS FAN B-B 0-HS-30-193 737/A9W					LIFT & TAPE 5A3 (R)	TB TA PT 6 (5A3)	LAND 5A3 (R)				
PENETRATION ROOM EL 692 COOLER 2B-B 2-HS-30-187 692/A15V					LIFT & TAPE 8B3 (R)	TB TA PT 6 (8B3)	LAND 8B3 (R)				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 231 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED				LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)					
	PERFORMED BY		VERIFIED BY			DESCRIPTION	DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
RHR PUMP 2B-B ROOM COOLER 2B-B 2-HS-30-176 RHR PMP ROOM					LIFT & TAPE 9A3 (W)	TB TA PT 6 (9A3)	LAND 9A3 (W)				
FAN B-B AFW AND BA TRANS SP 2-HS-30-185					LIFT & TAPE 5E3 (R)	TB TA PT 6 (5E3)	LAND 5E3 (R)				
PEN RM CLRS EL 737 FAN B-B 2-HS-30-195 737/A12V					LIFT & TAPE 9E3 (BL)	TB TA PT 6 (9E3)	LAND 9E3 (BL)				
2-FCV-3-185 FW INTERLOCKS 2-R-77					JUMPER	TB 742 PT 3 (2B4) TB 742 PT 4 (2B5)	REMOVE JUMPER				
2-FCV-3-187 FW INTERLOCKS 2-R-77					JUMPER	TB 741 PT 3 (4B4) TB 741 PT 4 (4B5)	REMOVE JUMPER				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 232 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED				LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)					
	PERFORMED BY		VERIFIED BY			DESCRIPTION	DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
0-FCV-77-241 RELAY FWB 1-R-78					JUMPER	TB 839 PT 1 (FWBN) TB 839 PT 2 (FWB1)	REMOVE JUMPER				
RX BLDG F & EQ SUMP PUMP 2B LEVEL INTERLOCKS 480V RX VENT BD 2B-B COMPT 2A					JUMPER	TB PT 18 (2AB3) TB PT 20 (2AB7)	REMOVE JUMPER				
2-FSV-46-9B JB 1995 729/T16H					INSTALL VOM FSV-9B M&TE ID # _____	TB TA PT 8 (TVAB2) TB TA PT 11 (TVABN)	REMOVE VOM FSV-9B				
FWI AUX RELAY HWPB 2-R-75					INSTALL VOM M&TE ID # _____	TB T514 PT 11 (HWPBY) TB T514 PT 12 (HWPB2)	REMOVE VOM				
2-FSV-46-36B JB 1995 729/T16H					INSTALL VOM FSV-36B M&TE ID # _____	TB TA PT 1 (TVBB2) TB TA PT 4 (TVBBN)	REMOVE VOM FSV-36B				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 233 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED					LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIPTION		DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
TURBINE TRIPS DISABLE 2-R-70					PULL FUSES	2-FU-275-R7 0/R1 2-FU-275-R7 0/R2 2-FU-275-R7 0/R3 2-FU-275-R7 0/R4	INSTALL FUSES				
2-FSV-47-26B JB 1322 755/T12J					INSTALL VOM FSV-26B M&TE ID # _____	TB 1 PT 4 (TTRNN) TB 1 PT 5 (TTRBB3)	REMOVE VOM FSV-26B				
2-FSV-47-27 JB 1322 755/T12J					INSTALL VOM FSV-27 M&TE ID # _____	TB 1 PT 2 (TTRBB2) TB 1 PT 3 (TTRNN)	REMOVE VOM FSV-27				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 234 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATION INSTALLED					LOCATION TERMINALS	MODIFICATION REMOVED (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIPTION		DESCRIPTION	PERFORMED BY		VERIFIED BY	
	INITIAL	DATE	INITIAL	DATE				INITIAL	DATE	INITIAL	DATE
CS PUMP 2B-B RM CLR 2-HS-30-178 CS PMP 2B-B RM					LIFT & TAPE 3C3 (W)	TB TA PT 4 (3C3)	LAND 3C3 (W)				
2-FSV-46-36B JB 1995 729/T16H					INSTALL VOM FSV-36B M&TE ID # _____	TB TA PT 1 (TVBB2) TB TA PT 4 (TVBBN)	REMOVE VOM FSV-36B				
2-FCO-30-295-B RELAY CPD4 2-R-78					JUMPER	TB 824 PT 10 (1216VL) TB 824 PT 11 (CPD6B)	REMOVE JUMPER				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 235 of 569</b>
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**Temporary Wire Lift and Jumper Equipment Modifications**

Date \_\_\_\_\_

COMPONENT	MODIFICATIONS INSTALLED					LOCATION TERMINALS	MODIFICATION RESTORATION (NOTE 2)				
	PERFORMED BY		VERIFIED BY		DESCRIPTION		PERFORMED BY		VERIFIED BY		
	INITIAL	DATE	INITIAL	DATE			INITIAL	DATE	INITIAL	DATE	
Pressurizer Level Interlocks 2-BKR-68-341D 2-BKR-68-341H (LB459CX/LB460DX) 2-R-58					LIFT AND TAPE TB316, Pt 7 TB316, Pt 9	TB316, PT 7, 9 2-R-58	LAND TB316, Pt 7 TB316, Pt 9				

**NOTE:** The above configuration changes allow the Pzr Htr breakers to be racked up and closed for testing by ramping down the RCS master pressure controller to minimum output, AND allow letdown isolation valves to open with less than minimum level in the pressurizer.



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**Appendix F  
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**Breaker Test Configuration Lineup**

	COMPONENT DESCRIPTION	PRE-TEST LINEUP						RESTORATION ALIGNMENT				
		AS FOUND CONFIG	REQUIRED CONFIG CHANGE	PERFORMED BY		VERIFIED BY		RETURNED TO AS FOUND CONFIG	PERFORMED BY		VERIFICATION	
				INITIAL	DATE	INITIAL	DATE		INITIAL	DATE	INITIAL	DATE
480V RX VENT BD 2B-B COMPT 2A	RB FLR/EQ DRN SUMP PUMP 2B		(1) BKR CLOSED, OVERLOADS REMOVED									
480V RX VENT BD 2B-B COMPT 11D	RCDT PUMP 2A (2-PMP-77-6)		(1) BKR CLOSED, OVERLOADS REMOVED									

(1) Both of the above pumps must be turned on by the pump control handswitch to obtain the red light required by Step 6.2.1[35]. Removing the breaker overloads allows the breaker contactor to pick up without actually running the pump.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 237 of 569</b>
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**Appendix G  
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**DG 2B-B Chart Recorder Connections**

Date \_\_\_\_\_

DG 2B-B CHART 1 CHANNEL	DESCRIPTION	SCALING	FIELD CONNECTIONS		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB-POINTS	INITIALS	DATE	PERFORMED BY		VERIFIED BY	
1	2-SIA2 (TRAIN B) (NOTE 1)	0-125V DC	2-M-6	B2-15-3 (+)						
				B2-15-4 (-)						
2	6.9KV COM BKR 1712 (NOTE 1)	0-125V DC	ECB-248-2/1	RTC-5(+)						
				RTC-6 (-)						
3	6.9KV COM BKR 1812 (NOTE 1)	0-125V DC	ECB-248-3/4	LTW-5(+)						
				LTW-6 (-)						
4	ES2BY (NOTE 1)	0-125V DC	2-PNL-211-B-B	RLY ES2BY2-F(+)						
				TB31-2 (-)						
5	DG 2B-B VOLTAGE (NOTE 2)	4-8KVAC 100V/DIV	2-BD-211-B-B COMPT 7	2-PK-211-B7/1 PT 1 (+)						
				2-PK-211-B7/1 PT 3 (-)						
6	DG 2B-B FREQUENCY (NOTE 2)	55-65HZ 0.25HZ/DIV	2-BD-211-B-B COMPT 7	2-PK-211-B7/1 PT 1 (+)						
				2-PK-211-B7/1 PT 3 (-)						

Note 1 - These test points may be piggybacked on the identical points for the SER.

Note 2 - Voltage & Frequency channels are to be scaled utilizing this Dranetz 325 Power System Polymeter and Keithley 197 Digital Multimeter.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 238 of 569</b>
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**Appendix G  
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**DG 2B-B Chart Recorder Connections**

Date \_\_\_\_\_

DG 2B-B CHART 2 CHANNEL	DESCRIPTION	SCALING	FIELD CONNECTIONS		WIRE INSTALLED		WIRE REMOVED			
							PERFORMED BY		VERIFIED BY	
			CABINET	TB-POINTS	INITIALS	DATE	INITIALS	DATE	INITIALS	DATE
1	2-SIA2 (TRAIN B) (NOTE 1)	0-125V DC	2-M-6	B2-15-3 (+)						
				B2-15-4 (-)						
2	6.9KV COM BKR 1712 (NOTE 1)	0-125V DC	ECB-248-2/1	RTC-5(+)						
				RTC-6 (-)						
3	6.9KV COM BKR 1812 (NOTE 1)	0-125V DC	ECB-248-3/4	LTW-5(+)						
				LTW-6 (-)						
4	ES2BY (NOTE 1)	0-125V DC	2-PNL-211-B-B	RLY ES2BY2-F(+)						
				TB31-2 (-)						
5	SHUTDOWN BOARD 2B-B (NOTE 2)	4-8KVAC 50V/DIV	2-BD-211-B-B COMPT 9	WHDM-1 (H)						
				WHDM-2 (N)						
6	RHR TO CL 1&4 2-FI-63-92B (NOTE 2)	1500-5500 GPM 0.1-0.5VDC	2-M-6	C1-16-7 (+)						
				NOTE 3						

Note 1 - These test points may be piggybacked on the identical points for the SER.

Note 2 - Voltage channel is to be scaled utilizing a Keithley 197 Digital Multimeter. See Figure 8.8. Sheet 5.

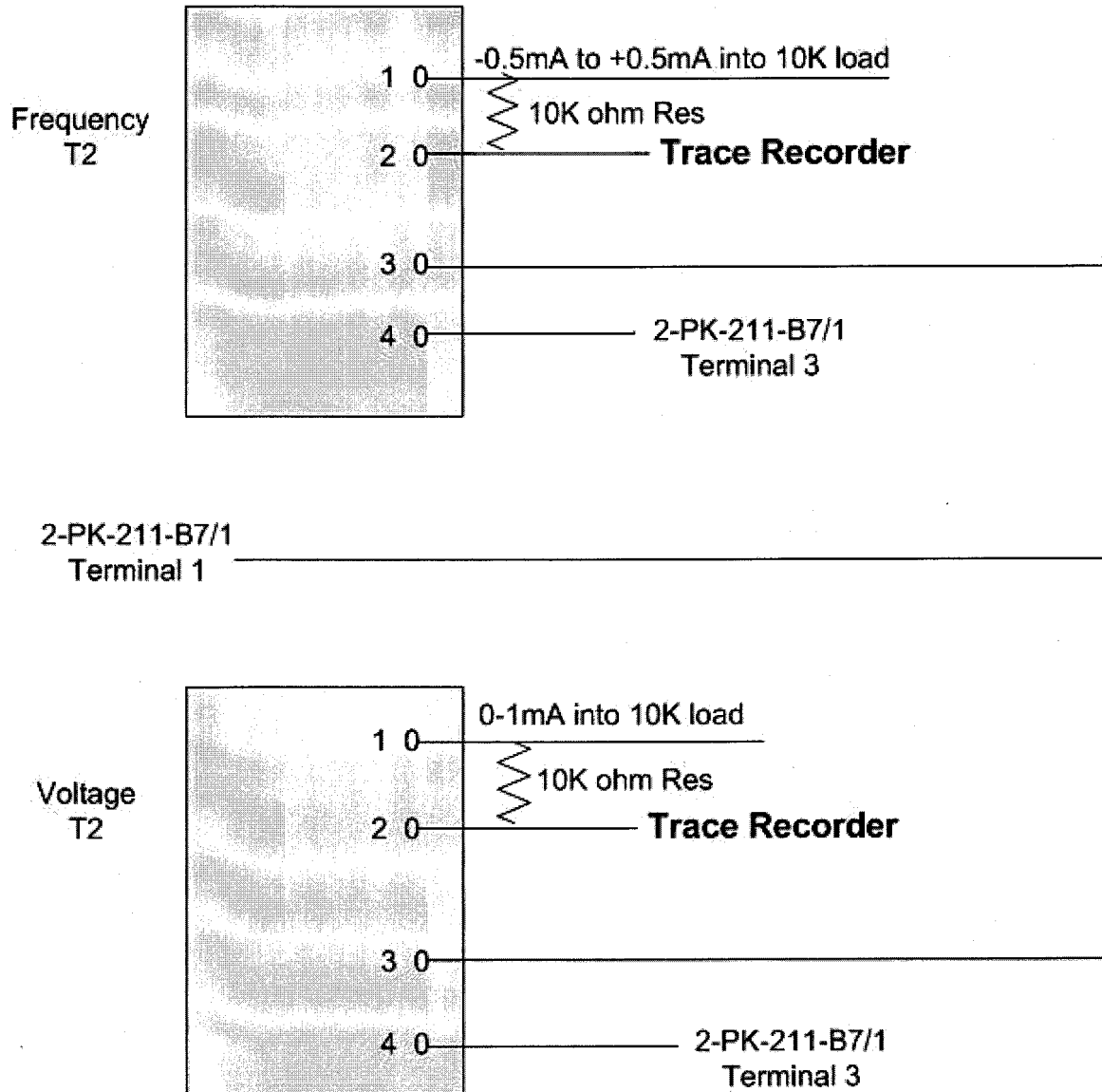
Note 3 - Recorder connections are between lifted lead and terminal from which lead was removed (ie, a series connection). Place a 10 ohm resistor across recorder input terminations Proper RHR pump off indication is 1500 GPM (**NOT** pegged low) on indicator and  $\pm 0.1$  VDC across recorder input terminations.

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DG 2B-B Chart Recorder Hookup

DG 2B-B – CHART 1



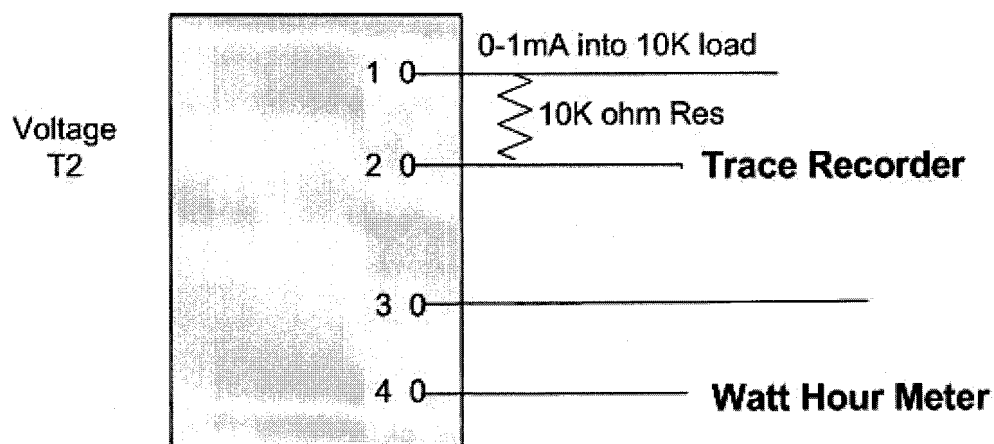
NOTE: Link all terminals through on  
2-PK-211-B7/1

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DG 2B-B Chart Recorder Hookup

Date \_\_\_\_\_



NOTE: This is typical for all four  
Shutdown Board  
Voltage Channels

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 241 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
CCP PUMP 2B-B 2-MTR-62-104-B	2-45W760-62-1	125VDC	2-M-5	B-22-6	1	5-1 (+)						
	2-45N2644-6			B-22-7		5-1 (-)						
SI PUMP 2B-B 2-MTR-63-15-B	2-45W760-63-1	125VDC	2-M-6	B1-32-7	2	5-2 (+)						
	45N2645-9			B1-32-6		5-2 (-)						
RHR PUMP 2B-B 2-MTR-74-20-B	2-45W760-74-1	125VDC	2-M-6	B1-30-7	3	5-3 (+)						
	45N2645-9			B1-30-6		5-3 (-)						
ERCW PUMP E-B 0-MTR-67-47-B	1-45W760-67-2	125VDC	0-M-27A	2-1D-6	30	5-4 (+)						
	45N1660-7			2-1D-5		5-4 (-)						
ERCW PUMP G-B 0-MTR-67-55-B	1-45W760-67-2	125VDC	0-M-27A	2-1A-7	31	5-6 (+)						
	45N1660-7			2-1A-6		5-6 (-)						
ERCW PUMP F-B 0-MTR-67-51-B	1-45W760-67-2	125VDC	0-M-27A	2-1E-9	4	5-5 (+)						
	45N1660-7			2-1E-8		5-5 (-)						
ERCW PUMP H-B 0-MTR-67-59-B	1-45W760-67-2	125VDC	0-M-27A	2-1B-12	5	5-7 (+)						
	45N1660-7			2-1B-11		5-7 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 242 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
CCS PUMP 2B-B 2-MTR-70-38-B	1-45W760-70-1	125VDC	0-M-27B	4-1D-5	6	6-1 (+)						
	4-1D-4			6-1 (-)								
CCS PUMP C-S 0-MTR-70-51-S	1-45W760-70-2	125VDC	0-M-27B	1-1C-10	7	2-2 (+)						
	45N1660-11			1-1C-9		2-2 (-)						
	2-45N2645-4			A1-44-4		3-7 (-)						
	45N1659-1			8-1F-6		4-4 (-)						
	74-84647-6947D63			A22CT1		4-7 (-)						
CCS THERM BARR BSTR PUMP 2B-B 2-MTR-70-130-B	2-45W760-70-9	125VDC	0-M-27B	4-3F-3	8	10-1 (+)						
	45N1660-14			4-3F-2		10-1 (-)						
AFW PUMP 2B-B 2-MTR-3-128-B	2-45W760-3-1	125VDC	2-M-4	B-4-7	9	6-3 (+)						
	2-45N2643-9			B-4-6		6-3 (-)						

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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
FIRE PUMP 2B-B 0-MTR-26-11A-B	1-45W760-26-1	125VDC	1-M-15	1-2G-7	10	6-5 (+)						
	45N1653-3			1-2G-8		6-5 (-)						
SD BD RM CHILLER B-B 0-MTR-31-49/2-B	1-45W760-31-19	125VDC	1-M-9	4-4G-6	11	6-6 (+)						
	45N1648-5			4-4G-7		6-6 (-)						
CRDM FANS 2B-B 2-MTR-30-92/1-B	2-45W760-30-8	125VDC	2-M-9	2-2E-8	12	6-7 (+)						
	45N2648-2			2-2D-12		6-7 (-)						
CRDM FANS 2D-B 2-MTR-30-80/1-B	2-45W760-30-8	125VDC	2-M-9	2-2C-8	13	6-8 (+)						
	45N2648-2			2-2B-12		6-8 (-)						
RX LWR CTMT CLR FANS 2B-B 2-MTR-30-75-B	2-45W760-30-10	125VDC	2-M-9	2-2G-6	14	7-1 (+)						
	45N2648-2			2-2G-8		7-1 (-)						
RX LWR CTMT CLR FANS 2D-B 2-MTR-30-78-B	2-45W760-30-10	125VDC	2-M-9	2-2J-6	15	7-2 (+)						
	45N2648-2			2-2J-8		7-2 (-)						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 244 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
AFP FCV-1-51 2-FCV-1-51	2-45W600-46-6	125VDC	2-M-3	TB-6 (NOTE 1)	16	4-8 (+)						
	2-45W2642-1			TB-2 (NOTE 1)		4-8 (-)						
PZR HTRS 2B-B 2-HTR-68-341D/B1-B6	2-45W760-68-3	125VDC	2-M-4	B-18-8	17	7-3 (+)						
	45N2643-9			B-18-6		7-3 (-)						
ØB ISOL TRN B 2-HS-30-64 (A&B)	2-45W760-30-8	125VDC	2-M-4	4-2D-8	18	7-4 (+)						
	45N2645-5			A-2J-6		7-4 (-)						
CS PUMP 2B-B 2-MTR-72-10-B	2-45W760-72-1	125VDC	2-M-9	B1-33-6	19	7-5 (+)						
	45N2645-9			B1-33-5		7-5 (-)						
CNTMT AIR RTN FN 2B-B 2-MTR-30-39-B	2-45W760-30-13	125VDC	2-M-9	2-1J-5	20	7-6 (+)						
	45N2648-2			2-1J-4		7-6 (-)						
ELECT BD RM A/C B-B CPRSR 0-MTR-31-129/2-B	1-45W760-31-13	125VDC	(2B) BD 2B2-B	B22BTP	21	8-7 (+)						
	74-R4647-6947D81			B22BT1		8-7 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 245 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
ØB ISOL TRN A 2-HS-30-68 (A&B)	2-45W760-30-8	125VDC	2-M-4	A-2J-8	22	3-4 (+)						
	45N2648-3			A-2J-6		3-4 (-)						
2-SIA1 (TRN A) 2-HS-63-133B & A	2-45W600-99-1	125VDC	2-M-6	A1-44-3	23	3-7 (+)						
	45N2645-4			A1-44-4		3-7 (-)						
6.9KV CSST BKR 1712 0-BD-200-C/B1	1-45W760-200-5	125VDC	0-ECB-248-2/1	RTC-5	24	3-8 (+)						
	55W612-1			RTC-6		3-8 (-)						
6.9KV CSST BKR 1812 0-BD-200-D/A1	1-45W760-200-5	125VDC	0-ECB-248-3/4	LTW-5	25	4-1 (+)						
	55W613-5			LTW-6		4-1 (-)						
DG EMERG START RLY ES2BY	1-45W760-82-6C	125VDC	2-PNL-211-B-B	(+)RLY ES2BY2-F	26	8-3 (+)						
	75K2-85354-E-3620E-3&7			(-)TB31-2		8-3 (-)						
DG BKR 1914 (1B-B) 1-BKR-211-B/6-B	1-45W760-211-4	125VDC	0-M-26 DG 1B-B	6-1F-7	27	8-4 (+)						
	45N1659-2			6-1F-6		8-4 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 246 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

COMPONENT TITLE EMS NUMBER	SCHEMATIC DWG CONNECTION DWG	CKT TYPE	FIELD CONNECTION		SER CONNECTION		WIRE INSTALLED		WIRE REMOVED			
			CABINET	TB POINTS	CHANNEL	CARD TERM			PERFORMED BY		VERIFIED BY	
							INIT	DATE	INIT	DATE	INIT	DATE
DG BKR 1924 (2B-B) 2-BKR-211-B/6-B	1-45W760-211-4	125VDC	0-M-26	2-1F-7	28	8-5 (+)						
	45N1659-4		DG 2B-B	2-1F-6		8-5 (-)						
2-SIA2 (TRN B) 2-HS-63-133A&B	1-45W600-99-1	125VDC	2-M-6	B2-15-3	29	7-7 (+)						
	45N2645-10			B2-15-4		7-7 (-)						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 247 of 569</b>
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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

SER CHANNEL			
	COMPONENT	SET (HIGH)	RESET (LOW)
1	CCP PMP 2B-B	RUN	STOP
2	SI PMP 2B-B	RUN	STOP
3	RHR PMP 2B-B	RUN	STOP
4	ERCW PMP F-B	RUN	STOP
5	ERCW PMP H-B	RUN	STOP
6	CCS PUMP 2B-B	RUN	STOP
7	CCS PMP C-S TR 2B	RUN	STOP
8	TBBP 2B-B	RUN	STOP
9	AFW PMP 2B-B	RUN	STOP
10	FIRE PMP 2B-B	RUN	STOP
11	SD BD RM CHLR B-B	RUN	STOP
12	CRDM FAN 2B-B	RUN	STOP
13	CRDM FAN 2D-B	RUN	STOP
14	RX LWR CTMT CLR FAN 2B-B	RUN	STOP
15	RX LWR CTMT CLR FAN 2D-B	RUN	STOP
16	AFWP 2-FCV-1-51	OPEN	CLOSED
17	PZR HTR 2B-B	ON	OFF

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**Test Equipment Connections (SER)**

Date \_\_\_\_\_

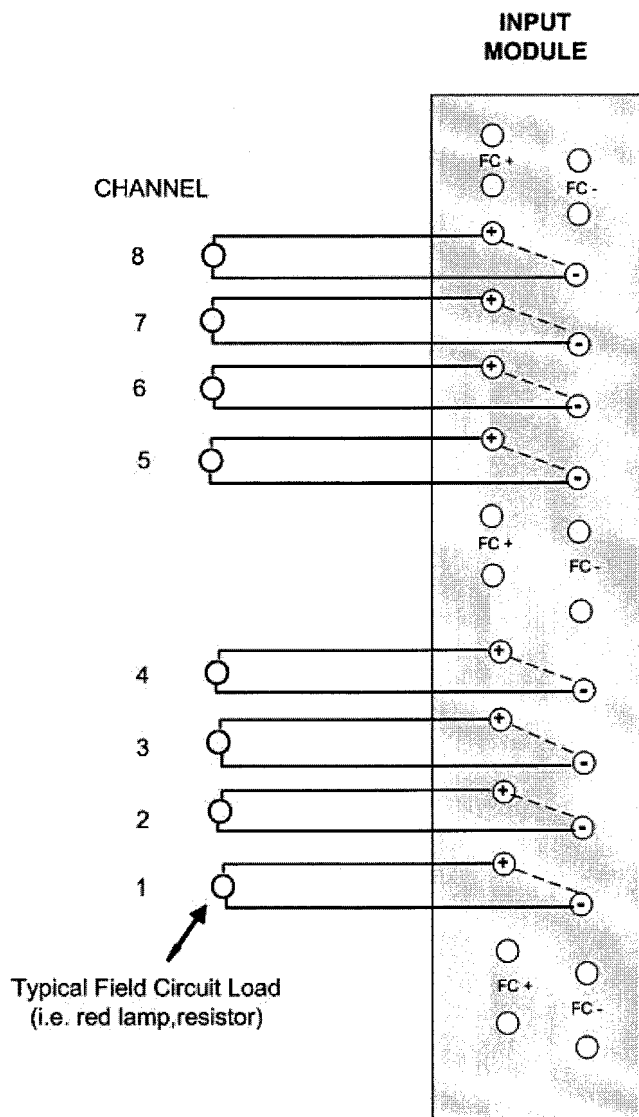
SER CHANNEL			
	COMPONENT	SET (HIGH)	RESET (LOW)
18	ØB ISOL TRN B	ACTUATE	NORMAL
19	CS PMP 2B-B	RUN	STOP
20	CNTMT AIR RET FAN 2B-B	RUN	STOP
21	EBR AC CPRSR B-B	RUN	STOP
22	ØB ISOL TRN A	ACTUATE	NORMAL
23	SAFETY INJECTION HS 1	NORMAL	ACTUATED
24	6900 CSST C BKR 1712	CLOSED	OPEN
25	6900 CSST D BKR 1812	CLOSED	OPEN
26	DG EMERG RLY ES2BY	NORMAL	ACTUATED
27	1B-B 6900 DG BKR 1914	CLOSED	OPEN
28	2B-B 6900 DG BKR 1924	CLOSED	OPEN
29	SAFETY INJECTION HS 2	NORMAL	ACTUATED
30	ERCW PMP E-B	RUN	STOP
31	ERCW PMP G-B	RUN	STOP

Note 1 - This Terminal Board is mounted by Westinghouse on Panel 2-M-3 in front of Riser 1, inside a junction box.

<b>WBN</b> <b>Unit 2</b>	<b>Unit 2 Integrated Safeguards Test -</b> <b>Train 2B</b>	<b>2-PTI-262-02</b> <b>Rev. 0000</b> <b>Page 249 of 569</b>
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**Appendix J**  
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**Sequence of Events Recorder (SER) Hookup**



2211-0-208D (115VAC) or  
2211-0-203D (125VDC)  
Input Module (Typical)  
8 Channel

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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			(AC)	INITIAL		POST-LOOP	
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	(AC) VERIFIED		RETURNED TO AS-FOUND	
						1st	CV	1st	CV
480V SD BD 2B1-B      Aux Bldg EL 757									
C/ 9B 2-BKR-212-B001/9B NORM FDR FOR RX VENT BD 2B-B (2-MCC-232-B)  (1)	2-BKR-212-B1/9B	BREAKER  OPEN  <input type="checkbox"/> CLOSED  <input type="checkbox"/>	NR	BREAKER CLOSED <input type="checkbox"/>	BREAKER OPEN <input type="checkbox"/>				
C / 7C 2-BKR-30-92 CRDM CLR 2B-B (2-FAN-30-92)	2-BKR-30-92	BREAKER  OPEN  <input type="checkbox"/> CLOSED  <input type="checkbox"/>	A AUTO	BREAKER CLOSED <input type="checkbox"/>	BREAKER OPEN <input type="checkbox"/>				
C/ 7D 2-BKR-30-75 LOWER COMPT COOLER 2B-B (2-CCU-30-75)	2-BKR-30-75	BREAKER  OPEN  <input type="checkbox"/> CLOSED  <input type="checkbox"/>	A AUTO	BREAKER CLOSED <input type="checkbox"/>	BREAKER OPEN <input type="checkbox"/>				

(1) Norm FDR BKR for RX VENT BD 2B-B will be restored per 2-SOI-232.04.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 251 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP/ SEQUENCE				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
<b>480V SD BD 2B1-B      Aux Bldg EL 757</b>									
480V SD Bd 2B1-B, C/7B 0-BKR-78-35B ALT FDR SFP CIRC PUMP C-S (0-PMP-78-35)	0-MTR-78-35-S		NR	BREAKER CLOSED <input type="checkbox"/> 1st      CV	BREAKER OPEN <input type="checkbox"/> GREEN LIGHT				
C/12D 2-BKR-212-B001/12D CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-B1/12D-B		NR	BREAKER OPEN <input type="checkbox"/> 1st      CV	BREAKER CLOSED <input type="checkbox"/>				
<b>INITIAL</b>				N/A			NA	NA	NA



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 252 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
<b>480V SD BD 2B2-B, AB EL 757</b>									
C/2D 0-BKR-70-51A NORM FDR FOR CCS PUMP C-S (0-PMP-70-51)	0-BKR-70-51A		NR	RUNNING <input type="checkbox"/> RED LIGHT	RUNNING <input type="checkbox"/> RED LIGHT				
C/12D 2-BKR-212-B002/12D CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-B2/12D-B		NR	BREAKER OPEN <input type="checkbox"/> 1st CV	BREAKER CLOSED <input type="checkbox"/>				
<b>INITIAL</b>				N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 253 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
480V SD BD 2B2-B, AB EL 757									
C/7B 2-BKR-30-80 CRDM CLR 2D-B (2-FAN-30-80)	2-BKR-30-80		A AUTO	BREAKER CLOSED <input type="checkbox"/> 1st CV	BREAKER OPEN <input type="checkbox"/>				
C/7D 2-BKR-30-78 LOWER COMPT COOLER 2D-B (2-CCU-30-78)	2-BKR-30-78		A AUTO	BREAKER CLOSED <input type="checkbox"/> 1st CV	BREAKER OPEN <input type="checkbox"/>				
INITIAL				N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 254 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
480V SD BD 2B2-B, AB EL 757									
C/10B 2-BKR-212-B002/10B NORM FDR FOR C&A VENT BD 2B2-B (2-MCC-214-B2)	2-BKR-212-B2/10B-B		NR	BREAKER CLOSED <input type="checkbox"/> 1st CV	BREAKER OPEN <input type="checkbox"/>		(1)		
C/3B 2-BKR-271-R1 UNIT 2 RB CRANE (2-CRN-271-R1)	2-BKR-271-R1		NR	BREAKER CLOSED <input type="checkbox"/> 1st CV	BREAKER OPEN <input type="checkbox"/>		(2)		
C/2B 0-BKR-31-129/2 ELEC BD RM CHLR B-B COMPR (0-COMP-31-129/2)	0-BKR-31-129/2		NR	BREAKER CLOSED <input type="checkbox"/> 1st CV	BREAKER CLOSED <input type="checkbox"/>		(1)		
INITIAL				N/A			NA	NA	NA

(1) Restoration will be verified by performance of appropriate SOI per steps in Section for the C & A Vent Bd or in Appendix D for EBR chiller.

(2) If Polar Crane is tagged for temporary power connection, this breaker may be tested and verified in the Test Position with permission from those holding the hold order.





WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 257 of 569
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
<b>480V RX MOV BD 2B1-B Aux Bldg EL 772</b>									
C/17A 2-BKR-62-228/3 BORIC ACID BATCH TANK HTR 3 (2-HTR-62-228/3)	2-HTR-62-228/3 (0-HS-62-228)		OFF <input type="checkbox"/>	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
C / 17E 2-BKR-213-B001/17E POWER OUTLETS 2-PO-213-B1/6-B1/10	2-BKR-213-B001/17E		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
<b>INITIAL</b>				N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 258 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND		
							1st	CV	IV
<b>480V Rx MOV BD 2B1-B Aux Bldg EL 772</b>									
C/17F2 2-BKR-31-324B INSTR RM A/C COMPR 2B (2-COMP-31-324/2) (1)	2-MTR-31-324B		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
<b>480V Rx MOV BD 2B2-B Aux Bldg EL 772</b>									
C/6F 2-BKR-213-B2/6F THERMAL OVERLOAD BYPASS 2B2	2-RLY-270-B2 RED LIGHT		NR	RED LIGHT NOT LIT <input type="checkbox"/>	NR		(2)		
<b>INITIAL</b>			N/A				NA	NA	NA

- (1) Incore instrument room cooling must be in service per 2-SOI-30.04. If temporary cooling is supplied to lower containment, temporary cooling must be secured and ERCW flow restored to the incore instrument room compressor, including ERCW valves open in the fan room.
- (2) Thermal Overloads will be Reset from performance of Appendix U.





<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 260 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO BREAKER ON or AS-FOUND		
							1st	CV	IV
<b>480V DIESEL AUX BD 2B1-B Diesel Bldg EL 760</b>									
C/5F1 0-BKR-30-482 DGB CORRIDOR EL 742 HTR 2B (0-HTR-30-482)	0-BKR-30-482		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
C/5F2 2-BKR-215-B001/5F2 POWER OUTLETS (2-PO-215-5/6/7)	2-BKR-215-B001/5F2		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
<b>480V DIESEL AUX BD 2B2-B Diesel Bldg EL 760</b>									
C/2C 2-BKR-82-B2/2 DG ENG 2B2 IMMERSION HTR (2-HTR-82-B2)	2-BKR-82-B2/2		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
<b>INITIAL</b>			NR	N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 261 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS- FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO BKR ON or AS-FOUND		
							1st	CV	IV
<b>480V DIESEL AUX BD 2B2-B      Diesel Bldg EL 760</b>									
C/3E1 2-BKR-30-490 DG 2B-B ELEC BD RM HTR (2-HTR-30-490)	2-BKR-30-490		NR	BREAKER ON □ 1st      CV	BREAKER OFF □				
C/3F1 2-BKR-30-477 DG 2B-B ROOM HTR 2A (2-HTR-30-477)	2-BKR-30-477		NR	BREAKER ON □ 1st      CV	BREAKER OFF □				
C/3F2 2-BKR-30-478 DG 2B-B ROOM HTR 2B (2-HTR-30-478)	2-BKR-30-478		NR	BREAKER ON □ 1st      CV	BREAKER OFF □				
C/6D 2-BKR-82-200 DIESEL GENERATOR 2B-B HEATER (2-HTR-82-200)	2-BKR-82-200		NR	BREAKER ON □ 1st      CV	BREAKER OFF □				
<b>INITIAL</b>			NR	N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 262 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

BREAKER/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO BREAKER ON		
							1st	CV	IV
<b>480V DIESEL AUX BD 2B2-B Diesel Bldg EL 760</b>									
C/4B 0-BKR-18-9B DG FUEL OIL XFER PUMP (0-PMP-18-9B)	0-BKR-18-9B		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
C/5A 2-BKR-82-270 DG ENG 2B1 AIR COMPR (2-COMP-82-270)	2-BKR-82-270		NR	BREAKER ON <input type="checkbox"/> 1st CV	BREAKER OFF <input type="checkbox"/>				
<b>INITIAL</b>				N/A			NA	NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 263 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-4									
2-HS-3-118A	2-MTR-3-118-A	HS		STOP - PULL TO LOCK <input type="checkbox"/>	N/A				
AFW PMP A-A		PMP		N/A	STOPPED <input type="checkbox"/>	NR			
2-HS-3-128A	2-MTR-3-128-B	HS		A-P AUTO (1)	N/A	N/A			
AFW PMP B-B		PMP		N/A	RUNNING (1) <input type="checkbox"/>	RUNNING <input type="checkbox"/>			
INITIAL							N/A	NA	NA

(1) This equipment will be verified in the body of this Instruction.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 264 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-4									
2-HS-68-341D BACKUP HEATERS B-B  2-BKR-68-341D PZR BACKUP HTR GRP 2B-B XFMR (2-OXF-68-341D)	2-BKR-68-341D	HS		A-P AUTO (1)	N/A	N/A			
	2-XS-68-341D-B 6.9KV SD BD 2B-B /C20	AUX HS		NOR (2)	N/A	(2)			
	6.9KV SD BD 2B-B C/20 (2)	HTR BKR		N/A (2)	CLOSED (1)	OPEN <input type="checkbox"/>			
INITIAL								NA	NA

(1) This equipment will be verified in the body of this Instruction.

(2) Verify the AS Found Breaker position and AUX/NOR transfer switch locally at the 6.9kv SD BD. Post LOOP position may be verified from 2-M-4 HS lights.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 265 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-4									
2-HS-68-341H BACKUP HEATERS C	2-BKR-68-341H	HS		NR	N/A	NR			
	2-XS-68-341H 6.9KV SD BD 2B-B /C21	AUX HS		NOR (1)	N/A	NR			
	2-BKR-68-341H PZR BACKUP HTR GRP 2C XFMR (2-OXF-68-341H)	HTR BKR		N/A (1)	CLOSED	OPEN			
INITIAL								NA	NA

(1) Verify the AS Found Breaker position and AUX/NOR transfer switch locally at the 6.9kv SD BD. Post LOOP position may be verified from 2-M-4 HS lights.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 266 of 569</b>
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**Appendix K  
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-5									
2-HS-81-7A	2-MTR-81-7	HS		Manual	N/A	N/A			
PRIMARY WATER PMP B		PMP		N/A	GREEN LIGHT ON □	RED & GREEN LIGHTS OFF □		(2)	
2-HS-62-104A	2-MTR-62-104-B	HS		A AUTO (1)	N/A	N/A			
CCP B-B (ECCS)		PMP		N/A	RUNNING (1)	RUNNING □			
MCR 2-M-6									
2-HS-63-15A	2-MTR-63-15-B	HS		A AUTO (1)	N/A	N/A			
SI PMP B (ECCS)		PMP		N/A	RUNNING (1)	STOPPED □			
INITIAL				N/A				NA	NA

(1) The equipment will be aligned and verified in the body of the Instruction.

(2) Primary water pump B breaker (and lights) will be restored on the C & A Vent Board page earlier in this Appendix.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 267 of 569</b>
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**Appendix K  
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-6									
2-HS-72 -10A	2-MTR-72-10-B	HS		A AUTO (1)	N/A	N/A			
CNTMT SPRAY PMP B		PMP		N/A	RUNNING (1)	STOPPED <input type="checkbox"/>			
2-HS-74-20A	2-MTR-74-20-B	HS		A AUTO (1)	N/A	N/A			
RHR PMP B (ECCS)		PMP		N/A	RUNNING (1)	STOPPED <input type="checkbox"/>			
INITIAL				N/A	N/A			NA	NA

(1) The equipment will be aligned and verified in the body of the Instruction.





<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 269 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-9									
2-HS-30-80A CRDM CLR D-B	2-MTR-30-80/1-B	HS		A AUTO <input type="checkbox"/>	N/A	N/A			
		IND LT		N/A	RED LIGHT LIT <input type="checkbox"/>	GREEN LIGHT LIT <input type="checkbox"/>			
2-HS-30-83A CRDM CLR A-A	2-MTR-30-83/1-A	HS		STOP PULL TO LOCK <input type="checkbox"/>	N/A	N/A			
2-HS-30-92A  CRDM CLR B-B	2-MTR-30-92/1-B	HS		A AUTO <input type="checkbox"/>	N/A	N/A			
		IND LT		N/A	RED LIGHT LIT <input type="checkbox"/>	GREEN LIGHT LIT <input type="checkbox"/>			
2-HS-30-88A CRDM CLR C-A	2-MTR-30-88/1-A	HS		STOP PULL TO LOCK <input type="checkbox"/>					
2-HS-30-74A LWR CNTMT CLR A-A	2-MTR-30-74-A	HS		STOP <input type="checkbox"/> PULL TO LOCK	N/A	N/A			
INITIAL								NA	NA

WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 270 of 569
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 2-M-9									
2-HS-30-75A	2-MTR-30-75-B	HS		A AUTO <input type="checkbox"/>	N/A	N/A			
LWR CNTMT CLR B-B		CLR		N/A	RED LIGHT LIT <input type="checkbox"/>	STOPPED <input type="checkbox"/> GREEN LIGHT			
2-HS-30-77A LWR CNTMT CLR C-A	2-MTR-30-77-A	HS		STOP <input type="checkbox"/> PULL TO LOCK	N/A	N/A			
2-HS-30-78A	2-MTR-30-78-B	HS		A AUTO <input type="checkbox"/>	N/A	N/A			
LWR CNTMT CLR D-B		CLR		N/A	RED LIGHT LIT <input type="checkbox"/>	STOPPED <input type="checkbox"/> GREEN LIGHT			
INITIAL								NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 271 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV		
MCR 2-M-9									
2-HS-31-266A	2-MTR-31-266	HS		A AUTO <input type="checkbox"/>	N/A	N/A			
INSTR ROOM CLG B AHU, CIRC PMP & FCO		FAN		N/A	RUNNING <input type="checkbox"/> RED LIGHT	STOPPED <input type="checkbox"/> LIGHTS OFF			
2-HS-31-265A	2-MTR-31-265	HS		STOP - PULL TO LOCK <input type="checkbox"/>	N/A				
INSTR ROOM CLG A AHU, CIRC PMP & FCO		FAN		N/A	STOPPED <input type="checkbox"/>	NR			
INITIAL								NA	NA

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 272 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 1-M-15									
0-HS-26-11A	0-MTR-26-11-B	HS		A-P AUTO (1)	N/A	N/A		(1)	
HPFP PMP 2B-B		PMP		N/A	RUNNING (1)	RUNNING <input type="checkbox"/>			
MCR 0-M-26									
2-HS-57-71B 1828 - NORMAL FROM CSST D	2-BKR-211-1828-B			NR	CLOSED RED LIGHT <input type="checkbox"/>	OPEN GREEN LIGHT <input type="checkbox"/>			
2-HS-57-73A 1924-DG TO SD BD 2B-B	2-BKR-211-1924-B			NR	OPEN GREEN LIGHT <input type="checkbox"/>	CLOSED RED LIGHT <input type="checkbox"/>			
INITIAL				N/A				N/A	N/A

(1) HPFP 2B-B will be started in the body of the instruction. See Step 6.1.2 [39]. Fire pump handswitches will be returned to normal per 0-SOI-26.01.



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 274 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST			POST-LOOP				
		AS-FOUND	REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV		
MCR 0-M-27B									
2-HS-65-74A	2-MTR-65-74	HS		A-P AUTO <input type="checkbox"/>	N/A	N/A			
ANN VAC FAN 2B & SUCT FCO		FAN		N/A	RUNNING <input type="checkbox"/>	STOPPED <input type="checkbox"/> LIGHTS OFF			
2-HS-70-130A	2-MTR-70-130-B	HS		A-P AUTO <input type="checkbox"/>	N/A	N/A			
THRM BAR BSTR PMP 2B (TBBP)		PMP		N/A	RUNNING <input type="checkbox"/>	RUNNING <input type="checkbox"/> LIGHTS ON			
INITIAL								N/A	N/A

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 275 of 569</b>
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**Loss of Offsite Power - Train 2B, Section 6.1**

Date \_\_\_\_\_

INDICATION/ DESCRIPTION	TESTED COMPONENT(S)	PRE-TEST				POST-LOOP			
		AS-FOUND		REQ'D HS POS	REQ'D POS OR COND	POST LOOP POS	AS-LEFT	RETURNED TO AS-FOUND CV	
MCR 0-M-27A and 0-M-27B									
0-HS-67-152A	0-FCV-67-152-B	HS		NR	(1)	N/A			
CCS HX C ALT DISCH TO HDR B		FCV		N/A	NOT IN POS A <input type="checkbox"/>	Position A LIT <input type="checkbox"/>		(1)	
2-HS-70-33A	2-MTR-70-33-B	HS		A P AUTO	(2)	N/A		(2)	
CCS PMP 2B-B		PMP		N/A	RUNNING <input type="checkbox"/>	RUNNING <input type="checkbox"/>			
2-HS-70-51A	0-MTR-70-51-S	HS		A P AUTO	(2)	N/A		(2)	
CCS PMP C-S NOR ACB		PMP		N/A	RUNNING <input type="checkbox"/>	RUNNING <input type="checkbox"/>			
INITIAL									

- (1) Simultaneous opening of all three 6.9kV Sd Bd 2B-B feeder breakers will cause this valve to initiate valve operation to the Safeguard POSITION A upon power restoration to the board. ERCW valve 0-FCV-67-152 may be reset by Pulling Out to Reset 0-HS-67-152A then moving HS to the AS FOUND position to restore.
- (2) 2B-B & C-S CCS pumps will be started in the body of the instruction and CCS will be returned to normal per SOI in Appendix W.



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 276 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1B1-B, Compt. 2C 1-BKR-30-197 PENT RM EL 713 CLR 1B-B	1-MTR-30-197-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 1B1-B, Compt. 3B 1-BKR-30-202 AB EL 692 PIPE CHASE CLR 1B-B	1-MTR-30-202-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 1B1-B, Compt. 5A 0-BKR-30-193 SFP PMP/TBBP AREA CLR B-B	0-MTR-30-193-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 1B1-B, Compt. 5E 1-BKR-30-191 CCS/AFW PMP AREA CLR 1B-B	1-MTR-30-191-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 277 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1B1-B, Compt. 8B 1-BKR-30-187 PENT RM EL 692 CLR 1B-B	1-MTR-30-187-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 1B1-B, Compt. 9E 1-BKR-30-195 PENT RM EL 737 CLR 1B-B	1-MTR-30-195-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 2B1-B, Compt. 2C 2-BKR-30-197 PENT RM EL 713 CLR 2B-B	2-MTR-30-197-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2 & 39	
C&A Vent Bd 2B1-B, Compt. 3B 2-BKR-30-202 AB EL 692 PIPE CHASE CLR 2B-B	2-MTR-30-202-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 278 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2B1-B, Compt. 5E 2-BKR-30-185 AFW/BA XFER PMP SPACE CLR 2B-B	2-MTR-30-185-B	RED LIGHT OFF- Note 9,24		RED LIGHT ON		RED LIGHT OFF- Note 23		Note 2 & 39	
C&A Vent Bd 2B1-B, Compt.8A 2-BKR-30-179 SIS PUMP 2B-B RM CLR	2-MTR-30-179-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 2B1-B, Compt. 8B 2-BKR-30-187 PENT RM EL 692 CLR 2B-B	2-MTR-30-187-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 2B1-B, Compt. 9A 2-BKR-30-176 RHR PUMP 2B-B RM COOLER	2-MTR-30-176-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 279 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRE D	ACTUAL
C&A Vent Bd 2B1-B, Compt. 9E 2-BKR-30-195 PENT RM EL 737 CLR 2B-B	2-MTR-30-195-B	RED LIGHT OFF- Note 9,24		RED LIGHT ON		RED LIGHT OFF- Note 23		Note 2 & 39	
C&A Vent Bd 2B1-B, Compt. 10D 0-BKR-30-156 ABGTS HUMIDITY HTR B-B	0-HTR-30-156-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A Vent Bd 2B1-B, Compt. 12B 2-BKR-30-207 EGTS ROOM CLR 2B-B	2-MTR-30-207-B	RED LIGHT OFF- Note 9,24		RED LIGHT ON		RED LIGHT OFF		Note 2	
C&A Vent Bd 2B1-B, Compt.10A 2-BKR-30-182 CENT CHG PUMP 2B-B RM CLR	2-MTR-30-182-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 280 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRE D	ACTUAL
RX MOV Bd 2B1-B, Compt. 4D 2-BKR-62-244 CCP AUX OIL PMP 2B	2-MTR-62-244-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2B1-B, Compt. 16D 2-BKR-213-B001/16D THERMAL OVERLOAD BYPASS 2B1	2-RLY-270-B1	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2B1-B, Compt. 16E POWER OUTLETS: 2-PO-213-B1/1, 2-PO-213-B1/2, 2-PO-213-B1/3, 2-PO-213-B1/4, 2-PO-213-B1/5	2-PO-213-B1/1,2,3,4,5	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 281 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRE D	ACTUAL
RX MOV Bd 2B1-B, Compt. 17E POWER OUTLETS: 2-PO-213-B1/6, 2-PO-213-B1/7, 2-PO-213-B1/8, 2-PO-213-B1/9, 2-PO-213-B1/10	2-PO-213-B1/6,7,8, 9,10	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2B1-B, Compt. 17F2 2-BKR-31-324A INSTR RM A/C COMPR 2B	2-MTR-31-324B	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2B1-B, Compt. 18C 2-BKR-31-324A INCORE INSTR RM CW PMP 2B	2-MTR-31-324/1	RUNNING- Note 9		STOPPED		STOPPED		Note 2	
RX MOV Bd 2B2-B, Compt. 6F 2-BKR-213-B2/6F THERMAL OVERLOAD BYPASS 2B2	2-RLY-270-B2	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 282 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRE D	ACTUAL
2-XX-3-35 MFW REG FCV 3-35	2-FCV-3-35	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-48	2-FCV-3-48	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-90	2-FCV-3-90	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-103	2-FCV-3-103	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35A BYP REG FCV 3-35A	2-FCV-3-35A	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 283 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRE D	ACTUAL
2-XX-3-35A BYP MFW REG FCV 3-90A	2-FCV-3-90A	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XI-3-236 SG 1 MFW BYP ISOL 2-FCV-3-236	2-FCV-3-236	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-3-47A SG 2 MFW ISOL VLV	2-FCV-3-47-B	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-242 SG 3 MFW BYP ISOL 2-FCV-3-242	2-FCV-3-242	OPEN - Note 9		CLOSED		CLOSED		CLOSED	
2-XI-3-239 SG 2 MFW BYP ISOL 2-FCV-3-239	2-FCV-3-239	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 284 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-100A SG 4 MFW ISOL VLV	2-FCV-3-100-B	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV-3-185	2-FCV-3-185	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV-3-187	2-FCV-3-187	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-245 SG 4 MFW BYP ISOL 2-FCV-3-245	2-FCV-3-245	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 285 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-128A AFW PMP B-B	2-MTR-3-128-B	STOPPED		RUNNING		RUNNING		STOPPED	
2-F1C-46-57A-S T-D AFWP FLOW CONTROLLER	2-F1C-46-57A-S	MANUAL		AUTO		AUTO		MANUAL	
2-HS-46-56A-S T-D AFWP T&L VLV	2-FCV-1-51-S	CLOSED		OPEN		OPEN		CLOSED	
2-HS-3-174A SG 1 SUPPLY LCV-3-174 CNTL	2-LCV-3-174A	CLOSED		NOT CLOSED (note 7)		NOT CLOSED		CLOSED	
2-HS-3-173A SG 2 SUPPLY LCV-3-173 CNTL	2-LCV-3-173A	CLOSED		NOT CLOSED (note 7)		NOT CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 286 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-LIC-3-174A SG 1 SUPPLY FRM T-D PMP	2-LIC-3-174	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-173A SG 2 SUPPLY FRM T-D PMP	2-LIC-3-173A	MANUAL		AUTO		AUTO		MANUAL	
2-HS-3-148A SG 3 SUPPLY LCV-3-148 CNTL	2-LCV-3-148A	CLOSED - No te 4		N/A - Note 21	N/A	N/A	N/A	CLOSED	
2-HS-3-171A SG 4 SUPPLY LCV-3-171 CNTL	2-LCV-3-171A	CLOSED - No te 5		N/A - Note 21	N/A	N/A	N/A	CLOSED	
2-HS-3-172A SG 3 SUPPLY LCV-3-172 CNTL	2-LCV-3-172	CLOSED		NOT CLOSED (note 7)		NOT CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 287 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-175A SG 4 SUPPLY LCV-3-175 CNTL	2-LCV-3-173A	CLOSED		<b>NOT CLOSED</b> (note 7)		<b>NOT CLOSED</b>		CLOSED	
2-LIC-3-148A SG 3 SUPPLY FRM B-B PMP	2-LIC-3-148	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-171A SG 4 SUPPLY FRM B-B PMP	2-LIC-3-171	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-172A SG 3 SUPPLY FRM T-D PMP	2-LIC-3-172A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-175A SG 4 SUPPLY FEM T-D PMP	2-LIC-3-175A	MANUAL		AUTO		AUTO		MANUAL	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 288 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-RT-1 RX TRIP BKR A (Ind. Light Nomenclature)	2-52RTA	CLOSED		OPEN		OPEN		OPEN	
2-RT-1 RX TRIP BKR B (Ind. Light Nomenclature)	2-52RTB	CLOSED		OPEN		OPEN		OPEN	
A RX TRIP BYPASS BKR	2-52BYA	CLOSED		OPEN		OPEN		OPEN	
2-HS-1-7/181 (181 lights above HS) SG 1 BLOWDOWN VLVS	2-FCV-1-7	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-14/182 (14 lights on HS) SG 2 BLOWDOWN VLVS	2-FCV-1-182	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-25/183 (183 lights above HS) SG 3 BLOWDOWN VLVS	2-FCV-1-25	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 289 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-1-32/184 (32 lights on HS) SG 4 BLOWDOWN VLVS	2-FCV-1-184	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-68-341D BACKUP HEATERS B-B	2-HTR-68-341D/B1-B	ON		OFF		OFF		OFF	
2-HS-68-341H BACKUP HEATERS C	2-HTR-68-341H/C1-B	ON		OFF		OFF		OFF	
2-HS-68-308A PRT TO GAS ANALYZER	2-FCV-68-308	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 290 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-5

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-61A RCP SEAL RETURN CIV-ØA	2-FCV-62-61-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-104A CCP B-B (ECCS)	2-MTR-62-104-B	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-62-133A VCT TO CHARGING PMPS SUCTION	2-LCV-62-133-B	OPEN - Note 6		CLOSED		CLOSED		OPEN	
2-HS-62-136A RWST TO CHARGING PMPS SUCTION	2-LCV-62-136-B	CLOSED - No te 6		OPEN		OPEN		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 291 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-6

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-91A CHARGING LINE ISOL	2-FCV-62-91-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-77 LP LETDOWN ISOL CIV-Ø A	2-FCV-62-77	OPEN		CLOSED		CLOSED		Note 2	
2-HS-74-20A RHR PMP B (ECCS)	2-MTR-74-20-B	STOPPED		RUNNING		RUNNING		STOPPED	
2-XI-74-28 RHR HX B OUTLET FLOW CNTL FCV-74-28	2-FCV-74-28	CLOSED		OPEN		OPEN		Note 2	
2-HS-63-25A BIT OUTLET	2-FCV-63-25-B	CLOSED		OPEN		OPEN		CLOSED	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 292 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-6

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-63-15A SI PMP B (ECCS)	2-MTR-63-15-B	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-63-23 CLA FILL FROM SI PMPS	2-FCV-63-23	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-63-84 CKV TEST LINE TO HUT	2-FCV-63-84	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 293 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-103A AB GEN SUPPLY FAN 1A & DISCH FCO-30-103	1-MTR-30-103	RUNNING - Note 31		STOPPED		STOPPED		Note 2 & 39	
1-HS-30-102A AB GEN SUPPLY FAN 1B & DISCH FCO-30-102	1-MTR-30-102	RUNNING - Note 31		STOPPED		STOPPED		Note 2 & 39	
2-HS-30-104A AB GEN SUPPLY FAN 2A & DISCH FCO-30-104	2-MTR-30-104	RUNNING - Note 31		STOPPED		STOPPED		Note 2 & 39	
2-HS-30-105A AB GEN SUPPLY FAN 2B & DISCH FCO-30-105	2-MTR-30-105	RUNNING - Note 31		STOPPED		STOPPED		Note 2 & 39	
1-HS-30-107 U1 AB GEN SPACES & FH AREA SUP	1-FCO-30-107	OPEN		CLOSED		CLOSED		Note 2 & 39	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 294 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-87 U1 AB GEN SPACES SUPPLY	1-FCO-30-87	OPEN		CLOSED		CLOSED		Note 2 & 39	
2-HS-30-109 U2 AB GEN SUP OUTLET	2-FCO-30-109	OPEN		CLOSED		CLOSED		Note 2 & 39	
2-HS-30-22 U2 AB GEN SPACES SUPPLY	2-FCO-30-22	OPEN		CLOSED		CLOSED		Note 2 & 39	
1-HS-30-161 AB GEN EXH FAN 1A SUCT	1-FCO-30-161	OPEN		CLOSED		CLOSED		Note 2 & 39	
1-HS-30-167 AB GEN EXH FAN 1B SUCT	1-FCO-30-167	OPEN		CLOSED		CLOSED		Note 2 & 39	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 295 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-272 AB GEN EXH FAN 2A SUCT	2-FCO-30-272	OPEN		CLOSED		CLOSED		Note 2 & 39	
2-HS-30-276 AB GEN EXH FAN 2B SUCT	2-FCO-30-276	OPEN		CLOSED		CLOSED		Note 2 & 39	
1-HS-30-159A AB GEN EXHAUST FAN 1B & D1SCH FCO-30-159	1-MTR-30-159	RUNNING - N ote 31		STOPPED		STOPPED		Note 2 & 39	
1-HS-30-162A AB GEN EXHAUST FAN 1B & D1SCH FCO-30-162	1-MTR-30-162	RUNNING - N ote 31		STOPPED		STOPPED		Note 2 & 39	
2-HS-30-274A AB GEN EXHAUST FAN 2A & D1SCH FCO-30-274	2-MTR-30-274	RUNNING - N ote 31		STOPPED		STOPPED		Note 2 & 39	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 296 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-278A AB GEN EXHAUST FAN 2B & D1SCH FCO-30-278	2-MTR-30-278	RUNNING - Note 31		STOPPED		STOPPED		Note 2 & 39	
DAMPER 1-XI-31-343 FCO-31-343	1-FCO-31-343	OPEN Note 12		CLOSED		CLOSED		Note 2 & 39	
DAMPER 0-XI-31-365 FCO-31-365	0-FCO-31-365	OPEN Note 12		CLOSED		CLOSED		Note 2 & 39	
0-HS-31-67A SD BD ROOM A PRESS FAN C-B	0-MTR-31-67-B	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
0-HS-31-68A SD BD ROOM B PRESS FAN D-B	0-MTR-31-68-B	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 297 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-4 MCR FRESH AIR 0-XI-31-4	0-FCV-31-4	OPEN		CLOSED		OPEN		Note 2	
0-HS-31-7A CB EMERG CLEANUP FAN B-B & SUCT FCO-31-7	0-MTR-31-7-B	STOPPED		RUNNING		RUNNING		Note 2	
0-HS-31-5A CB EMERG PRESS FAN B-B & SUCT FCO-31-5	0-MTR-31-5-B	STOPPED - Note 13		RUNNING		RUNNING		Note 2	
0-HS-31-25A SPREADING ROOM EXH FAN B-B	0-MTR-31-25	RUNNING		STOPPED		STOPPED		Note 2	
0-HS-31-26A SPREADING ROOM EXH FAN B-B	0-MTR-31-26	RUNNING		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 298 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-406A SPREADING ROOM SUPPLY FAN	0-MTR-31-406	RUNNING		STOPPED		STOPPED		Note 2	
DAMPER 0-XI-31-9 FCO-31-9	0-FCO-31-9	OPEN		CLOSED		OPEN		Note 2	
DAMPER 0-XI-31-16 FCO-31-16	0-FCO-31-16	OPEN		CLOSED		OPEN		Note 2	
0-HS-31-418A TOILET & LKR RM EXHAUST FAN	0-MTR-31-418	RUNNING		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 299 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-136A FH AREA EXH FAN A & DISCH FCO-30-136	0-MTR-30-136	RUNNING - N ote 31		STOPPED		STOPPED		Note 2 & 39	
0-HS-30-138 FH AREA EXH FAN A DISCH	0-FCO-30-138	OPEN		CLOSED		CLOSED		Note 2 & 39	
0-HS-30-139A FH AREA EXH FAN B & FCO-30-139	0-MTR-30-139	RUNNING Note 31		STOPPED		STOPPED		Note 2 & 39	
0-HS-30-141 FH AREA EXH FAN B DISCH	0-FCO-30-141	OPEN		CLOSED		CLOSED		Note 2 & 39	
0-HS-30-130 CASK LOAD AREA SUPPLY	0-FCO-30-130	OPEN		CLOSED		CLOSED		Note 2 & 39	
0-HS-30-123 CASK LOAD AREA EXHAUST	0-FCO-30-123	OPEN		CLOSED		OPEN		Note 2 & 39	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 300 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-SW-30-136 FUEL HANDLING AREA EXH FAN A ISOLATION SWITCH (757' A13S)	0-MTR-30-136	CLOSED		OPEN		OPEN		CLOSED Note 39	
0-SW-30-139 FUEL HANDLING AREA EXH FAN B ISOLATION SWITCH (757' A14U)	0-MTR-30-139	CLOSED		CLOSED		CLOSED		CLOSED Note 39	
2-SW-30-278 AB GENERAL EXH FAN 2B ISOLATION SWITCH (757' A14T)	2-MTR-30-278	CLOSED		CLOSED		CLOSED		CLOSED Note 39	
2-SW-30-274 AB GENERAL EXH FAN 2A ISOLATION SWITCH (757' A14Q)	2-MTR-30-274	CLOSED		OPEN		OPEN		CLOSED Note 39	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 301 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

1-SW-30-162 AB GENERAL EXH FAN 1B ISOLATION SWITCH (757' A2S)	1-MTR-30-162	CLOSED		CLOSED		CLOSED		CLOSED	
LOCATION: 1-M-9				section 6.2					
BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-SW-30-159 AB GENERAL EXH FAN 1A ISOLATION SWITCH (757' A2U)	1-MTR-30-159	CLOSED		OPEN		OPEN		CLOSED Note 39	
0-HS-77-241 AUX BLDG H2 SUPPLY	0-FCV-77-241	OPEN		CLOSED		CLOSED		Note 2 & 39	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 302 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

**Date** \_\_\_\_\_

**LOCATION: 2-M-9**

**SUBSECTION 6.2**

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 2-XI-30-295 FCO-30-295	2-FCO-30-295-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-1A CNTMT PURGE SUP & EXH FANS 1A AND FCO-30-1A & 1B	2-MTR-30-1 (SUP)	RUNNING		STOPPED		STOPPED		Note 2	
	2-MTR-30-1E (EXH)	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-30-4A CNTMT PURGE SUP & EXH FANS 1B AND FCO-30-4A & 4B	2-MTR-30-4 (SUP)	RUNNING		STOPPED		STOPPED		Note 2	
	2-MTR-30-4E (EXH)	RUNNING		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 303 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-11A INSTR RM SUP & EXH FANS AND FCO-30-11B & 11B	2-MTR-30-11 (SUP)	RUNNING		STOPPED		STOPPED		Note 2	
	2-MTR-30-11E (EXH)	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-30-2 PURGE SUPPLY FAN 1A DISCH	2-FCV-30-2	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-5 PURGE SUPPLY FAN 1B DISCH	2-FCV-30-5	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-8 UPR CNTMT PURGE 2-FCV-30-30 & 50	2-FCV-30-50	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-8	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 304 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-9 UPR CNTMT PURGE 2-FCV-30-9 & 53	2-FCV-30-53	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-9	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-19 INST RM PURGE 2-FCV-30-19 & 58	2-FCV-30-58	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-19	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-12 ANNULUS PURGE SUPPLY	2-FCV-30-12	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-54 ANNULUS PURGE EXH	2-FCV-30-54	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-97 FLOOR CLG SUP INSIDE CIV-ØA	2-FCV-61-97	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 305 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-61-192 GLYCOL TO AHU INSIDE CIV-ØA	2-FCV-61-192	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-122 FLOOR CLG RET INSIDE CIV-ØA	2-FCV-61-122	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-194 GLYCOL FRM AHU INSIDE CIV-ØA	2-FCV-61-194	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-61 PURGE EXH FAN A SUCT	2-FCV-30-61	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-62 PURGE EXH FAN B SUCT	2-FCV-30-62	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 306 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-15 LWR CNTMT PURGE 2-FCV-30-15 & 57	2-FCV-30-57	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-15	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-16 LWR CNTMT PURGE SUP	2-FCV-30-16	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-37 LWR CNTMT PURGE EXH PRESS RLF	2-FCV-30-37	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 307 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-31-266A INSTR ROOM CLG B AHU CIRC PMP & FCO	2-MTR-31-266	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-31-327 CIRC PMP B SUCT CIV-ØA	2-FCV-31-327	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-329 CIRC PMP B DISCH CIV-ØA	2-FCV-31-329	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-305 CIRC PMP A SUCT CIV-ØA	2-FCV-31-305	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-309 CIRC PMP A DISCH CIV-ØA	2-FCV-31-309	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 308 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-15

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-77-125B1 FL & EQ DR SMP REAC BLDG PUMP B CONTROL	2-MTR-77-125B	RUNNING - N ote 6		STOPPED		STOPPED		Note 2	
2-HS-77-127A REAC BLDG SUMP DISCH CONTROL CIV-ØA IN CNTMT	2-FCV-77-127	OPEN - Note 14		CLOSED		CLOSED		CLOSED	
2-HS-77-9A RCDT PUMP DISCH VLV FLOW CONTROL CIV-ØA IN CNTMT	2-FCV-77-9	OPEN - Note 15		CLOSED		CLOSED		CLOSED	
2-HS-77-16A RCDT TO GAS ANAL FLOW CONTROL CIV-ØA OUT CNTMT	2-FCV-77-16	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-18A RCDT TO VENT HDR FLOW CONTROL CIV-ØA IN CNTMT	2-FCV-77-18	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 309 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-12

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-90-114 CNTMT TO RM-112 CIV CVI IN CNTMT	2-FCV-90-114	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-108 CNTMT TO RM-106 CIV CVI IN CNTMT	2-FCV-90-108	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-115 CNTMT TO RM-112 CIV CVI IN CNTMT	2-FCV-90-115	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-109 CNTMT TO RM-106 CIV CVI IN CNTMT	2-FCV-90-109	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-116 RM-112 RET TO UPPER CNTMT CIV CVI IN CNTMT	2-FCV-90-116	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-110 RM-106 RET TO LOWER CNTMT CIV CVI IN CNTMT	2-FCV-90-110	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 310 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-26

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Indicating Lights) DG RUN	2-GEN-82-2B-B	STOPPED		RUNNING		RUNNING		STOPPED	
2-HS-57-73A 1924-DG TO SD BD 2B-B	2-BKR-211-1924/6- B	OPEN		OPEN		OPEN		OPEN	
INITIAL / DATE		/		/		/		/	

LOCATION: 0-M-26

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-59A ERCW PMP H-B	0-MTR-67-59-A	STOPPED		RUNNING		RUNNING		RUNNING	
0-HS-67-47A ERCW PMP E-B	0-MTR-67-47-A	STOPPED		RUNNING		RUNNING		STOPPED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 311 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-26

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-152A CCS HX C ALT DISCH TO HDR B	0-FCV-67-152-B	OPEN/ CLOSED/ POS-B		POS A		POS A		Note 2	
INITIAL / DATE		/		/		/		/	

LOCATION: 0-M-27B

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-74A ANN VAC FAN 2B & SUCT FCO	2-MTR-65-74	RUNNING - Note 33		STOPPED		STOPPED		Note 2	
2-HS-65-4 U2 ANN VAC FANS SUCT	2-FCV-65-4	OPEN		CLOSED		CLOSED		(Note 1)	
2-HS-65-29 EGTS TR-B U2 SUCT DMPR	2-FCV-65-29	CLOSED		OPEN		OPEN		Note 2	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 312 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

2-HS-65-42A EGTS FAN B & DISCH DMPR	2-MTR-65-42-B	STOPPED		RUNNING		RUNNING		Note 2	
2-HS-65-45 EGTS TO U2 SHIELD BLDG	2-FCO-65-45	CLOSED		OPEN		OPEN		Note 2	
INITIAL / DATE		/		/		/		/	

LOCATION: 0-M-27B

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-83/87 U2 EGTS-ANN ΔP CNTLR B ISOL	2-PCV-65-87	CLOSED - Note 27		OPEN		OPEN		Note 2	
	2-PCV-65-83	CLOSED - Note 27		OPEN		OPEN		Note 2	
2-HS-70-85A EXC LTDN HX OUT CIV-ØA	2-FCV-70-85-B	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-70-51B CCS PMP C-S NORMAL ACB	0-MTR-70-51-S	RUNNING - Note 16		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 313 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-JB-292-2012 (713/A8W)

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-43-2 PRESSURIZER GAS SAMPLE ISOL VLV	2-FCV-43-2	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-34 ACCUM TANK SAMPLE HDR ISOL VLV	2-FCV-43-34	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-11 PRESSURIZER LIQUID SAMPLE ISOL VLV	2-FCV-43-11	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-22 HOT LEGS 1/3 SAMPLE ISOL VLV	2-FCV-43-22	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 314 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-JB-292-4262 (713/A9V)

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-43-54D STEAM GEN 1 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-54D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-56D STEAM GEN 2 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-56D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-59D STEAM GEN 3 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-59D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-63D STEAM GEN 4 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-63D	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 315 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: LOCAL

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(1-L-572) 1-HS-31-437 PASF GENERAL SUPPLY FAN C1	1-MTR-31-437-C1/ 1	RUNNING		STOPPED		STOPPED		Note 2	
(2-R-75) HWPB (FWI AUX RELAY)	RELAY HWPB	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(6.9kV Unit Bd 2A, Compt. 8) FEEDWATER ISOL AUX RELAY 5X	RELAY 5X	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-9B) VOM-FSV9B 729/T16J	2-FSV-46-9B	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-36B) VOM-FSV36B 729/T16H	2-FSV-46-36B	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 316 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: LOCAL

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-SI		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Local at 2-FSV-47-26B) VOM-FSV24 755/T12J	2-FSV-47-26B	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-27) VOM-FSV27 755/T12J	2-FSV-47-27	DE- ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL / DATE		/		/		/		/	

**NOTES**

**SUBSECTION 6.2**

- 1 The Pre-Test "REQUIRED" position for all handswitches is the Spring-Return to "Center" position (AUTO, A-AUTO, A-P AUTO, NORMAL), unless specified otherwise.
- 2 The Post-Test "REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. As-left status for these components is recorded in the Post-Test "ACTUAL" column.
- 3 Not used
- 4 Use handswitch valve position indication for "148A" Valve only, NOT "148" valve.
- 5 Use handswitch valve position indication for "171A" Valve only, NOT "171" Valve.
- 6 Handswitch in the Center "Pull-Out" position (A-P AUTO, P AUTO STANDBY)

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 317 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

Date \_\_\_\_\_

- 7 "NOT CLOSED" is defined as either Modulating or Full-Open.
- 8 Not used
- 9 Handswitch is Local.
- 10 Handswitch is on Switchgear.
- 11 FIC in "MANUAL" with controller output set to 100%.
- 12 1-HS-31-481 (1-L-572) in Normal.
- 13 0-HS-31-5D in Bypass.
- 14 2-HS-77-127B in Block.
- 15 2-HS-77-9B in Block.
- 16 Fans and Pumps initially running will be secured in this subsection prior to SI Actuation.
- 17 Not used
- 18 Not used
- 19 Not used
- 20 Not used
- 21 Component position verified and repositioned in this subsection.
- 22 Not used
- 23 Thermostat for coolers and fans are disabled.
- 24 HS in Auto.
- 25 Not used
- 26 Not used
- 27 Handswitch in "A Auto".
- 28 Not used
- 29 Not used
- 30 Not used
- 31 Component is to be started per 0-SOI-30.05.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 318 of 569</b>
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**Safety Injection (SI) - Train 2B, Section 6.2**

**Date \_\_\_\_\_**

- 32 Not used
- 33 Component is to be started per SOI-65.02.
- 34 Not used
- 35 Not used
- 36 Not used
- 37 Not used
- 38 Not used
- 39. These components are verified to ensure correct operation but are not Acceptance Criteria. These items are tested in 0-SI-30-7-A

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 319 of 569</b>
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**Appendix M  
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2B1-B, Compt. 3C 2-BKR-30-178 CS PUMP 2B-B RM CLR	2-MTR-30-178-B	RED LIGHT OFF  HS - AUTO		RED LIGHT ON		RED LIGHT OFF		RED LIGHT OFF	
INITIAL / DATE		/		/		/		/	

LOCATION: 2-M-6

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-72-10A CNTMT SPRAY PMP B	2-MTR-72-10-B	STOPPED		RUNNING		RUNNING		STOPPED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 320 of 569</b>
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**Appendix M  
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-97A UPR CNTMT CLR B	2-MTR-30-97	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-30-75A LWR CNTMT CLR B-B	2-MTR-30-75-B	RUNNING - Note 1		STOPPED		STOPPED		Note 2	
2-HS-30-92A CRDM CLR B-B	2-MTR-30-92/1-B	RUNNING - Note 1		STOPPED		STOPPED		Note 2	
2-HS-30-100A UPR CNTMT CLR D	2-MTR-30-100	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-30-78A LWR CNTMT CLR D-B	2-MTR-30-78-B	RUNNING - Note 1		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 321 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-80A CRDM CLR D-B	2-MTR-30-80/1-B	RUNNING - Note 1		RUNNING		STOPPED		Note 2	
2-HS-30-39A AIR RETURN FAN B-B	2-FCV-30-39-B	STOPPED A AUTO		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 322 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 2-M-15

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-32-103A AUX AIR TO RX BLDG TR B CIV ØB 70 PSI D/S CLOSSES	2-FCV-32-103	OPEN		CLOSED		CLOSED		Note 2	
2-HS-32-111A REACTOR BLDG UNIT 2 TRAIN B NON- ESSENTIAL CONTROL AIR ISOLATION VLV	2-FCV-32-111	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 323 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-131A UPR CNTMT CLR A RET CIV-ØB	2-FCV-67-131	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-134A UPR CNTMT CLR A RET CIV-ØB	2-FCV-67-134	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-88A LWR CNTMT A CLRS RET CIV-ØB	2-FCV-67-88-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-96A UPR CNTMT C CLRS SUP CIV-ØB	2-FCV-67-96-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-83A LWR CNTMT A CLRS SUP CIV-ØB	2-FCV-67-83-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 324 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-91A LWR CNTMT C CLRS SUP CIV-ØB	2-FCV-67-91-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-297A UPR CNTMT CLR B RET CIV-ØB	2-FCV-67-297-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-138A UPR CNTMT CLR B SUP CIV-ØB	2-FCV-67-138-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-298A UPR CNTMT CLR D RET CIV-ØB	2-FCV-67-298-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-141A UPR CNTMT CLR D SUP CIV-ØB	2-FCV-67-141-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 325 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-103A LWR CNTMT B CLRS SUP CIV-ØB	2-FCV-67-103-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-111A LWR CNTMT D CLRS SUP CIV-ØB	2-FCV-67-111-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-105A LWR CNTMT B CLRS SUP CIV-ØB	2-FCV-67-105-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-113A LWR CNTMT D CLRS SUP CIV-ØB	2-FCV-67-113-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 326 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.2

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-CIØB□		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-70-87A THERMAL BAR RET CIV-ØB	2-FCV-70-87-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-70-89A RCP OIL CLRS RET CIV-ØB	2-FCV-70-89-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-70-140A RCP OIL CLRS RET CIV-ØB	2-FCV-70-140-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-70-130B THRM BAR BSTR PMP 2B (TBBP)	2-PMP-70-130-B	RUNNING - Note 1		STOPPED		STOPPED		Note 2	
2-HS-70-134A THRM BAR SUP CIV-ØB	2-FCV-70-134-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 327 of 569</b>
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**Containment Isolation Phase B (CIØB) - Train 2B, Section 6.2**

**Date \_\_\_\_\_**

**NOTES**

**SUBSECTION 6.2**

- 1 Handswitch in the Center "Pull-Out" position (A-P AUTO, P AUTO STANDBY)
- 2 The Post-Test REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. As-left status for these components is recorded in the Post-Test "ACTUAL" column.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 328 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1B1-B, Compt. 2C 1-BKR-30-197 PENT RM EL 713 CLR 1B-B	1-MTR-30-197-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 1B1-B, Compt. 2F2 VALVE AND STRAINER ROOM SUMP B PUMP 1B-B 1-MTR-40-66-A-B	1-MTR-40-66A	CLOSED		TRIPPED		TRIPPED		CLOSED	
C&A Vent Bd 1B1-B, Compt. 3B 1-BKR-30-202 AB EL 692 PIPE CHASE CLR 1B-B	1-MTR-30-202-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 1B1-B, Compt. 5A 0-BKR-30-193 SFP PMP/TBBP AREA CLR B-B	0-MTR-30-193-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 1B1-B, Compt. 5E 1-BKR-30-191 CCS/AFW PMP AREA CLR 1B-B	1-MTR-30-191-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 329 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

**LOCATION: SWGR/MCC**

**SUBSECTION 6.3**

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 1B1-B, Compt. 7C 0-BKR-26-14A HPFP BACKWASH STRAINER 1B	0-MTR-26-14-B	RED LIGHT ON		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 1B1-B, Compt. 8B 1-BKR-30-187 PENT RM EL 692 CLR 1B-B	1-MTR-30-187-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 1B1-B, Compt. 9E 1-BKR-30-195 PENT RM EL 737 CLR 1B-B	1-MTR-30-195-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
INITIAL / DATE		/		/		/		/	

**LOCATION: SWGR/MCC**

**SUBSECTION 6.3**

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2B1-B, Compt. 4D 2-BKR-62-244 CCP AUX OIL PMP 2B	2-MTR-62-244-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 330 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2B1-B, Compt. 16E POWER OUTLETS: 2-PO-213-B1/1, 2-PO-213-B1/2, 2-PO-213-B1/3, 2-PO-213-B1/4, 2-PO-213-B1/5	2-PO-213-B1/1,2,3,4 ,5	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2B1-B, Compt. 117E POWER OUTLETS: 2-PO-213-B1/6, 2-PO-213-B1/7, 2-PO-213-B1/8, 2-PO-213-B1/9, 2-PO-213-B1/10	2-PO-213-B1/6,7,8,9 ,10	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2B1-B, Compt. 16D 2-BKR-213-B001/16D THERMAL OVERLOAD BYPASS 2B1	2-RLY-270-B1	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
RX MOV Bd 2B1-B, Compt. 17A 2-BKR-62-228/3 BORIC ACID BATCH TANK HTR 3	2-HTR-62-228/1	CLOSED Note 22		TRIPPED		TRIPPED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 331 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
RX MOV Bd 2B1-B, Compt. 17F2 2-BKR-31-324A INSTR RM A/C COMPR 2B	2-MTR-31-324B	CLOSED		TRIPPED		TRIPPED		CLOSED	
RX MOV Bd 2B1-B, Compt. 18C 2-BKR-31-324A INCORE INSTR RM CW PMP 2B	2-MTR-31-324/1	RUNNING - Note 19,29		STOPPED		STOPPED		Note 2	
RX MOV Bd 2B2-B, Compt. 6F 2-BKR-213-B2/6F THERMAL OVERLOAD BYPASS 2B2	2-RLY-270-B2	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 2B1-B, Compt. 2C 2-BKR-30-197 PENT RM EL 713 CLR 2B-B	2-MTR-30-197-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 2B1-B, Compt. 2F1 VALVE AND STRAINER ROOM SUMP B PUMP 2B-B 2-MTR-40-66B	2-MTR-40-66B	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 332 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2B1-B, Compt. 3B 2-BKR-30-202 AB EL 692 PIPE CHASE CLR 2B-B	2-MTR-30-202-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
C&A Vent Bd 2B1-B, Compt. 3C 2-BKR-30-178 CS PUMP 2B-B RM CLR	2-MTR-30-178-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT OFF		Note 2	
C&A Vent Bd 2B1-B, Compt. 5E 2-BKR-30-185 AFW/BA XFER PMP SPACE CLR 2B-B	2-MTR-30-185-B	RED LIGHT OFF- Note 9,24		RED LIGHT ON		RED LIGHT OFF- Note 23		Note 2	
C&A Vent Bd 2B1-B, Compt.8A 2-BKR-30-179 SIS PUMP 2B-B RM CLR	2-MTR-30-179-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 2B1-B, Compt. 8B 2-BKR-30-187 PENT RM EL 692 CLR 2B-B	2-MTR-30-187-B	RED LIGHT OFF - Note 9,24		RED LIGHT ON		RED LIGHT OFF - Note 23		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 333 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
C&A Vent Bd 2B1-B, Compt. 9A 2-BKR-30-176 RHR PUMP 2B-B RM COOLER	2-MTR-30-176-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A Vent Bd 2B1-B, Compt. 9E 2-BKR-30-195 PENT RM EL 737 CLR 2B-B	2-MTR-30-195-B	RED LIGHT OFF- Note 9,24		RED LIGHT ON		RED LIGHT OFF- Note 23		Note 2	
C&A Vent Bd 2B1-B, Compt. 10A 2-BKR-30-182 CENT CHG PUMP 2B-B RM CLR	2-MTR-30-182-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		RED LIGHT OFF	
C&A Vent Bd 2B1-B, Compt. 10D 0-BKR-30-156 ABGTS HUMIDITY HTR B-B	0-HTR-30-156-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
C&A Vent Bd 2B1-B, Compt. 12B 2-BKR-30-207 EGTS ROOM CLR 2B-B	2-MTR-30-207-B	RED LIGHT OFF		RED LIGHT ON		RED LIGHT ON		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 334 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
480V SD Bd 2B1-B, Compt. 7B 0-BKR-78-35 ALT FDR SFP CIRC PUMP C-S	0-MTR-78-35-S	CLOSED Note 9		OPEN		OPEN		OPEN	
480V SD Bd 2B1-B, Compt. 9A 2-MCC-214-B2-B 480V C&A BLDG BENT BD 2B2-B ALTERNATE FEEDER	2-BKR-212-B1/9A-B	CLOSED Note 10		OPEN		OPEN		CLOSED	
480V SD Bd 2B1-B, Compt. 9B REACTOR VENT BOARD 2B-B NORMAL FEEDER 2-MCC-232-B-B	2-BKR-212-B1/9B-B	CLOSED Note 10		OPEN		OPEN		CLOSED	
480V SD Bd 2B1-B, Compt. 10D 2-BKR-30-92/2 CRDM CLR 2B-B 2nd STAGE FAN	2-MTR-30-92/2-B	RUNNING		STOPPED		STOPPED/ RUNNING		Note 2	
480V SD Bd 2B1-B, Compt 12D CURRENT LIMITING REACTOR BYPASS BKR 52T	2-BKR-212-B1/12D-B	OPEN Note 10		CLOSED		CLOSED		OPEN	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 335 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
480V SD Bd 2B2-B, Compt. 2B ELEC RD RM CHLR B-B COMPR 0-BKR-31-129/2-B	0-MTR-31-129/2-B	RUNNING Note 19, 28		RUNNING		RUNNING		NOTE 2	
480V SD Bd 2B2-B, Compt. 9A REACTOR VENT BOARD 2B-B ALTERNATE FEEDER 2-MCC-232-B-B	2-BKR-212-B2/9A-B	CLOSED Note 10		OPEN		OPEN		CLOSED	
480V SD Bd 2B2-B, Compt. 10B 2-MCC-214-B2-B 480V C&A BLDG BENT BD 2B2-B NORMAL FEEDER	2-BKR-212-B2/10B-B	CLOSED Note 10		OPEN		OPEN		CLOSED	
480V SD Bd 2B2-B, Compt. 10C 2-BKR-30-80/2 CRDM CLR 2 D-B 2ND STAGE FAN	2-MTR-30-80/2-B	RUNNING		STOPPED		STOPPED/ RUNNING		Note 2	
480V SD Bd 2B2-B, Compt 12D CURRENT LIMITING REACTOR BYPASS BKR 52T	2-BKR-212-B2/12D-B	OPEN Note 10		CLOSED		CLOSED		OPEN	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 336 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
Diesel Aux Bd 2B1-B. Compt 5A DIESEL GENERATOR 2B-B AIR COMPRESSOR 2	2-MTR-82-271	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Au x Bd 2B1-B. Comps 5F1 0-BKR-30-482 DGB CORRIDOR EL 742 HTR 1B	0-HTR-30-482	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B1-B. Compt 5F2 POWER OUTLETS	2-PO-215-5,6,7	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B2-B. Compt 2C DIESEL GENERATOR 2B-B WATER HEATER 2	2-HTR-82-B2-B	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Au x Bd 2B2-B. Comps 3E1 0-BKR-30-490 DG 2B-B ELEC BD RM HTR	2-HTR-30-490	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 337 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: SWGR/MCC

SUBSECTION 6.3

BREAKER/DESCRIPTION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
Diesel Aux Bd 2B2-B, Compt 3F1 0-BKR-30-477 DG 2B-B ROOM HTR 2A	2-HTR-30-477	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B2-B, Compt 3F2 0-BKR-30-478 DG 2B-B ROOM HTR 2B	2-HTR-30-478	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B2-B, Compt 4B 0-BKB-18-98 DG FUEL OIL XFER PUMP	0-MTR-18-98	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B2-B, Compt 5A DIESEL GENERATOR 2B-B AIR COMPRESSOR 1	2-MTR-82-270	CLOSED		TRIPPED		TRIPPED		CLOSED	
Diesel Aux Bd 2B2-B, Compt 6D DIESEL GENERATOR 2B-B SPACE HEATER	2-HTR-82-200	CLOSED		TRIPPED		TRIPPED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 338 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35 MFW REG FCV 3-35	2-FCV-3-35	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-48	2-FCV-3-48	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-90	2-FCV-3-90	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35 MFW REG FCV 3-103	2-FCV-3-103	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XX-3-35A BYP REG FCV 3-35A	2-FCV-3-35A	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 339 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XX-3-35A MFW REG FCV 3-90	2-FCV-3-90A	OPEN - Note 11		CLOSED		CLOSED		CLOSED	
2-XI-3-236 SG 1 MFW BYP ISOL 2-FCV-3-236	2-FCV-3-236	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-239 SG 2 MFW BYP ISOL 2-FCV-3-239	2-FCV-3-239	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-3-47A SG 2 MFW ISOL VLV	2-FCV-3-47-B	OPEN		CLOSED		CLOSED		CLOSED	
2-XI-3-242 SG 3 MFW BYP ISOL 2-FCV-3-242	2-FCV-3-242	OPEN - Note 9		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	



WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 340 of 569
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-3

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-XI-3-245 SG 4 MFW BYP ISOL 2-FCV-3-245	2-FCV-3-245	OPEN - Note 9		CLOSED		CLOSED		CLOSED	
2-HS-3-100A SG 4 MFW ISOL VLV	2-FCV-3-100-B	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV-3-185	2-FCV-3-185	OPEN		CLOSED		CLOSED		CLOSED	
2-XX-3-235 CKV BYP-REV FLUSH FCV-3-187	2-FCV-3-187	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 341 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-128A AFW PMP B-B	2-MTR-3-128-B	RUNNING- Note 3		RUNNING		RUNNING		STOPPED	
2-F1C-46-57A-S T-D AFWP FLOW CONTROLLER	2-F1C-46-57A-S	MANUAL		AUTO		AUTO		MANUAL	
2-HS-46-56A-S T-D AFWP T&L VLV	2-FCV-1-51-S	CLOSED		OPEN		OPEN		CLOSED	
2-HS-3-174A SG 1 SUPPLY LCV-3-174 CNTL	2-LCV-3-174	CLOSED		NOT CLOSED (Note 7)		NOT CLOSED (Note 7)		CLOSED	
2-HS-3-173A SG 2 SUPPLY LCV-3-173 CNTL	2-LCV-3-173	CLOSED		NOT CLOSED (Note 7)		NOT CLOSED (Note 7)		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 342 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-LIC-3-174A SG 1 SUPPLY FRM T-D PMP	2-LIC-3-174A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-173A SG 2 SUPPLY FRM T-D PMP	2-LIC-3-173A	MANUAL		AUTO		AUTO		MANUAL	
2-HS-3 148A SG 3 SUPPLY LCV-3-148 CNTL	2-LCV-3-148A	CLOSED - Note 4		N/A - Note 21	N/A	N/A	N/A	CLOSED	
2-HS-3-171A SG 4 SUPPLY LCV-3-171 CNTL	2-LCV-3-171A	CLOSED - Note 5		N/A - Note 21	N/A	N/A	N/A	CLOSED	
2-HS-3-172A SG 3 SUPPLY LCV-3-172 CNTL	2-LCV-3-172	CLOSED		NOT CLOSED		NOT CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 343 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-3-175A SG 4 SUPPLY LCV-3-175 CNTL	2-LCV-3-175	CLOSED		<b>NOT CLOSED</b>		<b>NOT CLOSED</b>		CLOSED	
2-LIC-3-148A SG 3 SUPPLY FRM PMP B-B	2-LIC-3-148A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-171A SG 4 SUPPLY FRM PMP B-B	2-LIC-3-171A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-172A SG 3 SUPPLY FRM T-D PMP	2-LIC-3-172A	MANUAL		AUTO		AUTO		MANUAL	
2-LIC-3-175A SG 4 SUPPLY FRM T-D PMP	2-LIC-3-175A	MANUAL		AUTO		AUTO		MANUAL	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 344 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-RT-1 RX TRIP BKR A (Ind. Light Nomenclature)	2-52RTA	CLOSED		OPEN		OPEN		OPEN	
2-RT-1 RX TRIP BKR B (Ind. Light Nomenclature)	2-52RTB	CLOSED		OPEN		OPEN		OPEN	
2-HS-1-7/181 (181 lights above HS) SG 1 BLOWDOWN VLVS	2-FCV-1-7	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-14/182 (14 lights on HS) SG 2 BLOWDOWN VLVS	2-FCV-1-182	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-1-25/183 (183 lights above HS) SG 3 BLOWDOWN VLVS	2-FCV-1-25	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 345 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-4

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-1-32/184 (32 lights on HS) SG 4 BLOWDOWN VLVS	2-FCV-1-184	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-68-341D BACKUP HEATERS B-B	2-HTR-68-341D/B1-B	ON		OFF		OFF		OFF	
2-HS-68-341H BACKUP HEATERS C	2-HTR-68-341H/C1-B	ON		OFF		OFF		Note 2	
2-HS-68-308A PRT TO GAS ANALYZER	2-FCV-68-308	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 346 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 2-M-5**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-81-7A PRIMARY WATER PUMP B	2-MTR-81-7	RUNNING		LIGHTS OFF		LIGHTS OFF		Note 2	
2-HS-62-61A RCP SEAL RETURN CIV-ØA	2-FCV-62-61-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-101A PD CHARGING PUMP	2-MTR-62-101	RUNNING		STOPPED		STOPPED		STOPPED	
2-HS-62-104A CCP B-B (ECCS)	2-MTR-62-104-B	RUNNING - Note 3		RUNNING		RUNNING		STOPPED	
2-HS-62-133A VCT TO CHARGING PMPS SUCTION	2-LCV-62-133-B	OPEN - Note 6		CLOSED		CLOSED		OPEN	
2-HS-62-136A RWST TO CHARGING PMPS SUCTION	2-LCV-62-136-B	CLOSED - Note 6		OPEN		OPEN		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 347 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 2-M-6**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-62-91A CHARGING LINE ISOL	2-FCV-62-91-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-62-77A LP LETDOWN ORIFICE CIV-ØA	2-FCV-62-77	OPEN		CLOSED		CLOSED		Note 2	
2-HS-74-20A RHR PMP B (ECCS)	2-MTR-74-20-B	RUNNING- Note 3		RUNNING		RUNNING		STOPPED	
2-XI-74-28 RHR HX B OUTLET FLOW CNTL FCV-74-28	2-FCV-74-28	CLOSED		OPEN		OPEN		Note 2	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 348 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-6

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-63-25A BIT OUTLET	2-FCV-63-25-B	CLOSED		OPEN		OPEN		CLOSED	
2-HS-63-15A SI PMP B (ECCS)	2-MTR-63-15-B	RUNNING- Note 3		RUNNING		RUNNING		STOPPED	
2-HS-63-23 CLA FILL FROM SI PMPS	2-FCV-63-23	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

LOCATION: 2-M-6

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-63-84A CKV TEST LINE TO HUT	2-FCV-63-84	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-72-10A CNTMT SPRAY PMP B	2-MTR-72-10-B	RUNNING- Note 3		RUNNING		RUNNING		STOPPED	
INITIAL / DATE		/		/		/		/	

WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 349 of 569
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 2-XI-30-295 FCO-30-295	2-FCO-30-295-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-1A CNTMT PURGE SUP & EXH FANS 1A AND FCO-30-1A & 1B	2-MTR-30-1 (SUP)	RUNNING		STOPPED		STOPPED		Note 2	
	2-MTR-30-1E (EXH)	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-30-4A CNTMT PURGE SUP & EXH FANS 1B AND FCO-30-4A & 4B	2-MTR-30-4 (SUP)	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2-MTR-30-4E (EXH)	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 350 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date** \_\_\_\_\_

**LOCATION: 2-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-11A INSTR RM PURGE SUP & EXH FANS AND FCO-30-11A & 11B	2-MTR-30-11 (SUP)	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2-MTR-30-11E (EXH)	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-HS-30-2 PURGE SUPPLY FAN 1A DISCH	2-FCV-30-2	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-5 PURGE SUPPLY FAN 1B DISCH	2-FCV-30-5	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 351 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-8 UPR CNTMT PURGE 2-FCV-30-8 & 50	2-FCV-30-50	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-8	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-9 UPR CNTMT PURGE 2-FCV-30-9 & 53	2-FCV-30-53	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-9	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-19 INST RM PURGE 2-FCV-30-19 & 58	2-FCV-30-58	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-19	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 352 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-12 ANNULUS PURGE SUPPLY	2-FCV-30-12	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-54 ANNULUS PURGE EXH	2-FCV-30-54	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-97 FLOOR CLG SUP INSIDE CIV-ØA	2-FCV-61-97	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-192 GLYCOL TO AHU INSIDE CIV-ØA	2-FCV-61-192	OPEN		CLOSED		CLOSED		Note 2	
2-HS-61-122 FLOOR CLG RET INSIDE CIV-ØA	2-FCV-61-122	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 353 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date** \_\_\_\_\_

**LOCATION: 2-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-61-194 GLYCOL FRM AHU INSIDE CIV-ØA	2-FCV-61-194	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-61 PURGE EXH FAN A SUCT	2-FCV-30-61	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-62 PURGE EXH FAN B SUCT	2-FCV-30-62	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-15 LWR CNTMT PURGE 2-FCV-30-15 & 57	2-FCV-30-57	OPEN		CLOSED		CLOSED		Note 2	
	2-FCV-30-15	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-16 LWR CNTMT PURGE SUP	2-FCV-30-16	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 354 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-37 LWR CNTMT PURGE EXH PRESS RLF	2-FCV-30-37	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-97A UPR CNTMT CLR B	2-MTR-30-97	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-HS-30-75A LWR CNTMT CLR B-B	2-MTR-30-75-B	RUNNING Note 6		STOPPED		STOPPED/ RUNNING		Note 2	
2-HS-30-92A CRDM CLR B-B MTR 1&2	2-MTR-30-92/1-B	RUNNING Note 6		STOPPED		STOPPED/ RUNNING		Note 2	
2-HS-30-100A UPR CNTMT CLR D	2-MTR-30-100	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 355 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-78A LWR CNTMT CLR D-B	2-MTR-30-78-B	RUNNING Note 6		STOPPED		STOPPED/ RUNNING		Note 2	
2-HS-30-80A CRDM CLR D-B MTR 1&2	2-MTR-30-80/1-B	RUNNING Note 6		STOPPED		STOPPED/ RUNNING		Note 2	
2-HS-30-39A AIR RETURN FAN B-B	2-MTR-30-39-B	STOPPED A AUTO		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

LOCATION: 2-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-31-266 INSTR ROOM CLG B AHU CIRC PMP & FCO	2-MTR-31-266	RUNNING		STOPPED		STOPPED		Note 2	
2-HS-31-327 CIRC PMP B SUCT CIV-ØA	2-FCV-31-327	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-305 CIRC PMP A SUCT CIV-ØA	2-FCV-31-305	OPEN		CLOSED		CLOSED		Note 2	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 356 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

**LOCATION: 2-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-31-309 CIRC PMP A DISCH CIV-ØA	2-FCV-31-309	OPEN		CLOSED		CLOSED		Note 2	
2-HS-31-329 CIRC PMP B DISCH CIV-ØA	2-FCV-31-329	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

**LOCATION: 1-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-136A FH AREA EXH FAN A & DISCH FCO-30-136	0-MTR-30-136	RUNNING Note 31		STOPPED		STOPPED		Note 2	
0-HS-30-139A FH AREA EXH FAN B & FCO-30-139	0-MTR-30-139	RUNNING Note 31		STOPPED		STOPPED		Note 2	
0-HS-30-138 FH AREA EXH FAN A DISCH	0-FCO-30-138	OPEN		CLOSED		CLOSED		Note 2	
0-HS-30-141 FH AREA EXH FAN B DISCH	0-FCO-30-141	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 357 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 1-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-30-130 CASK LOAD AREA SUPPLY	0-FCO-30-130	OPEN		CLOSED		CLOSED		Note 2	
0-HS-30-123 CASK LOAD AREA EXHAUST	0-FCO-30-123	OPEN		CLOSED		OPEN		Note 2	
0-HS-77-241 AUX BLDG H2 SUPPLY	0-FCV-77-241	OPEN		CLOSED		CLOSED		Note 2	
SW-30-136 (FH AREA A) FUEL HANDLING AREA EXH FAN SHUNT TRIP STATUS	0-MTR-30-139	CLOSED		OPEN		OPEN		CLOSED	
INITIAL / DATE		/		/		/		/	

WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 358 of 569
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
SW-30-159 (AB 1A) AB GENERAL EXHAUST FAN SHUNT TRIP STATUS	1-MTR-30-162	CLOSED		OPEN		OPEN		CLOSED	
SW-30-278 (AB 2A) AB GENERAL EXHAUST FAN SHUNT TRIP STATUS	2-MTR-30-278	CLOSED		OPEN		OPEN		CLOSED	
1-HS-30-103A AB GEN SUPPLY FAN 1A & DISCH FCO-30-103	1-MTR-30-103	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
1-HS-30-102A AB GEN SUPPLY FAN 1B & DISCH FCO-30-102	1-MTR-30-102	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
2-HS-30-104A AB GEN SUPPLY FAN 2A & DISCH FCO-30-104	2-MTR-30-104	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 359 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-105A AB GEN SUPPLY FAN 2B & DISCH FCO-30-105	2-MTR-30-105	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
1-HS-30-107 U1 AB GEN SPACES & FH AREA SUP	1-FSV-30-107	OPEN		CLOSED		CLOSED		Note 2	
1-HS-30-87 U1 AB GEN SPACES SUPPLY	1-FCO-30-87	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-109 U2 AB GEN SUP OUTLET	2-FCO-30-109	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-22 U2 AB GEN SPACES SUPPLY	2-FCO-30-22	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 360 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 1-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-161 AB GEN EXH FAN 1A SUCT	1-FCO-30-161	OPEN		CLOSED		CLOSED		Note 2	
1-HS-30-167 AB GEN EXH FAN 1B SUCT	1-FCO-30-167	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-272 AB GEN EXH FAN 2A SUCT	2-FCO-30-272	OPEN		CLOSED		CLOSED		Note 2	
2-HS-30-276 AB GEN EXH FAN 2B SUCT	2-FCO-30-276	OPEN		CLOSED		CLOSED		Note 2	
1-HS-30-159A AB GEN EXHAUST FAN 1A & D1SCH FCO-30-159	1-MTR-30-159	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 361 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 1-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
1-HS-30-162A AB GEN EXHAUST FAN 1B & D1SCH FCO-30-162	1-MTR-30-162	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
2-HS-30-274A AB GEN EXHAUST FAN 2A & D1SCH FCO-30-274	2-MTR-30-274	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
2-HS-30-278A AB GEN EXHAUST FAN 2B & D1SCH FCO-30-278	2-MTR-30-278	RUNNING - Note 31		STOPPED		STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 362 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
DAMPER 1-XI-31-343 FCO-31-343	1-FCO-31-343	OPEN		CLOSED		CLOSED		Note 2	
DAMPER 0-XI-31-365 FCO-31-365	0-FCO-31-365	OPEN		CLOSED		CLOSED		Note 2	
0-HS-31-67A SD BD ROOM A PRESS FAN C-B	0-MTR-31-67-B	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
0-HS-31-49A SD BD ROOM A & B A/C SYS B-B	0-MTR-31-49/2-B	RUNNING - Note 32, 38		RUNNING		RUNNING		Note 2	
0-HS-31-68A SD BD ROOM A PRESS FAN A-A	0-MTR-31-68-B	RUNNING		STOPPED		RUNNING/ STOPPED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 363 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

**LOCATION: 1-M-9**

**SUBSECTION 6.3**

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-4 MCR FRESH AIR	0-FCV-31-4	OPEN		CLOSED		OPEN		Note 2	
0-HS-31-7A CB EMERG CLEANUP FAN A-A & SUCT FCO-31-8	0-MTR-31-7-B	STOPPED		RUNNING		RUNNING		Note 2	
0-HS-31-5A CB EMERG PRESS FAN B-B & SUCT FCO-31-5	0-MTR-31-5-B	STOPPED		RUNNING		RUNNING		Note 2	
0-HS-31-25A SPREADING ROOM EXH FAN A-A	0-MTR-31-25	RUNNING		STOPPED		STOPPED		Note 2	
0-HS-31-26A SPREADING ROOM EXH FAN B-B	0-MTR-31-26	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 364 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 1-M-9

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-31-406A SPREADING ROOM SUPPLY FAN	0-MTR-31-406	RUNNING		STOPPED		STOPPED		Note 2	
DAMPER 0-XI-31-9 FCO-31-9	0-FCO-31-9	OPEN		CLOSED		OPEN		Note 2	
DAMPER 0-XI-31-16 FCO-31-16	0-FCO-31-16	OPEN		CLOSED		OPEN		Note 2	
0-HS-31-418A TOILET & LKR RM EXHAUST FAN	0-MTR-31-418	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 365 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-15

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-77-125B1 RX BLDG F & EQ SUMP PMP B	2-MTR-77-125B	N/A - Note 17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-HS-77-127A RB F & EQ SUMP PMPS TO TDCT CIV-ØA OUT CNTMT	2-FCV-77-127	OPEN - Note 14		CLOSED		CLOSED		CLOSED	
2-HS-77-9A RCDT PMPS TO TDCT CIV-ØA OUT CNTMT	2-FCV-77-9	OPEN - Note 15		CLOSED		CLOSED		CLOSED	
2-HS-77-16A RCDT TO GAS ANAL CIV-ØA OUT CNTMT	2-FCV-77-16	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-77-18A RCDT TO WDS VENT HDR CIV-ØA IN CNTMT	2-FCV-77-18-B	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 366 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-M-15

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-32-103A AUX AIR TO RX BLDG TR B CIV ØB/70 PSI D/S CLOSSES	2-FCV-32-103	OPEN		CLOSED		CLOSED		Note 2	
2-HS-32-111A REACTOR BLDG UNIT 2 TRAIN B NON- ESSENTIAL CONTROL AIR ISOLATION VLV	2-FCV-32-111	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 367 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-12

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-90-114 CNTMT TO RM-112 CIV CVI IN CNTMT	2-FCV-90-114	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-108 CNTMT TO RM-106 CIV CVI IN CNTMT	2-FCV-90-108	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-115 CNTMT TO RM-112 CIV CVI IN CNTMT	2-FCV-90-115	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-109 CNTMT TO RM-106 CIV CVI IN CNTMT	2-FCV-90-109	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-116 RM-112 RET TO UPPER CNTMT CIV CVI IN CNTMT	2-FCV-90-116	OPEN		CLOSED		CLOSED		Note 2	
2-HS-90-110 RM-106 RET TO LOWER CNTMT CIV CVI IN CNTMT	2-FCV-90-110	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 368 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-25

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-30-157A ABGTS FAN B-B	2-MTR-30-157-B	STOPPED		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

LOCATION: 0-M-26

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-57-71B 1828-NORMAL FROM CSST D	2-BKR-211-1828/16	CLOSED		OPEN		OPEN		CLOSED	
2-HS-57-73A 1924-DG TO SD BD 2B-B	2-BKR-211-1924/6	OPEN		CLOSED		CLOSED		OPEN	
2-HS-57-98B 1938-ALTERNATE FROM CSST C	1-BKR-211-1938/1	OPEN		OPEN		OPEN		OPEN	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 369 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-131A UPR CNTMT CLR A RET CIV-ØB	2-FCV-67-131-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-134A UPR CNTMT CLR C RET CIV-ØB	2-FCV-67-134-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-88A LWR CNTMT A CLRS RET CIV-ØB	2-FCV-67-88-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-96A LWR CNTMT C CLRS RET CIV-ØB	2-FCV-67-96-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-83A LWR CNTMT A CLRS SUP CIV-ØB	2-FCV-67-83-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 370 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-91A LWR CNTMT C CLRS SUP CIV-ØB	2-FCV-67-91-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-297A UPR CNTMT CLR B RET CIV-ØB	2-FCV-67-297-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-138A UPR CNTMT CLR B SUP CIV-ØB	2-FCV-67-138-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-298A UPR CNTMT CLR D RET CIV-ØB	2-FCV-67-298-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-141A UPR CNTMT CLR D SUP CIV-ØB	2-FCV-67-141-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 371 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-67-103A LWR CNTMT B CLRS RET CIV-ØB	2-FCV-67-103-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-111A LWR CNTMT D CLRS RET CIV-ØB	2-FCV-67-111-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-105A LWR CNTMT B CLRS SUP CIV-ØB	2-FCV-67-105-B	OPEN		CLOSED		CLOSED		Note 2	
2-HS-67-113A LWR CNTMT D CLRS SUP CIV-ØB	2-FCV-67-113-B	OPEN		CLOSED		CLOSED		Note 2	
INITIAL / DATE		/		/		/		/	



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 372 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27A

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-51A ERCW PMP F-B	0-MTR-67-51-B	RUNNING		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

LOCATION: 0-M-27A

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
0-HS-67-152A CCS HX C ALT DISCH TO HDR B	0-FCV-67-152-B	OPEN/ CLOSED/ POS B Note 37		POS A		POS A		Note 2, 37	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 373 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27B

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-74A ANN VAC FAN 2B & SUCT FCO	2-MTR-65-74	RUNNING Note 33		LIGHTS OFF		LIGHTS OFF		Note 2	
2-HS-65-4 U2 ANN VAC FANS SUCT	2-FCV-65-4	OPEN		CLOSED		CLOSED		Note 2	
2-HS-65-29 EGTS TR-B U2 SUCT DMPR	2-FCV-65-29	CLOSED		OPEN		OPEN		Note 2	
0-HS-65-42A EGTS FAN B & DISCH DMPR	0-MTR-65-42-B	STOPPED		RUNNING		RUNNING		Note 2	
2-HS-65-45 EGTS TO U2 SHIELD BLDG	2-FCO-65-45	CLOSED		OPEN		OPEN		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 374 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27B

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-65-83/87 U1 EGTS-ANN ΔP CNTLR A ISOL	2-PCV-65-87	CLOSED - Note 27		OPEN		OPEN		Note 2	
	2-PCV-65-83	CLOSED - Note 27		OPEN		OPEN		Note 2	
2-HS-70-85 EXC LTDN HX OUT CIV-ØA	2-FCV-70-85-B	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-70-87A THERMAL BAR RET CIV-ØB	2-FCV-70-87-B	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-89A RCP OIL CLRS RET CIV-ØB	2-FCV-70-89-B	OPEN		CLOSED		CLOSED		OPEN	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 375 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 0-M-27B

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-70-140A RCP OIL CLRS SUP CIV-ØB	2-FCV-70-140-B	OPEN		CLOSED		CLOSED		OPEN	
2-HS-70-130A THRM BAR BSTR PMP 1B (TBBP)	2-FCV-70-130-B	RUNNING - Note 6		STOPPED		STOPPED		Note 2	
2-HS-70-134A THRM BAR SUP CIV-ØB	2-FCV-70-134-B	OPEN		CLOSED		CLOSED		OPEN	
1-HS-70-38A CCS PMP 1B-B	1-MTR-70-38-B	RUNNING		RUNNING		RUNNING		Note 2	
1-HS-70-51A CCS PMP C-S ALT ACB	0-MTR-70-51-S	STOPPED		STOPPED		STOPPED		Note 2	
2-HS-70-33A CCS PMP 2B-B	2-MTR-70-33-B	RUNNING		RUNNING		RUNNING		Note 2	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 376 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-JB-292-2015 (713/A8W)

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-43-2 PRESSURIZER GAS SAMPLE ISOL VLV	2-FCV-43-2	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-34 ACCUM TANK SAMPLE HDR ISOL VLV	2-FCV-43-34	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-11 PRESSURIZER LIQUID SAMPLE ISOL VLV	2-FCV-43-11	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-22 HOT LEGS 1/3 SAMPLE ISOL VLV	2-FCV-43-22	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 377 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: 2-JB-292-4262 (713/A9V)

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
2-HS-43-54D STEAM GEN 1 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-54D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-56D STEAM GEN 2 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-56D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-59D STEAM GEN 3 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-59D	OPEN		CLOSED		CLOSED		CLOSED	
2-HS-43-63D STEAM GEN 4 DRUM/BLDN SAMPLE ISOL VLV	2-FCV-43-63D	OPEN		CLOSED		CLOSED		CLOSED	
INITIAL / DATE		/		/		/		/	

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 378 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: LOCAL

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(1-L-572) 1-HS-31-437 PASF GENERAL SUPPLY FAN C1	1-MTR-31-437-C1/1	RUNNING		STOPPED		STOPPED		Note 2	
(2-R-75) HWPB (FWI AUX RELAY)	RELAY HWPB	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(6.9kV Unit Bd 2A, Compt. 8) FEEDWATER ISOL AUX RELAY 5X	RELAY 5X	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-9B) VOM-FSV9B 729/T16H	2-FSV-46-9B	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-36B) VOM-FSV36B 729/T16H	2-FSV-46-36B	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL / DATE		/		/		/		/	

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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

Date \_\_\_\_\_

LOCATION: LOCAL

SUBSECTION 6.3

HANDSWITCH/INDICATION	ASSOCIATED COMPONENT(S)	PRE-TEST		POST-EVENT		POST-RESET		POST-TEST	
		REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL	REQUIRED	ACTUAL
(Local at 2-FSV-47-27) VOM-FSV27 755/T12J	2-FSV-47-27	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
(Local at 2-FSV-46-26B) VOM-FSV26B 755/T12J	2-FSV-47-26B	DE-ENERGIZED		ENERGIZED		ENERGIZED		ENERGIZED	
INITIAL / DATE		/		/		/		/	

**NOTES**

SUBSECTION 6.3

- 1 The Pre-Test "REQUIRED" position for all handswitches is the Spring-Return to "Center" position (AUTO, A-AUTO, A-P AUTO, NORMAL), unless specified otherwise.
- 2 The Post-Test "REQUIRED" position for this component is determined by the Shift Manager (SM) and/or Test Engineer, to support existing plant conditions. As-left status for these components is recorded in the Post-Test "ACTUAL" column.
- 3 Pumps will be started immediately prior to "LOOP", within this subsection.
- 4 Use handswitch valve position indication for "148A" Valve only, **NOT** "148" valve.
- 5 Use handswitch valve position indication for "171A" Valve only, **NOT** "171" Valve.
- 6 Handswitch in the Center "Pull-Out" position (A-P AUTO, P AUTO STANDBY)



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 380 of 569</b>
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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

- 7 "NOT CLOSED" is defined as either Modulating or Full-Open.
- 8 Not used
- 9 Handswitch is Local.
- 10 Handswitch is on Switchgear.
- 11 FIC in "MANUAL" with controller output set to 100%.
- 12 Not used
- 13 Not used
- 14 2-HS-77-127B in Block.
- 15 2-HS-77-9B in Block.
- 16 Not used
- 17 Components are NOT tested in this subsection as the Motor Control Center is Load Shed.
- 18 Not used
- 19 Opposite Train Chiller Unit Handswitch in "Pull-To-Lock",
- 20 Not used
- 21 Component position verified and repositioned in this subsection.
- 22 Handswitch 0-HS-62-228 in "OFF" (713/A13R).
- 23 Thermostat for coolers and fans are disabled.
- 24 HS in Auto.
- 25 Not used
- 26 Not used
- 27 Handswitch in "A-Auto".
- 28 Component is to be started per 0-SOI-31.01.
- 29 Component is to be started per 2-SOI-30.04.
- 30 Not used
- 31 Component is to be started per 0-SOI-30.05.

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**Coincident LOOP/SI/CIØB - Train 2B, Section 6.3**

**Date \_\_\_\_\_**

- 32    Component is to be started per 0-SOI-30.07
- 33    Component is to be started per 0-SOI-65.02.
- 34    Not used
- 35    Not used
- 36    Not used
- 37    Pre-Test Handswitch position for 0-HS-67-152A may be in any position except "POS A". 0-HS-67-152A must be placed in OPEN PULL TO RESET POST-TEST to remove emergency signal seal-in.
- 38    Opposite Train Chiller Unit Handswitch must be placed in A AUTO-AFTER-STOP.

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**SER Timing - Subsection 6.1**

Date \_\_\_\_\_

**TABLE 1: SER TIME TAG (Note 1)**

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	6900 CSST C BKR 1712 OPEN	N/A	24	: : :		
B	DG EMRG START RLY ES2BY ACTUATED	N/A	26	: : :		
C	CRDM FAN 2B-B STOP	3	12	: : :		
D	CRDM FAN 2D-B STOP	3	13	: : :		
E	AFW PMP 2B-B STOP	3	9	: : :		
F	PZR HTR 2B-B OFF	3	17	: : :		
G	CCP 2B-B STOP	3	1	: : :		
H	RHR PMP 2B-B STOP	3	3	: : :		
I	SI PMP 2B-B STOP	3	2	: : :		
J	CS PMP 2B-B STOP	3	19	: : :		
K	RX LWR CTMT CLR FAN 2B-B STOP	3	14	: : :		
L	RX LWR CTMT CLR FAN 2D-B STOP	3	15	: : :		
M	FIRE PMP 2B-B STOP	3	10	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 383 of 569</b>
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**Appendix O  
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**SER Timing - Subsection 6.1**

Date \_\_\_\_\_

**TABLE 1: SER TIME TAG (Note 1)**

<b>PARA- METER</b>	<b>PARAMETER DESCRIPTION</b>	<b>NOTES</b>	<b>SER CHANNEL</b>	<b>TIME TAG (Hr : Min : Sec : mSec)</b>	<b>INITIAL</b>	<b>DATE</b>
N	ERCW PMP H-B STOP	3	5	: : :		
O	TBBP 2B-B STOP	3	8	: : :		
P	CCS PMP 2B-B STOP	3	6	: : :		
Q	CCS PMP C-S TR 2B STOP	NA	7	: : :		
R	EBR AC CPRSR B-B STOP	5	21	: : :		
S	2B-B 6900 DG BKR 1924 CLOSED	N/A	28	: : :		
T	CCP 2B-B RUN	4	1	: : :		
U	ERCW PMP H-B RUN	4	5	: : :		
V	AFW PMP 2B-B RUN	4	9	: : :		
W	CCS PMP 2B-B RUN	4	6	: : :		
X	CCS PMP C-S TR 2B RUN	4	7	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 384 of 569</b>
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**SER Timing - Subsection 6.1**

**Date \_\_\_\_\_**

**TABLE 1: SER TIME TAG (Note 1)**

<b>PARA- METER</b>	<b>PARAMETER DESCRIPTION</b>	<b>NOTES</b>	<b>SER CHANNEL</b>	<b>TIME TAG (Hr : Min : Sec : mSec)</b>	<b>INITIAL</b>	<b>DATE</b>
Y	TBBP 2B-B RUN	4	8	: : :		
Z	FIRE PUMP 2B-B RUN	4	10	: : :		
AA	PZR HTR 2B-B ON	4	17	: : :		
AB	EBR AC CPRSR B-B RUN	4	21	: : :		
AC	AFW PMP 2-FCV-1-51 OPEN	3	16	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 385 of 569</b>
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**SER Timing - Subsection 6.1**

Date \_\_\_\_\_

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP - CRDM FAN 2B-B	C-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - CRDM FAN 2D-B	D-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - AFWP 2B-B	E-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - PZR HTR 2B-B	F-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - CCP 2B-B	G-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - RHRP 2B-B	H-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - SIP 2B-B	I-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - CSP 2B-B	J-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - RX LCC 2B-B	K-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - RX LCC 2D-B	L-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - HPFP 2B-B	M-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - ERCWP H-B	N-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - TBBP 2B-B	O-A		3.0	N/A	3.3	2.79	3.21		

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SER Timing - Subsection 6.1

Date \_\_\_\_\_

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP - CCS PMP 2B-B	P-A		3.0	N/A	3.3	2.79	3.21		
BUS STRIP - CCS PMP C-S (Tr 2B)	Q-A		NA	NA	3.3	2.79	3.21		
BUS STRIP - EBR CHLR B-B	R-A		0.5	0.10	5.00	N/A	N/A		
AFWP 2-FCV-1-51 OPEN	AC-A		5 (MAX)	N/A	N/A	N/A	N/A		
DG 2B-B UV RELAY (27D)	B-A		1.0	N/A	N/A	0.500	1.500		
2B-B 6900 DG BKR 1924 CLOSED	S-B		10	N/A	N/A	N/A	10		
SEQ START - CCP 2B-B	T-S		5	N/A	N/A	4.679	5.277		
SEQ START - ERCW PMP H-B	U-S		20	N/A	N/A	18.717	21.106		
SEQ START - AFWP 2B-B	V-S		25	N/A	N/A	23.395	26.383		
SEQ START - CCS PMP 2B-B	W-S		35	N/A	N/A	33.790	36.210		
SEQ START - CCS PMP C-S Tr 2B	X-S		35	N/A	N/A	33.790	36.210		
SEQ START - TBBP 2B-B	Y-S		35	N/A	N/A	33.790	36.210		
SEQ START - FIRE PUMP 2B-B	Z-S		50	N/A	N/A	48.740	52.766		
SEQ START - PZR HTR 2B-B	AA-S		90	N/A	N/A	84.22	94.977		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 387 of 569</b>
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**SER Timing - Subsection 6.1**

**Date \_\_\_\_\_**

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALC METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
SEQ START - ELECT BD RM AC CPRSR B-B	AB-S		360	N/A	N/A	340.900	499.100		



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SER Timing - Subsection 6.1

Date \_\_\_\_\_

NOTES:

- [1] Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
- [2] Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
- [3] Component actuation following initiation of LOOP.
- [4] Component actuation following closure of EDG breaker.
- [5] Component trip caused by loss of power to MCC (**NOT** a UV Relay bus-strip signal).

	INITIAL	DATE
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 389 of 569</b>
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**SER Timing - Subsection 6.1**

**Date \_\_\_\_\_**

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 390 of 569</b>
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**Appendix P  
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**SER Timing - Subsection 6.2**

Date \_\_\_\_\_

**TABLE 1: SER TIME TAG (Note 1)**

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	SAFETY INJECTION HS 1 ACTUATED	N/A	23	: : :		
B	CCP PMP 2B-B RUN	3	1	: : :		
C	SI PMP 2B-B RUN	3	2	: : :		
D	RHR PMP 2B-B RUN	3	3	: : :		
E	ERCW PMP F-B RUN	3	4	: : :		
F	ERCW PMP H-B RUN	3	5	: : :		
G	AFW PMP 2B-B RUN	3	9	: : :		
H	CCS PMP 2B-B RUN	3	6	: : :		
I	CCS PMP C-S TR B RUN	3	7	: : :		
J	DG EMRG START RLY ES2BY ACTUATED	3	26	: : :		
K	ØB ISOL TRAIN B ACTUATED	N/A	18	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 391 of 569</b>
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**Appendix P  
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**SER Timing - Subsection 6.2**

Date \_\_\_\_\_

**TABLE 1: SER TIME TAG (Note 1)**

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
L	SAFETY INJECTION HS 1 ACTUATED	N/A	23	: : :		
M	CCP PMP 2B-B RUN	4	1	: : :		
N	SI PMP 2B-B RUN	4	2	: : :		
O	RHR PMP 2B-B RUN	4	3	: : :		
P	ERCW PMP F-B RUN	4	4	: : :		
Q	ERCW PMP H-B RUN	4	5	: : :		
R	AFW PMP 2B-B RUN	4	9	: : :		
S	DG EMRG START RLY ES2BY ACTUATED	4	26	: : :		
T	CS PMP 2B-B RUN	4	19	: : :		
U	CNTMT AIR RET FAN 2B-B RUN	4	20	: : :		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 392 of 569</b>
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**SER Timing - Subsection 6.2**

Date \_\_\_\_\_

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
CCP PMP 2B-B SI-START	B-A		0.1	0	2	N/A	N/A		
SI PMP 2B-B SI-START	C-A		0.1	0	2	N/A	N/A		
RHR PMP 2B-B SI -START	D-A		0.1	0	2	N/A	N/A		
ERCW PMP F-B SI-START	E-A		0.1	0	2	N/A	N/A		
ERCW PMP H-B SI-START	F-A		0.1	0	2	N/A	N/A		
AFW PMP 2B-B SI-START	G-A		0.1	0	2	N/A	N/A		
CCS PMP 2B-B SI-SEQ	H-A		8.0	N/A	N/A	7.600	8.400		
CCS PMP C-S TR B SI-SEQ	I-A		8.0	N/A	N/A	7.600	8.400		
DG EMRG START RLY ES2BY	J-A		0.1	0	2	N/A	N/A		

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SER Timing - Subsection 6.2

Date \_\_\_\_\_

TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
CCP PMP 2B-B SI-CIØB-START	M-L		0.1	0	2	N/A	N/A		
SI PMP 2B-B SI-CIØB-START	N-L		0.1	0	2	N/A	N/A		
RHR PMP 2B-B SI-CIØB-START	O-L		0.1	0	2	N/A	N/A		
ERCW PMP F-B SI-CIØB-START	P-L		0.1	0	2	N/A	N/A		
ERCW PMP H-B SI-CIØB-START	Q-L		0.1	0	2	N/A	N/A		
AFW PMP 2B-B SI-CIØB-START	R-L		0.1	0	2	N/A	N/A		
DG EMRG START RLY ES2BY SI-CIØB	S-L		0.1	0	2	N/A	N/A		
CS PMP 2B-B SI-CIØB-START	T-L		0.1	0	2	N/A	N/A		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 394 of 569</b>
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**SER Timing - Subsection 6.2**

**Date \_\_\_\_\_**

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
CNTMT AIR RET FAN 2B-B SI-CIØB-START	U-L		540	N/A	N/A	506.820	568.380		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 395 of 569</b>
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**SER Timing - Subsection 6.2**

**Date \_\_\_\_\_**

**NOTES:**

1. Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
2. Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
3. Component actuation following initiation of SI.
4. Component actuation following initiation of SI/PHASE B Containment Isolation signal.

	<b>INITIAL</b>	<b>DATE</b>
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		



WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 396 of 569
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SER Timing - Subsection 6.3

Date \_\_\_\_\_

TABLE 1: SER TIME TAG (Note 1)

(DG 2B)

PARA-METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
A	SAFETY INJECTION HS 1 ACTUATED	N/A	23	: : :		
B	ØB ISOL TRAIN B ACTUATED	N/A	18	: : :		
C	6900 CSST D BKR 1812 OPEN	N/A	25	: : :		
D	DG EMRG START RLY ES2BY ACTUATED	N/A	26	: : :		
E	CCP PMP 2B-B STOP	3	1	: : :		
F	SI PMP 2B-B STOP	3	2	: : :		
G	RHR PMP 2B-B STOP	3	3	: : :		
H	ERCW PMP F-B STOP	3	4	: : :		
I	AFW PMP 2B-B STOP	3	9	: : :		
J	CCS PMP 2B-B STOP	3	6	: : :		
K	CCS PMP C-S TR 2B STOP	3	7	: : :		
L	TBBP 2B-B STOP	5	8	: : :		
M	FIRE PMP 2B-B STOP	3	10	: : :		
N	CRDM FAN 2B-B STOP	3	12	: : :		
O	CRDM FAN 2D-B STOP	3	13	: : :		

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**SER Timing - Subsection 6.3**

Date \_\_\_\_\_

P	RX LWR CTMT CLR FAN 2B-B STOP	3	14	:	:	:		
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TABLE 1: SER TIME TAG (Note 1)

(DG 2B)

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
Q	RX LWR CTMT CLR FAN 2D-B STOP	3	15	: : :		
R	PZR HTR 2B-B OFF	3	17	: : :		
S	EBR AC CPRSR B-B STOP	5	21	: : :		
T	CS PMP 2B-B STOP	3	19	: : :		
U	2B-B 6900 DG BKR 1924 CLOSED	N/A	28	: : :		
V	CCP PMP 2B-B RUN	4	1	: : :		
W	SI PMP 2B-B RUN	4	2	: : :		
X	RHR PMP 2B-B RUN	4	3	: : :		
Y	ERCW PMP F-B RUN	4	4	: : :		
Z	AFW PMP 2B-B RUN	4	9	: : :		

WBN Unit 2	Unit 2 Integrated Safeguards Test - Train 2B	2-PTI-262-02 Rev. 0000 Page 398 of 569
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SER Timing - Subsection 6.3

Date \_\_\_\_\_

AA	CCS PMP 2B-B RUN	4	6	:	:	:		
AB	CCS PMP C-S TR 2B RUN	4	7	:	:	:		
AC	CS PMP 2B-B RUN	4	19	:	:	:		

TABLE 1: SER TIME TAG (Note 1)

(DG 2B)

PARA- METER	PARAMETER DESCRIPTION	NOTES	SER CHANNEL	TIME TAG (Hr : Min : Sec : mSec)	INITIAL	DATE
AD	EBR AC CPRSR B-B RUN	4	21	:	:	:
AE	CNTMT AIR RET FAN 2B-B RUN	6	20	:	:	:

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 399 of 569</b>
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**SER Timing - Subsection 6.3**

Date \_\_\_\_\_

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

(DG 2B)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP-CCP PMP 2B-B	E-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-SI PMP 2B-B	F-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RHR PMP 2B-B	G-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-ERCW PMP G-B	H-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-AFW PMP 2B-B	I-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CCS PMP 2B-B	J-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CCS PMP C-S TRN B STOP	K-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-THERM BAR BSTR PMP 2B-B	L-C		0.5	0.10	5.00	N/A	N/A		
BUS STRIP-FIRE PMP 2B-B	M-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-CRDM FAN 2B-B	N-C		3.0	2.80	5.00	N/A	N/A		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 400 of 569</b>
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**SER Timing - Subsection 6.3**

Date \_\_\_\_\_

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

(DG 2B)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
BUS STRIP-CRDM FAN 2D-B	O-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RX LWR CTMT CLR FAN 2B-B	P-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-RX LWR CTMT CLR FAN 2D-B	Q-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-PZR HTR 2B-B	R-C		3.0	2.80	5.00	N/A	N/A		
BUS STRIP-EBR CPRSR B-B	S-C		0.5	0.10	5.00	N/A	N/A		
BUS STRIP-CS PMP 2B-B	T-C		3.0	2.80	5.00	N/A	N/A		
2B-B 6900 DG BKR 1924 CLOSED	U-D		10	N/A	N/A	N/A	10		
CCP PMP 2B-B SEQ START	V-U		5	N/A	N/A	4.679	5.277		
SI PMP 2B-B SEQ START	W-U		10	N/A	N/A	9.358	10.553		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 401 of 569</b>
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**SER Timing - Subsection 6.3**

Date \_\_\_\_\_

**TABLE 2: ELAPSED TIME CALCULATIONS (Note 2)**

(DG 2B)

EVENT DESCRIPTION	ELAPSED TIME		IDEAL VALUE (Seconds)	EXPECTED VALUE (Seconds)		ACCEPTANCE CRITERIA (Seconds)		INITIAL	DATE
	CALCULATION METHOD	RESULT (Min:Sec:mSec)		MIN	MAX	MIN	MAX		
RHR PMP 2B-B SEQ START	X-U		15	N/A	N/A	14.037	15.830		
ERCW PMP G-B SEQ START	Y-U		20	N/A	N/A	18.717	21.106		
AFW PMP 2B-B SEQ START	Z-U		25	N/A	N/A	23.395	26.383		
CCS PMP 2B-B SEQ START	AA-U		35	N/A	N/A	33.790	36.210		
CCS PMP C-S TR B SEQ START	AB-AM		35	N/A	N/A	33.790	36.210		
CS PMP 2B-B SEQ START	AC-U		184	N/A	N/A	178.76	189.24		
EBR CPRSR B-B SEQ START (NOTE 7)	AD-U		420	N/A	N/A	340.900	499.100		
CTMT AIR RET FAN 2B-B START	AE-B		540	N/A	N/A	506.820	568.380		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 402 of 569</b>
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**SER Timing - Subsection 6.3**

**Date \_\_\_\_\_**

**NOTES:**

1. Record time TAG associated with each parameter from sequence of Events Recorder (SER) printout obtained during test section.
2. Actual elapsed time for each event is calculated utilizing the SER TIME TAGS recorded on TABLE 1 for each parameter.
3. Component actuation following initiation of LOOP/Sl.
4. Component actuation following closure of EDG breaker.
5. Component trip caused by loss of power to MCC (NOT a UV Relay bus-strip signal).
6. Component actuation following initiation of Containment Isolation Phase B.
7. Start time includes an Electrical Board room Compressor Skid internal time delay of 60 seconds.

	<b>INITIAL</b>	<b>DATE</b>
TABLE 2 Calculations Performed By:		
TABLE 2 Calculations Verified By:		

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 403 of 569</b>
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**Appendix R  
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**Transient Load Response - Subsection 6.1**

**Date \_\_\_\_\_**

<b>DG 2B-B, LOSS OF OFFSITE POWER (LOOP), LOAD SEQUENCE</b>					
<b>LOAD SEQUENCE TIME (IDEAL)</b>	<b>LOAD SEQUENCE TIME (ACTUAL) (Note 2)</b>	<b>ACTUAL VOLTAGE RECOVERY TIME (Notes 3,4,5)</b>	<b>ACTUAL FREQUENCY RECOVERY TIME (Notes 3,4,6)</b>	<b>INITIAL</b>	<b>DATE</b>
0.0 (Misc)					
5.0 (CCP)					
20.0 (ERCW)					
25.0 (AFW)					
35.0 (CCS) (Note 3)					
40.0 (Fire Pmp)					
90.0 (Pzr Htr)					
420.0 (EBR Chlr) (Note 7)					



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Transient Load Response - Subsection 6.1

Date \_\_\_\_\_

NOTES:

- 1 All times recorded on this Appendix are in seconds.
- 2 Record Actual sequence start time of the load(s), referenced to DG 2B-B output breaker 1924 closure, as the event start time.
- 3 Two CCS Pumps start at Time = 35 seconds; if two discrete transients are distinguishable for this load block, Actual recovery times(s) are measured from the first load/transient.
- 4 ACCEPTANCE CRITERIA: ALLOWABLE recovery time is equal to or less than 3 seconds.
- 5 Record time DG voltage is restored to within a band of 6255-7645 VAC following START of associated load(s). If DG voltage does **NOT** exit this band, record "0" seconds.
- 6 Record time DG frequency is restored to within a band of 58.8-61.2 Hz following START of associated load(s). If DG frequency does **NOT** exit this band, record "0" seconds.
- 7 Includes Electrical Board Room Chiller internal skid time delay of 60 seconds.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 405 of 569</b>
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**Appendix S  
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**Transient Load Response - Subsection 6.3**

Date \_\_\_\_\_

DG 2B-B, COINCIDENT LOOP/SI/CIØB, LOAD SEQUENCE					
LOAD SEQUENCE TIME (IDEAL)	LOAD SEQUENCE TIME (ACTUAL) (Note 2)	ACTUAL VOLTAGE RECOVERY TIME (Notes 3,4,5)	ACTUAL FREQUENCY RECOVERY TIME (Notes 3,4,6)	INITIAL	DATE
0.0 (Misc)					
5.0 (CCP)					
10.0 (SIP)					
15.0 (RHR)					
20.0 (ERCW)					
25.0 (AFW)					
35.0 (CCS) (Note 3)					
184.0 (CS)					
420.0 (EBR Chlr) (Note 7)					
540(Cntmt Air Ret Fan)					

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Appendix S  
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Transient Load Response - Subsection 6.3

Date \_\_\_\_\_

NOTES:

- 1) All times recorded on this Appendix are in seconds.
- 2) Record Actual sequence start time of the load(s), referenced to DG 2B-B output breaker 1924 closure, as the event start time.
- 3) Two CCS Pumps start at Time = 35 seconds. If two discrete transients are distinguishable for this load block, Actual recovery time(s) are measured from the first load/transient.
- 4) ACCEPTANCE CRITERIA: ALLOWABLE recovery time is equal to or less than 3 seconds.
- 5) Record time DG 2B-B voltage is restored to within a band of 6255 - 7645 VAC following START of associated load(s). If DG 2B-B voltage does **NOT** exit this band, record "0" seconds
- 6) Record time DG 2B-B frequency is restored to within a band of 58.8 - 61.2 Hz following START of associated load(s). If DG frequency does **NOT** exit this band, record "0" seconds.
- 7) Includes Electrical Board Room Chiller (EBR) internal skid time delay of 60 seconds.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 407 of 569</b>
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**Appendix T  
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating  
Requirements (FOR), and Offsite Dose Calculation Manual (ODCM) Applications**

Date \_\_\_\_\_

**CAUTION**

Prior to fuel load on Unit 2, all potential LCO entries should be evaluated using Unit 1 License documents.

**NOTE**

These tables are provided as a quick reference for information only. Anytime the acronym LCO is used, it should be considered as synonymous with a license document such as TSs, TRs, FORs, ODCM, etc..

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Actions</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
161kV Offsite Line	3.8.1	6.1, 6.3	A	Perform SR 3.8.1.1 within 1 hr  Declare required feature w/no offsite power available inop when redundant required feature is inop, within 12 hrs, AND  Restore offsite circuit to operable within 72 hrs.	Mode 1 - 4  LCO should be entered and exited upon opening and closing of feeder breaker.
Explosive Gas Monitor	5.7.2.15	ALL		Perform daily sampling in accordance with 0-SI-77-3 and TI-266.	Required at all times. RCDT and PRT are de-selected during setup since they will isolate.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 408 of 569</b>
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**Appendix T  
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

Date \_\_\_\_\_

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Actions</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
ERCW Train B	3.7.8	6.1, 6.3	A	1. Enter applicable Conditions and Required Actions of LCO 3.8.1 2. Enter applicable conditions and Required Actions of LCO 3.4.6 - N/A	Modes 1, 2, 3, 4 Restore within 72 hours LCO should be entered and exited upon deenergizing and energizing of 2B-B 6.9kV Shutdown Bd.
ERCW Screen Wash Pump 2B-B	3.7.8		A	Tracking Only - With Traveling Screen Washpump 1B-B operable	Modes 1, 2, 3, 4
ERCW Travelling Screen 2B	3.7.8		A	Tracking Only - With Traveling Screen 1B-B operable	Modes 1, 2, 3, 4
ERCW Strainer 2B-B	3.7.8		A	1. Enter applicable Conditions and Required Actions of LCO 3.8.1 2. Enter applicable conditions and Required Actions of LCO 3.4.6 - N/A	Modes 1, 2, 3, 4 Restore within 72 hours LCO should be entered and exited upon deenergizing and energizing of 2B-B 6.9kV Shutdown Bd.

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 409 of 569</b>
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

Date \_\_\_\_\_

<b>TEST SETUP LCO ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Actions</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
EBR CHILLER A  Required for U1 TS	LCO 3.7.11	6.1/6.3	A	A. Restore in 30 days. Both will be OOS for <30 min during Blackout (Section 6.1/6.3) but the sys description allows 4 hrs for both OOS.	A EBR A/C will be taken OOS during setup per HS position on 2-M-9. B EBR A/C will lose power during Blackout.
ABGTS B  Required for U1 TS	LCO 3.7.12	6.1/6.3	A	A. Restore 7 days	Modes 1 through 4, or During fuel movement of irradiated fuel assemblies in the Fuel Handling Area.
CCS C-S Pump	LCO 3.7.7	6.3	A	Restore Train within 72 hours.	Modes 1 through 4

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 410 of 569</b>
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**Appendix T  
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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

Date \_\_\_\_\_

<b>TEST PERFORMANCE ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Actions</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
480V BD RM 2B- B A/C  Required for U1 TS	LCO 3.8.10,	6.1, 6.3	Tracking	30 day tracking for one train inop	Loss of Power during Blackouts to 2A train. Refer to sys Description N3-30AB-4001, Section 4.18.  Compensatory measures required
480V Sd Bd Transformer Rm Ventilation  2-FAN-30-246F 2-FAN-30-246G 2-FAN-30-246H	3.8.9		A	Restore AC electrical power distribution subsystem to OPERABLE status within 8 hours	Modes 1, 2, 3, 4  Three exhaust fans will be deenergized then reenergized during testing.  Refer to Sys. Description N3-30AB-4001
	OR-14.10			Restore within 30 days	
90-126 CREVS Actuation Instruments	LCO 3.3.7.		A	A. Place 1 CREVS train in emergency protection mode in 7 days	Required in ALL Modes & fuel movement. Main Control Room Intake monitor 0-RE-90-126 loses power during first Blackout <30 min

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
Calculation Manual (ODCM) Applications**

Date \_\_\_\_\_

<b>TEST PERFORMANCE ENTRIES</b>					
<b>Equipment</b>	<b>TS/TR/OR/ ODCM</b>	<b>TEST Sect</b>	<b>Actions</b>	<b>Action statement(s)</b>	<b>Applicability &amp; Notes</b>
Auxiliary Control Air Comp B-B  (See Note below)	LCO 3.7.10		A	A. Restore 7 days	CREVS relies on Aux Air in all modes
	LCO 3.7.11		A	A. Restore 30 days	CREATCS & EBR A/C rely on Aux Control Air in all modes B Aux Air Comp loses power during 1st Blackout only
	LCO 3.7.12		A.	A. Restore in 7 days,	ABGTS dampers rely on Aux Air for all modes & Fuel Handling.
	LCO 3.6.9		A		Restore EGTS w/i 30D
	LCO 3.7.4		B		Restore Atmospheric Dump Vlv w/i 30D

**NOTE:** Refer to PER 377481. Auxiliary Control Air System (ACAS) is a support system for some TS required systems/components. The unavailability of a Trained Aux Air compressor does not automatically render supported systems/components inoperable. There is no TS on the auxiliary air compressors. Functions supported by ACAS are still available and functional and the opposite train of ACAS remains in service. The normal air supply for operating the control systems is the plant compressed air system and it is not directly affected by the loss of power to the Aux Air Compressor. There is no need to enter LCOs or ORs for the temporary loss of power to this train of ACAS.



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Equipment	TS/TR/OR/ ODCM	TEST Sect	Actions	Action statement(s)	Applicability & Notes
Auxiliary Control Air (continued)	3.7.5		C	Tracking Only - Restore AFW to OPERABLE status within 72 hours	Modes 1, 2, 3, 4 when SG relied upon for heat removal.  Two AFW train inoperable in Mode 1, 2, 3  Be in Mode 3 in 6 hours,  Mode 4 in 18 hours
1-PCV-68-340B	OR-14.10		Inoperable	Restore PZR Spray Valve within 30 days	Mode 1, 2, 3
0-COMP-32-86	OR-14.10		Inoperable	Restore Aux Air compressor within 30 days	Mode 1, 2, 3
120V Vital Inverters	3.8.7		A	Restore Inverter to OPERABLE status - NOTE With two Inverters inoperable in any one channel, LCO 3.0.3 may be applicable	Mode 1 through 4

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**Potential Technical Specifications (TS), Technical Requirements (TR), Fire Operating Requirements (FOR), and Offsite Dose  
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TEST PERFORMANCE ENTRIES					
Equipment	TS/TR/OR/ ODCM	TEST Sect	Actions	Action statement(s)	Applicability & Notes
EGTS Train B	3.6.9		A	Restore EGTS train to OPERABLE status with in 7 days	EGTS Train B actuated each time on accident signal initiation.  EGTS Train B Loss of power on each LOOP initiation.
DG 2B-B	3.8.1		B	Perform SI-82-3  Check for loss of safety function  Check for common cause failure  Restore DG	Mode 1 through 4
2-RM-90-400 2-FI-90-400	ODCM 1.1.2			See ODCM 1/2.1.2	RM will not lose power during this test.  Attention should be on flow measurement may be excessive due to both ABGTS and EGTS will auto start and perform during this test.

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Time Started: \_\_\_\_\_

Reason for Performance: \_\_\_\_\_

Examples: Partial Recovery; Final Recovery; Test Aborted.

**NOTES**

- 1) Additional copies of this Section may be required during the performance of this instruction.
- 2) In general, the alignment of equipment required by the performance of this Section should be the same alignment required by present plant conditions. If a component cannot be restored to the AS FOUND POSITION, the Unit SRO should be notified and the reason logged in the chronological test log or on the affected page of this appendix as desired. The step may be N/A'd and annotated as "See CTL" or "HO Tag #" or "See Below" if explained on that page.
- 3) Steps should be performed sequentially in each Section but Sections can be performed in any order except the electrical support (Appendix W Section 3.0 RESTORATION should be completed before Step 7.0[22.1] of this Appendix). Performance in each Section may continue before independent verification is completed.
- 4) When a step is signed off it indicates completion of the performance of the step or that the step has been verified performed per a previous action or step.

**1.0 2B AFW REALIGNMENT**

- [1] **ENSURE** 2-HS-46-56A-S, T-D AFWP T&T VLV, is indicating  
CLOSED. (GREEN light ON, RED light OFF) \_\_\_\_\_
- [2] **ENSURE** 2-FCV-1-51, T-D AFWP T&T VLV, Mechanical  
Overspeed Trip Device is LATCHED and the valve motor drive  
is LATCHED to the valve stem. \_\_\_\_\_

\_\_\_\_\_  
CV

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**2.0 CVCS REALIGNMENT (continued)**

[3] **ENSURE** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>125V VITAL BATTERY BOARD I</b>					
NORM FDR FOR UNIT 2 AFWT PUMP	PANEL 3	OFF	0-BKR-236-1/321		CV
<b>125V VITAL BATTERY BOARD II</b>					
ALT FDR FOR UNIT 2 AFWT PUMP	PANEL 3	OFF	0-BKR-236-2/321		CV

[4] **ENSURE** 2-FCV-3-359, M-D AFWP 2B RECIRC VALVE  
[2-M-4], CLOSED.

**2.0 CVCS REALIGNMENT**

**NOTE**

CVCS may be aligned as required in accordance with 2-SOI-62.01. If used, mark the following steps as NA as needed and add appropriate comments to the test log.

[1] **ENSURE** HS position.

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
CCP B-B (ECCS)	2-M-5	STOP PULL TO LOCK	2-HS-62-104A		CV

[2] **ENSURE** the following breakers are turned back ON

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
<b>Rx MOV Bd 2B1-B</b>					
CVCS CHARGING HEADER ISOL (2-FCV-62-91)	C/7A	ON	2-BKR-62-91		CV
VCT OUTLET ISOL (2-LCV-62-133)	C/8A	ON	2-BKR-62-133		CV
RWST CVCS SUPPLY HEADER ISOL (2-LCV-62-136)	C/8B	ON	2-BKR-62-136		CV

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- [3] **ENSURE** the following CCP alignment from VCT to normal charging:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
CHARGING LINE ISOL	2-M-6	OPEN	2-HS-62-90A		CV
CHARGING LINE ISOL	2-M-6	OPEN	2-HS-62-91A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-132A		CV
VCT TO CHARGING PMPS SUCTION	2-M-5	OPEN A-P AUTO	2-HS-62-133A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-135A		CV
RWST TO CHARGING PMPS SUCTION	2-M-5	CLOSED A-P AUTO	2-HS-62-136A		CV

- [4] **NOTIFY** WCC SRO or UNIT SRO that CCP 2B clearance for COMS may be modified back to a hold order on the pump breakers if desired.

- [5] **ENSURE** the following to check spring charged after pump run:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SD BD 2B-B</b>					
CENT CHARGING PUMP 2B-B (2-PMP-62-104)	C/18	RACKED UP & SPRING CHARGED	2-BKR-62-104		CV

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**3.0 2B SIP REALIGNMENT: (continued)**

**3.0 2B SIP REALIGNMENT:**

**NOTE**

The only switch manipulation in the following table should be 2-HS-63-4A.

[1] **ENSURE** the following SIP alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
SI PMP B (ECCS)	2-M-6	2-HS-63-15A	PULL-TO- LOCK		CV
SI PMPS RECIRC HDR TO RWST	2-M-6	2-HS-63-3A	OPEN		CV
SI PMP A RECIRC TO RWST	2-M-6	2-HS-63-4A	OPEN		CV
SI PMP B RECIRC TO RWST	2-M-6	2-HS-63-175A	OPEN		CV
RWST TO SI PMPS SUCTION	2-M-6	2-HS-63-5A	OPEN		CV
SI PMP B SUCTION	2-M-6	2-HS-63-48A	OPEN		CV

[2] **NOTIFY** WCC SRO or UNIT SRO that SIP 2B clearance for COMS may be modified back to a hold order on the pump breakers if desired.

[3] **ENSURE** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>6.9KV SHUTDOWN BD 2B-B</b>					
SAFETY INJECTION PUMP 2B-B (2-PMP-63-15)	C/15	RACKED UP, CLOSING SPRING CHARGED	2-BKR-63-15		CV

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**3.0 2B SIP REALIGNMENT: (continued)**

**NOTE**

The next step will reset RWST to Containment Sump switchover logic for 2-FCV-63-73 which will unlatch K647. 2-HS-63-73D White light will **NOT** be LIT if 2-FCV-63-73 control circuit is de-energized but this reset circuit should still unlatch K647.

- [4] **PLACE** 2-HS-63-73D, RWST-CNTMT SUMP SWITCHOVER  
SI SIG TO FCV-63-73 [2-M-6]. in RESET, **THEN**

**RELEASE** 2-HS-63-73D. \_\_\_\_\_

- [5] **VERIFY** the following CLA MOVs are CLOSED by light  
indication on 2-M-6:

NOMENCLATURE	POS	UNID	PERF INIT	VERIF INIT
CL ACCUM 1 OUTLET	CLOSED	2-HS-63-118A		CV
CL ACCUM 2 OUTLET	CLOSED	2-HS-63-98A		CV
CL ACCUM 3 OUTLET	CLOSED	2-HS-63-80A		CV
CL ACCUM 4 OUTLET	CLOSED	2-HS-63-67A		CV

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- [6] **VERIFY** the following breaker positions to prevent inadvertent opening:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
<b>480V REACTOR MOV BOARD 2A1-A</b>					
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	C/3F2	OFF	2-BKR-63-118A		CV
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	C/17F2	OFF	2-BKR-63-80A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	C/11D	OFF	2-BKR-63-26		CV
<b>480V REACTOR MOV BOARD 2B1-B</b>					
SIS CL ACCUM 2 OUT ISOL (2-FCV-63-98)	C/3F2	OFF	2-BKR-63-98A		CV
SIS CL ACCUM 4 OUT ISOL (2-FCV-63-67)	C/16F2	OFF	2-BKR-63-67A		CV
SIS BORON INJ TNK OUT ISOL (2-FCV-63-25)	C/11E	OFF	2-BKR-63-25		CV



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**4.0 2B CONTAINMENT SPRAY REALIGNMENT: (continued)**

**4.0 2B CONTAINMENT SPRAY REALIGNMENT:**

**NOTE**

The Containment Spray system is removed from service per 2-GO-6, Appendix B for Modes 5 & 6. The caution order (C.O.) is specified in 2-GO-6.

[1] **NOTIFY** U2 WCC that Caution Orders or Hold Orders, as applicable, may be placed on U2 Containment Spray components.

[2] **ENSURE** the following CSP alignment on 2-M-6:

NOMENCLATURE	POS	HS POSITION	UNID	PERF INITIAL
CNTMT SPRAY PMP B	N/A	P-T-L w/ C.O.	2-HS-72-10A	
CNTMT SPRAY PMP B MINI FLOW	CLOSED	(PULL) P AUTO	2-HS-72-13A	
RWST TO CS PMP B SUCTION	CLOSED	MID w/ C.O.	2-HS-72-21A	
CNTMT SUMP TO CS PMP B SUCTION	NO LIGHTS	MID w/ C.O.	2-HS-72-45A	
CNTMT SPRAY HDR B TO CNTMT	NO LIGHTS	A AUTO w/ C.O	2-HS-72-2A	
RHR SPRAY HDR B TO CNTMT	NO LIGHTS	MID w/ C.O.	2-HS-72-41A	

[3] **PERFORM** the following alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
<b>U2 BIT Rm</b>					
CNTMT SPRAY HDR B TEST LINE ISOLATION	A11V/719	LOCKED CLOSED	2-ISV-72-504		CV
CNTMT SPRAY TEST LINE ISOLATION	A11U/715	CLOSED	2-ISV-72-502		CV

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**5.0 2B RHR REALIGNMENT: (continued)**

[4] **ENSURE** the following alignment:

NOMENCLATURE	LOC	POS	UNID	PERF INITIAL	VERIF INITIAL
<b>6.9KV SHUTDOWN BOARD 2B-B</b>					
CONTAINMENT SPRAY PUMP 2B-B (2-PMP-72-10)	C/13	RACKED DOWN w/ C.O.	2-BKR-72-10		CV

**CAUTION**

It may be appropriate that the Refueling Water Purification alignment be walked down prior to starting the RWPP to ensure pump flowpath.

[5] **IF** a RWPS Pump(s) were shutdown in Appendix B, **THEN**  
**RESTART** one RWPP: (N/A pump **NOT** started)

NOMENCLATURE	POS	HS POSITION	UNID	PERF INITIAL
REFUELING WATER PURIFICATION PUMP A	A5W/692	START	0-HS-78-19	
REFUELING WATER PURIFICATION PUMP B	A5W/692	START	0-HS-78-20	

[6] **INFORM** U2 operations of the status of Containment Spray. \_\_\_\_\_

**5.0 2B RHR REALIGNMENT:**

[1] **IF** SI signal **NOT** present, and 2-HS-74-28, RHR HX B  
OUTLET FCV SI SIGNAL RESETwhite light is LIT, **THEN**  
**TURN** 2-HS-74-28, RHR HX B OUTLET FCV SI SIGNAL  
RESET, to RESET. \_\_\_\_\_

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**6.0 FIRE OPERATIONS ALIGNMENTS (continued)**

**NOTE**

This test should have left RHR Train 2A in service and Train B isolated normally for mode 5 or 6.

- [2] **ENSURE** RHR system returned to the condition required per present plant condition. Refer to 2-SOI-74.01 if needed. \_\_\_\_\_

**6.0 FIRE OPERATIONS ALIGNMENTS**

**NOTE**

Steps may be marked N/A if another NPG SPP-18.4.6, Fire Protection Impairment Permit is in place on the affected equipment.

- [1] **IF** breaker HC was placed in the OFF position in Appendix B Section **6.0**, **THEN**
- PLACE** breaker to 0-FCV-26-320 located in compartment HC of 0-MCC-281-1. (MWTP Control Room) in the ON position. \_\_\_\_\_
- CV
- [2] **IF** the breaker for 0-FCV-26-320 was **NOT** placed in the OFF position in Appendix B Step **6.0[3]**, **THEN**
- RESET/OPEN** 0-FCV-26-320 locally at 0-HS-26-320, MAKEUP WTR TRTMT PLANT ISOLATION VLV CONTROL, [Southeast corner of Water Treatment Plant]. \_\_\_\_\_
- [3] **IF** the following handswitches were placed in the TEST position in Appendix B Step **6.0[4]**, **THEN**
- RETURN** the following hand switches to the NORMAL position:

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- [3.1] 0-HS-26-3145A [MOB Chiller Room, north wall, el. 725,  
[0-JB-294-6889]

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [3.2] 0-HS-26-3146A [Service Bldg, Mech Equip Rm, S4/SM,  
el. 741, 0-JB-295-6890]

\_\_\_\_\_  
\_\_\_\_\_  
CV

- [4] **NOTIFY FIRE OPERATIONS** to **COMPLETE** the restoration  
Section(s) of the NPG SPP-18.4.6 secured for this test **AND**

**EXIT OR(s)** that were entered for this test.

- [5] **NOTIFY** the Test Director that this Section 6.0 of Appendix U  
is complete.

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS:**

- [1] **RESTORE** 2-HS-70-130A THRM BAR BSTR PMP 2B (TBBP) to the AS FOUND position of Appendix C Step 7.0[1.3]. \_\_\_\_\_
- [2] **ENSURE** recovery from ABI by using 0-SOI-30.05, AUXILIARY BLDG HVAC SYSTEMS. This SOI Section will also shutdown ABGTS if running using 0-SOI-30.06. \_\_\_\_\_

**NOTE**

The CB Cleanup fans aligned in the next step may already be stopped by this instruction.

- [3] **RECOVER** from CRI per 0-SOI-31.01. \_\_\_\_\_

**NOTE**

EGTS is required OPERABLE in MODES 1-4 for U1. 0-SOI-65.02 is used to align the system to standby readiness. The local reset pushbuttons for a phase A isolation must be reset only after annulus  $\Delta P$  has raised to greater than 4 inches of H<sub>2</sub>O. However, the annulus is normally open in the performance modes of this test.

- [4] **ENSURE** 0-SOI-65.02, Sections 7.1, and 5.1 is performed following auto actuation of EGTS by this test. \_\_\_\_\_
- [5] **ENSURE** the following dampers are CLOSED AND **PERFORM** the following:

NOMENCLATURE	LOC	POS	UNID	PERF INIT	VERIF INIT
U2 EGTS-ANN $\Delta P$ CNTLR B ISOL	0-M-27B	A AUTO	2-HS-65-83/87		CV
U2 EGTS-ANN $\Delta P$ CNTLR A ISOL	0-M-27B	A AUTO	2-HS-65-81/86		CV

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

- [6] **ENSURE** 0-BKR-65-42, EGTS FAN B/DISCH ISOL DMPR (0-FAN-65-42), is ON. [C&A VENT Bd 2B1-B, C/4D]

\_\_\_\_\_  
CV

**CHILLER RECOVERY**

**NOTE**

Jumpers were placed in the EBR chiller in Appendix W but they do **NOT** inop the chiller and do **NOT** have to be removed before exiting from the LCO.

- [7] **RESTORE** EBR chillers per 0-SOI-31.01. 0-HS-31-30A, EBR CHLR & AHU SYS A-A, must be placed to STOP then released to MID position during this restoration phase.
- [8] **NOTIFY** US /SRO to exit LCO 3.7.11 tracking for EBR chiller A after performing the previous step.

**CAUTION**

Prior to installing fuses for CES2BY in Step below, review all indications of potential DG emergency start signals ON DG 2B-B.

**NOTE**

The next step will restore common start circuits for DG 2B-B to DGs 1A-A, 1B-B, and 2A-A, and AFW initiation signal from both MFW Pumps trip.

- [9] **INSTALL** the following fuses:

FUSE	RELAY	PANEL	INITIALS	
1-FU-275-R76/M2	CES2BY	1-R-76		CV
1-FU-275-R76/M3	CES2BY	1-R-76		CV

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

**NOTE**

If Auxiliary Building Supply Fans were shutdown for this test due to loss of building heat, the next step will recover and place them back in service.

- [10] **IF** needed, **THEN**  
**RETURN** an Auxiliary Boiler to service per 0-SOI-12.01, **AND**  
**RESTORE** Auxiliary Building Ventilation/Heating. \_\_\_\_\_

**CAUTION**

**2-FCV-32-103 must be opened first prior to closing its bypass valve in the next step in order to prevent losing containment air.**

- [11] **RESTORE** containment air isolation capability:
- [11.1] **ENSURE** 2-FCV-32-103 is OPEN, **THEN**. \_\_\_\_\_
- [11.2] **RECLOSE AND LOCK** control air bypass valve in the annulus.

DESCRIPTION	UNID	POSITION	PERF	VERIF
ESSENT CONTROL AIR 2-FCV-32-103 BYPASS [OC/724 AZ 280]	2-BYV-32-318	LOCKED CLOSED		CV

- [12] **NOTIFY** Operations that B Station Air Compressor may be selected for service in accordance with 0-SOI-32.01. \_\_\_\_\_

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

**CCS PMP C-S ALIGNMENT**

**NOTE**

The following step may be NA if the CCS C-S pump is aligned to the Unit 2 Train B power supply which is the normal power supply for both U1 and U2 operations.

- [13] **PERFORM** the applicable section of 0-SOI-70.01 to place the 1B-B CCS Pump in service to B train (both units) and stop the C-S CCS pump. \_\_\_\_\_
- [14] **ENSURE** the normal power supply from U2 B train is in service to the C-S CCS pump. \_\_\_\_\_
- [15] **RESTORE** power to the 480V C & A Vent Board 2B2-B per 2-SOI-214.08. \_\_\_\_\_
- [16] **ENSURE** all UV relays targets are RESET on the following:
  - 6.9KV SD BD 2B-B. \_\_\_\_\_
  - 6.9KV SD BD 2B-B logic panel. \_\_\_\_\_
  - 480V SD BD 2B1-B. \_\_\_\_\_
  - 480V SD BD 2B2-B. \_\_\_\_\_
- [17] **RESET** all local alarms on Vital Inverter 1-IV and 2-IV. \_\_\_\_\_
- [18] **RESET** thermal overload bypass relays, by performing the following:
  - [18.1] **PLACE** the THERMAL OVERLOAD BYPASS 2B1 SWITCH, at 480V Reactor MOV BD 2B1-B [C/16D] to RESET and back to NOR. \_\_\_\_\_
  - [18.2] **ENSURE** thermal overload bypass relay reset by red indicating light OFF at 480V Reactor MOV BD 2B1-B [C/16D]. \_\_\_\_\_



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Return to Normal**

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

- [18.3]    **RESET** thermal overload bypass relay at 480V Reactor MOV BD 2B2-B, by placing THERMAL OVERLOAD BYPASS 2B2 SWITCH, [C/6F] to RESET and back to NOR.

\_\_\_\_\_
- [18.4]    **ENSURE** thermal overload bypass relay reset by red indicating light OFF at 480V Reactor MOV BD 2B2-B [C/6F].

\_\_\_\_\_
- [19]    **RESTORE** SFP cooling to normal alignment as plant conditions require in accordance with 0-SOI-78.01.

\_\_\_\_\_
- [20]    **RESTORE** computer trend recorders, 2-UDR-278-760 thru 765 to As-Found status by performing the following with UO assistance:

\_\_\_\_\_
- [20.1]    **REFER TO** the two pages of STRIP CHART ASSIGNMENT TEMPLATE obtained at the test setup in Appendix B.

\_\_\_\_\_
- [20.2]    **SELECT** "TREND MENU" on any control room computer monitor.

\_\_\_\_\_
- [20.3]    **SELECT** "ASSIGN POINTS TO STRIP CHART RECORDER". This displays the STRIP CHART ASSIGNMENT TEMPLATE.

\_\_\_\_\_
- [20.4]    **CLICK** on each point and restore points and ranges to previous values or to values desired by Operations.

\_\_\_\_\_
- [20.5]    **PAGE** down to page 2 and restore points and ranges to previous values or to values desired by Operations on page 2.

\_\_\_\_\_

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**7.0 MISCELLANEOUS SYSTEM REALIGNMENTS: (continued)**

**NOTE**

The throttle valves should be fully open to provide for flow at low steam generator pressures and temperatures. Several adjustments of the valves will be required as unit conditions change.

- [21] **IF** the SG-BD throttle valves were closed in Appendix B, **THEN**  
**OPEN** the following SG-BD throttle valves:

- A. SG 1, 2-THV-1-828. \_\_\_\_\_
- B. SG 2, 2-THV-1-829. \_\_\_\_\_
- C. SG 3, 2-THV-1-830. \_\_\_\_\_
- D. SG 4, 2-THV-1-831. \_\_\_\_\_

**NOTE**

Thermals were removed from several components and should be re-installed per Appendix W before returning the remaining associated components normal in this Section.

- [22] **ENSURE** Appendix W 3.0[7] is completed prior to performing the following steps in this Section. \_\_\_\_\_

- [22.1] **ENSURE** the following are in A-P AUTO (2-M-15):

[22.1.1] 2-HS-77-125A1, RX BLDG F & EQ SUMP PMP 2A \_\_\_\_\_

[22.1.2] 2-HS-77-125B1, RX BLDG F & EQ SUMP PMP 2B \_\_\_\_\_

- [22.2] **NOTIFY** Operations that Reactor Coolant Drain Tank Pump 2A may be returned to service. (0-L-2) \_\_\_\_\_

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[23] **ENSURE** the following HVAC systems are returned to normal:

- Incore Instrument Room (2-SOI-30.04). \_\_\_\_\_
- 480V BD RM A/C (el.772) (0-SOI-30.07). \_\_\_\_\_

[24] **NOTIFY** Chemistry that sampling of the RCDT & PRT may resume if required. \_\_\_\_\_

[25] **ENSURE** the following systems are in the condition required by present plant conditions by referring to MCR board indications of valve positions, pressure indications and alarms. Refer to listed SOIs as needed:

- [25.1] CVCS, 2-SOI-62.01. \_\_\_\_\_
- [25.2] BORON CONCENTRATION CONTROL, 2-SOI-62.02. \_\_\_\_\_
- [25.3] CCS, 0-SOI-70.01. \_\_\_\_\_
- [25.4] ERCW, 0-SOI-67.01. \_\_\_\_\_

[26] **VERIFY** the RETURN TO AS FOUND position of the PZR heater breakers as recorded in Appendix K and jumpers installed per Appendix E is completed. \_\_\_\_\_

[27] **VERIFY** temporary equipment modifications made per Appendix E are restored. \_\_\_\_\_

[28] **RETURN** Main Feedwater system to service or alignment in accordance with 2-SOI-2&3.01. \_\_\_\_\_

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**Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout  
Testing) On Train 2B**

<b>RAD MONITOR NAME</b>	<b>RAD MONITOR #</b>	<b>LOC</b>	<b>HI RAD FUNCTION (other than alarm)</b>	<b>COMMENTS</b>
CCS Liquid Effluent Monitors	2-RE-90-123	AB 737 CCS HXs	Closes Surge Tank Vents	For Unit 1/2 - <b>NOT</b> Tech Spec. Surge tank vents checked open in App K.  Skid powered by Train 2B, 2-DPL-90-242-1, Rad Processing & Area Monitoring Power  Rate Meter powered from 2-M-7 Inst Pwr Rack A
Upper Containment Air Monitor	2-RE-90-112	A12U/737		Unit 2 - Instrument powered from Vital Inst. Power Bd 2-IV  Unit 2 - Pumps powered from C&A Vent Bd 2B1-B
Condenser Vacuum Exhaust Monitors	2-RE-90-119	T15G/708		Unit 2 - Verify RM OOS  Rate Meter powered from 2-M-7 Inst Pwr Rack A  Skid powered from 2-DPL-242-1 Rad Processing & Area Monitoring Power  Pumps powered from C&A Vent BD 2A1-A
Containment Purge Air Exhaust Monitor	2-RE-90-131	A15U/713	Containment Vent Isolation (CVI) (wire lift will disable CVI)	Unit 2 - NA, Containment Purge Exh monitored by U2 Shield Bldg Exhaust RM  For Unit 1 - ODCM 1.1.2 requires only 1 Rad monitor 130 or 131 operable.  Tech Spec 3.3.6.A 4 hrs then 3.3.6.C enter LCO 3.9.4 if fuel movement  Rate Meter powered from 120V VIPB 2-IV  Pumps powered from C&A Vent BD 2B1-B

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Radiation Monitors Which Lose Power During Integrated Safeguards Tests (Blackout Testing) On Train 2B

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Area Radiation Monitors	ALL except 90-135 MCR Area Monitor	Throughout the plant		Refer to 2-SOI-90.04.  High radiation light and high radiation alarm are de-energized during the Blackouts. The meters will still operate. SFP Area Monitors 90-102 & 103 are <b>NOT</b> affected.  Normal feed is from 480V SD BD 2A2-A
Main Control Room Intake Monitor	0-RE-90-126	C2P/755	CRI & CREVS actuation	Unit 1 - Tech Spec 3.3.7 action A (7 days), all modes & fuel movement.  Fan fed from C & A Vent Bd 2B1-B  Rate Meter fed from 120V VIPB 1-II

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**Appendix W  
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Electrical Support**

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**1.0 TEST SETUP WITH ELECTRICAL SUPPORT**

**NOTES**

- 1) This Section is to be performed with Operations personnel and with one or two electrical support personnel.
- 2) Sections and steps of this Appendix are driven from the body of the procedure. Therefore, sections and steps may be performed out of order in this Appendix.

**CAUTION**

Ensure compliance with the TVA Safety Manual and NPG SPP-18.4.9 during the performance of steps within this Appendix, as appropriate.

- [1] **ENSURE** the following M&TE or equivalent is available:

DESCRIPTION	MINIMUM RANGE	REQUIRED ACCURACY	INITIALS
VOM	N/A	N/A	
Torque wrench	25-35 IN-LBS	+/- 2.5 IN-LB	

- [2] **DOCUMENT** test equipment or equivalent used during performance of this Instruction below:

TEST EQUIPMENT	MODEL NO.	TVA ID NO.	CAL DUE DATE	RANGE	INITIALS
VOM					
Torque wrench					

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[3]     **VERIFY** required M&TE is within its current calibration cycle as evidenced by a current affixed calibration sticker. \_\_\_\_\_

[4]     **ENSURE** the following tools are available:

[4.1]     Door keys for the following panels: 2-R-47, 2-R-48, 2-R-51, 2-R-53, 2-R-73, 2-R-76, 2-R-77, 2-R-78, 2-R-79, and 2B-B SD Bd Logic Panels. \_\_\_\_\_

[4.2]     (4) Jumpers, 4 to 6 inch long, for jumpering terminals in panel 2-R-76, and 2-R-78, (one for relay contacts, three for terminal blocks). \_\_\_\_\_

[4.3]     (2) Jumpers with standard alligator clips, 4 to 6 inch long, for jumpering relay terminals in the Electrical Board Room Chiller control panel. \_\_\_\_\_

[4.4]     (2) Jumpers, 10 to 12 inch long, for jumpering terminal block terminals in Reactor Vent Board 2B-B. \_\_\_\_\_

[4.5]     (1) Jumper with banana jack plugs, 4 to 6 inches long for jumpering terminal strip banana jack terminals in R-79 for the Fire pump start circuit. \_\_\_\_\_

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**NOTES**

- 1) This Section is to be performed with Operations personnel and with one or two electrical support personnel.
- 2) Prepare labels and bags for each set of thermals. Store these where they can be quickly retrieved for restoration at the end of the test. Notify US and place Caution Order or other prepared labels or tags as these are removed.

- [5] **REMOVE** the thermal overloads from the following by completing the table for each component in sequence (A thru D):

NOMENCLATURE	LOC	UNID	A. BKR AS FND POS	B. BKR OFF CV	C. THERMALS REMOVED CV	D. BKR ON CV
<b>480V REACTOR VENT BOARD 2B-B</b>						
RCDT PUMP 2B (2-PMP-77-6)	C/11D	2-BKR-77-6		CV	CV	CV
RB FLR/EQ DRN SUMP PUMP 2B (2-PMP-77-125B)	C/2A	2-BKR-77-125B		CV	CV	CV

- [6] **PLACE** prepared Caution Order or other appropriate labels or tags on each associated Control Room Switch (and breaker if using a Caution Order) stating "Thermals Removed". \_\_\_\_\_



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**NOTE**

Jumpers that are installed in the following step bypass the low level trips of the RBF&ED Sump and RCDT Pumps to prove that they trip on an accident signal instead of low level. The thermals are removed from these breakers in this Section step 1.0[5] to prevent pump damage. Two jumpers, each 10 to 12 inches long, are needed.

- [7] **INSTALL** jumpers across the following terminals in the rear of Reactor Vent Board 2B-B:

EQUIPMENT	COMPARTMENT	TERMINALS	PERF	CV
RBF&ED SUMP PUMP 2-PMP-77-125B	2A	2AB7 to 2AB3		CV
RCDT PUMP 2-PMP-77-6	11D	11D3 to 11D6		CV

**NOTE**

Wire lift prevents inadvertent CVI actuations from RE-90-131. Since U-2 will be defueled and the CVI is not required for this function, LCO 3.3.6 should not be applicable.

- [8] **OBTAIN** SRO permission to disable 2-RM-90-131.

\_\_\_\_\_  
U-2 SRO

- [9] **CONTACT** US/SRO to evaluate entry into LCO 3.3.6 Actions A & C for 2-RM-90-131.

- [10] **ENSURE** the previous two steps are completed, **THEN**  
**LIFT AND TAPE** the following internal wire in 2-R-78:

WIRE	TERMINAL	PERF	CV
URM2	TB835-2		

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**CAUTION**

This is a 120VAC circuit but the cabinet has some 480VAC circuits inside. Utilize the appropriate precautions and comply with the necessary ARC flash requirements.

**NOTE**

The next step will enable the train B EBR chiller to restart following black out. This jumpers out the high oil temp switch which would require local reset if the power is off greater than about 60 seconds. For this test, the Blackout is extended longer than the usual 10 seconds to permit verification of equipment. This jumper will **NOT** INOP the chiller. The following step will require the use of a 4 to 6 inch jumper with standard alligator clips. The 5CR relay can be found behind the right control panel door just above eye level. Wires should be clearly marked 7 and 8 at the top of the relay. This circuit is 120V AC but the cabinet has some exposed 480V circuits in it.

- [11] **PLACE** a jumper across wires 7 and 8 of the 5CR relay in the control panel of chiller 0-CHR-031-0129, ELECTRICAL BOARD ROOM CHILLER B.

TERMINALS	CONTROL PANEL	PERF	CV
Relay 5CR wires 7 and 8	0-CHR-031-0129		

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**NOTE**

The jumper installed in the next step bypasses the AFW Pump 52STA/b contact closure of the Steam Generator sample valves. This ensures that when the Safety Injection signal is actuated only the Phase A Containment Isolation relay contact actuates the Steam Generator sample valves to the Safeguard state and **NOT** an AFW pump start.

[12] **INSTALL** jumper across the following terminals in 2-R-78:

TERMINALS	CONTROL PANEL	PERF	CV
TB812-9 (BVBX) to TB812-10 (BVB1)	2-R-78		

[13] **NOTIFY** test director that Appendix W, Section 1.0 Steps [1-12] are complete. \_\_\_\_\_

**NOTE**

1) The next step must NOT be performed until notified since an LCO entry must be made prior to performing this step. See Steps 1.0[14] & 1.0[15]. This jumper will affect logic to the SD BD Rm pressurization fans.

2) Two jumpers installed in the next step bypass CRI trip signal to SD BD RM PRESS FANS A-A & B-A from A Train CRI logic. This ensures that when Unit 2, Train A SI signal is actuated, Unit 2 K606 & K613 will place SD BD Room Press Fans A-A & B-A in Safeguard state (OFF).

[14] **WHEN** notified by Test Director per Step 6.2.1[6], **THEN**

**INSTALL** jumpers across the following terminals in 1-R-78:

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EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
0-MTR-31-67	VKEB-1	TB852-1 (6A1X) to TB852-2 (6A1)	1-R-78		
0-MTR-31-68	VKEB-1	TB852-3 (6A1X) to TB852-4 (6A1)	1-R-78		

**NOTE**

Jumpers installed in the next step bypass the ABI trip of Cnmnt Purge and Incore Inst Rm Fans. With the Train 2A SSPS removed from service, this ensures that when the Safety Injection signal is actuated only the Train B Containment Vent Isolation contacts are placing the associated equipment in the Safeguard state.

[15] **WHEN** notified by Test Director per Step 6.2.1[7], **THEN**

**INSTALL** jumpers across the following terminals of Relay  
CPD2 [2-R-76 Row G Slot 9]:

EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
2-MTR-30-4	CPD2	3 AND 4	2-R-76		
2-MTR-30-11	CPD2	7 AND 8	2-R-76		

[16] **WHEN** notified by Test Director per Step 6.3.2[71], **THEN**

**REMOVE** jumpers from the following terminals of Relay CPD2  
[2-R-76 Row G Slot 9]:

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EQUIPMENT	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
2-MTR-30-4	CPD2	3 AND 4	2-R-76		
2-MTR-30-11	CPD2	7 AND 8	2-R-76		

[17] **WHEN** notified by Test Director per Step 6.3.2[72], **THEN**

**REMOVE** jumpers from the following terminals in 1-R-78  
affecting SD BD Rm pressurizing fans

	RELAY	TERMINALS	PNL	INITIALS	
				PERF	CV
0-MTR-31-67	VKEB-1	TB852-1 (6A1X) to TB852-2 (6A1)	1-R-78		
0-MTR-31-68	VKEB-1	TB852-3 (6A1X) to TB852-4 (6A1)	1-R-78		

**CAUTION**

**Terminals are energized with 120V AC.**

**NOTE**

The following jumper will place an automatic fire pump start signal only on the 2B-B fire pump and should energize relay 2B3 in 2-R-78. This terminal strip is located in the back of 1-R-79 (the door without lights). 1-R-79 is normally locked. If banana jacks have been installed on this terminal strip it is preferred to use a jumper for these jacks. F4-9 and F4-10 are the wire numbers coming off the bottom of these terminals.

[18] **WHEN** notified by Test Director per Step 6.1.2[43], **THEN**

**INSTALL** a jumper across terminals 10 (F4-9) and 11 (F4-10)  
on terminal strip TB908 [1-R-79].

\_\_\_\_\_  
CV

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**2.0 DG 2B-B NON-EMERGENCY TRIPS BYPASS TEST  
(continued)**

[19] **WHEN** notified by Test Director per Step 6.1.2[96] **THEN**

**REMOVE** the jumper from terminals 10 (F4-9) and 11 (F4-10)  
on terminal TB908 [1-R-79].

\_\_\_\_\_  
CV

[20] **NOTIFY** the Test Director when the jumper is removed from  
TB908 [1-R-79].

**2.0 DG 2B-B NON-EMERGENCY TRIPS BYPASS TEST**

**CAUTION**

The following steps must be performed with a VOM in a noisy and high air flow area in the running diesel rooms. Ensure proper hearing and safety protection equipment used. 125V DC potential from the diesel battery control circuit will exist on at least one of the terminals.

[1] **WHEN** notified by the Test Director per Step 6.1.2[67] **THEN**

**PERFORM** the following at the DG Building to verify non-emergency  
DG trips are removed from service:

**2B-B DIESEL ROOM**

[1.1] **VERIFY** the following annunciator windows at 0-M-26  
are CLEAR:

[1.1.1] Annunciator Window 217-D, CRANKCASE PRESS  
HI.

[1.1.2] Annunciator Window 218-D, DG PROTECTIVE  
RELAY OPERATION.

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[1.2]     **VERIFY** 2-RLY-82-86LOR2, DG 2B-B EMERGENCY START LOCKOUT, is TRIPPED [2-ARB-82-B/1, Diesel Generator 2B-B Relay Board].

[1.3]     **MOMENTARILY PLACE** a jumper across output terminals at Crankcase Pressure Switch 0-IPS-82--326/2BA1, HI CRANKCASE PRESS ALARM.

\_\_\_\_\_

CV

[1.4]     **ROTATE** and **HOLD** disk on Protective Relay DSL GEN 2B-B REV PWR RLY 32 at 2-ARB-82-B-B to ACTUATE relay contacts.

[1.5]     **VERIFY** the following annunciator windows at 0-M-26 are in ALARM:

[1.5.1]     Annunciator Window 217-D, CRANKCASE PRESS HI

[1.5.2]     Annunciator Window 218-D, DG PROTECTIVE RELAY OPERATION

[1.6]     **VERIFY** DG 2B-B continues to RUN by OBSERVING the following indications at 0-M-26:

[1.6.1]     DG RUN Lights (DG 2B-B) indicate RUNNING

[1.6.2]     2-HS-57-73A, 1924-DG To SD BD 2B-B, indicates Breaker CLOSED

[1.7]     **RELEASE** disk on Protective Relay DSL GEN 2B-B REV PWR RLY 32 at 2-ARB-52-B-B.

[1.8]     **RESET** trip target on DSL GEN 2B-B REV PWR RLY 32 at 2-ARB-82-B-B.

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**3.0 RESTORATION (continued)**

[1.9] **PLACE** Handswitch 0-XS-55-26, ANNUNCIATOR  
RESET-ACK-TEST, at 0-M-26 in RESET position. \_\_\_\_\_

[1.10] **VERIFY** the following annunciator windows at 0-M-26 are  
CLEAR:

[1.10.1] Annunciator Window 217-D, CRANKCASE PRESS  
HI \_\_\_\_\_

[1.10.2] Annunciator Window 218-D, DG PROTECTIVE  
RELAY OPERATION \_\_\_\_\_

**3.0 RESTORATION**

**NOTES**

- 1) Steps for thermal replacements in this appendix may be performed prior to other steps.
- 2) The jumpers referred to in the following step bypassed the low level trip of the RBF&ED Sump and RCDT Pumps to prove that they trip on an accident signal instead of low level.

[1] **WHEN** notified by Test Director to perform this restoration  
Section, **THEN**

**REMOVE** jumpers across the following terminals in the rear of  
Reactor Vent Board 2B-B:

EQUIPMENT	COMPARTMENT	TERMINALS	PERF	VERIF
RBF&ED SUMP PUMP 2-PMP-77-125B	2A	2AB7 to 2AB3		CV
RCDT PUMP 2-PMP-77-6	11D	11D3 to 11D6		CV

[2] **WHEN** notified by Test Director to perform this restoration  
Section, **THEN**

**REMOVE** jumper from the following terminals in 2-R-78.



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**3.0 RESTORATION (continued)**

TERMINALS	PNL	INITIALS	
		PERF	CV
TB812-9 (BVBX) to TB812-10 (BVB1)	2-R-78		

**NOTE**

The wire lift referred to in the next step prevented inadvertent CVI actuations from 2-RE-90-131. If irradiated fuel movement was in progress or planned, an LCO 3.3.6 action and an LCO 3.9.4 action may have been entered for 2-RM-90-131 when this wire lift was performed.

- [3] **LAND** the following internal wire back in 2-R-78:

WIRE	TERMINAL	PERF	VERIF
URM2	TB835-2		CV

- [4] **NOTIFY** US/SRO to exit LCO 3.3.6 for 2-RM-90-131 if no alarms are present from this monitor on 0-M-12.

**NOTE**

Step 3.0[5] of this appendix will remove the jumper from the high oil temp switch on Train B EBR chiller. The 5CR relay can be found behind the right control panel door just above eye level. Wires should be clearly marked 7 and 8 at the top of the relay. This circuit is 120V AC but the cabinet has some exposed 480V circuits in it.

- [5] **REMOVE** the jumper across wires 7 and 8 of the 5CR relay in the control panel of chiller 0-CHR-031-0129, ELECTRICAL BOARD ROOM CHILLER B, CB el.692.

TERMINALS	CONTROL PANEL	INITIALS	
Relay 5CR wires 7 and 8	0-CHR-031-0129		CV

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Date \_\_\_\_\_

- [6] **ENSURE** 0-CHR-031-0129, ELECTRICAL BOARD ROOM  
CHILLER B, is either in service or all local alarms are reset.

\_\_\_\_\_  
CV

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**Appendix W  
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Electrical Support**

Date \_\_\_\_\_

**NOTES**

- 1) Thermals should have been labeled and bagged and stored with the test director or in the Tagging Office.
- 2) If one train of purge air was left in service for the test (thermals **NOT** removed) then mark columns A and B "N/A" for that set of supply and exhaust fan.

- [7] **REINSTALL** the thermal overloads in the following by completing the table for each component in sequence (columns A thru C). Refer to this Appendix W Section 1.0 to find the "AS FOUND POSITION".

NOMENCLATURE	LOC	UNID	A. BKR OFF	B. THERMALS RE- INSTALLED	C. BKR RESTORED TO AS FOUND POSITION FROM APP U Section 1.0
480V REACTOR VENT BOARD 2B-B					
RCDT PUMP 2B (2-PMP-77-6)	C/11D	2-BKR-77-6			
INITIALS			1st	CV	1st
RB FLR/EQ DRN SUMP PUMP 2B (2-PMP-77-125B)	C/2A	2-BKR-77-125B			
INITIALS			1st	CV	1st

- [8] **REMOVE** Caution Order or other labels used from each breaker and associated Control Switch that was placed for removal of thermals **AND**
- COMPLETE** Caution Order sign-offs or document label or tag removal as needed. \_\_\_\_\_
- [9] **NOTIFY** US/SRO that Purge Air may now be placed back in service per 2-SOI-30.02 after the hold order is picked up on the A train dampers, if placed for RM-90-131. \_\_\_\_\_

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery I								
108 BATTERY DISCHARGE TEST		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					
109 125V VITAL BATT I TIE TO 125V VITAL BRTY BD I		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
201 6900V S/D BD 1A-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
202 480V S/D BD 1A1-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
203 480V S/D BD 1A2-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery I								
204 6900V S/D BD 1A-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
205 480V S/D BD 1A1-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
206 480V S/D BD 1A2-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
207 Spare								
208 Spare								
209 Spare								

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
210 125V VITAL BATT BD BUS FILTER		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
211 Spare								
212 Spare								
213 480V AUX BLDG COMMON BOARD		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
214 GAS ANALYZER 0-L-206, FSV-77-3, LSV 77-415		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
215 U1 CRD MG SET 1A POWER SUPPLY		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
216 GAS WASTE DISPOSAL PNL 0-L-2C, FSV-77-3, FSV-77-415		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
217 U1 FUSE ASSEMBLY COLUMN D		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery I								
218 U1 FUSE ASSEMBLY COLUMN E		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
219 Spare								
220 RESPONSE TIME TESTING		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					
221 U1 GENERATOR AUXILIARY PANEL ANNUNCIATOR (1-L-39 SWITCH)		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
222 SPARE		Open	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
223 6900V COMMON SWGR C		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery I								
224 SPARE								
225 SPARE BATT CHARGER 6-S TRANS. SWITCH		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
226 125V BATTERY CHARGER 1		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
227 INTER TIE TO BKR 226		Open	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
301 6900 S/D BD 2A-A BACKUP BUS NOR FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
302 480V S/D BD 2A1-A NOR BUS ALT FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
303 480V S/D BD 2A2-A NOR BUS ALT FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
304 6900V S/D BD 2A-A NOR BUS ALT FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
305 480V S/D BD 2A1-A BACKUP BUS NOR FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
306 480V S/D BD 2A2-A BACKUP BUS NOR FDR		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
307 EMERGENCY DC LIGHTING CAB LD-1		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
308 SPARE								
309 SPARE								
310 U1 FUSE ASSEMBLY COLUMN A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
A16 - 2-FCV-3-172		Removed						
A32 - 2-FCV-3-175		Removed						
311 U1 FUSE ASSEMBLY COLUMN B		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
B33 - 2-FCV-3-175		Removed						

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery I								
312 U1 FUSE ASSEMBLY COLUMN C		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
C9 - 2-FCV-3-172		Removed						
C13 - 2-PCV-1-5		Removed						
313 U1 AUX RELY RACK PANEL 1-R-54		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
314 SPARE								
315 FLOW CONTROL VALVE FCV-1-14, -32, -181, -183		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
316 SPARE								
317 SPARE								
318 SPARE								
319 U1 REACTOR PROTECTION SYSTEM TRAIN A 1-I-116		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
320 6.9KV S/D BD LOGIC RELAY PNL 1A-A		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
321 UNIT 2 AUX FEEDWATER PUMP & TURBINE NORMAL FEEDER		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
322 DIESEL GENERATOR 1A-A STOP CONTROL CIRCUIT		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery I								
323 SPARE								
324 SPARE								
325 VITAL INVERTER 2-I		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
326 VITAL INVERTER 0-I		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
327 VITAL INVERTER 1-I		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
108 BATTERY DISCHARGE TEST		Open	Open <input type="checkbox"/> 1 <sup>st</sup> CV					
109 125V VITAL BATTERY III TIE TO 125V VITAL BATT BD III		Closed	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
201 6900V S/D BD 1A-A BACKUP BUS NOR FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
202 6900V S/D BD 1A-A BACKUP BUS NOR FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
203 480V S/D BD 1A2-A NOR BUS ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Test				
	As-Found	Req'd Pos	1st CV	Post Test Pos	As-left	Returned to as-Found 1st CV IV		
125V Vital Battery III								
204 6900V S/D BD 1A-A NOR BUS ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
205 480V S/D BD 1A-A BACKUP BUS NOR FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
206 480V S/D BD 1A2-A BACKUP BUS NOR FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
207 SPARE								

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
208 UNIT 1 ANNUNCIATOR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
209 SPARE								
210 BUS FILTER 7500 OHMS RESISTOR 50W FOR VITAL BAT BD III		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
211 SPARE								
212 SPARE								
213 480V AUX BLDG COMMON BD (ALT FDR)		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
214 WASTE DISPOSAL PANEL 0-L- 2A (INVERTER XP/1098)		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery III								
215 CONTROL ROD DRIVE MG SET 2A LOAD BREAKER		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
216 SPARE								

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
217 U2 FUSE ASSEMBLY COLUMN D		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
D2 - FCV-62-35		Removed						
D7 - FCV-63-130		Removed						
D10 - FCV-30-213/FSV-30-213		Removed						
D11 - PCO-65-96		Removed						
D12 - FCV-63-78		Removed						
D14 - FCV-62-53		Removed						
D15 - 1-FCO-30-158		Installed						
D16 - FCO-30-270		Installed						
D17 - FCO-62-9		Removed						
D20 - PCV-68-301		Removed						
D21 - PCV-68-310		Removed						
D22 - SPARE		Removed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
D23 - FCV-63-77		Removed						
D24 - FCV-63-115		Removed						
D26 - FCV-62-125		Removed						
D28 - FCV-63-21		Removed						
D29 - FCV-63-79		Removed						
D30 - FCV-63-127		Removed						
D31 - FCV-63-163		Removed						
D32 - FCV-63-121		Removed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
D33 - FCV-81-13		Removed						
D37 - FCV-63-167		Removed						
D38 - FCV-63-158		Removed						
D39 – FCV-3-72		Removed						
D40 - FCV-63-186		Removed						
D41 - SPARE		Removed						
D42 - FCV-63-187		Removed						
D45 - FCV-63-188		Removed						
D46 - FSV-61-191		Removed						
D47 - FSV-61-193		Removed						
D48 - FCV-3-204		Removed						
D49 - LCV-70-63		Installed						
D50 - FCV-70-66		Installed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
218 - U2 FUSE ASSEMBLY COLUMN E		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
E2 - FCV-62-35		Removed						
E7 - FCV-63-130		Removed						
E14 - FCV-62-53		Removed						
E17 - FCO-62-9		Removed						
E20 - PCV-68-301		Removed						
E21 - FCV-68-310		Removed						
E23 - FCV-63-77		Removed						
E24 - FCV-63-115		Removed						
E30 - FCV-63-127		Removed						
E32 - FCV-63-117		Removed						
E34 - FCV-81-15		Removed						
E36 - FCV-63-164		Removed						

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
E40 - FSV-3-35D		Installed						
E41 - FSV-3-48D		Installed						
E42 - FSV-3-90D		Installed						
E43 - FSV-3-103D		Installed						
E49 - LCV-70-63		Installed						
E50 - LCV-70-66/LSV-70-66		Installed						
219 SPARE								
220 RESPONSE TIME TESTING		OFF	Open <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
125V Vital Battery III								
221 U2 GENERATOR AUX PNL ANNUNCIATOR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
222 SPARE								
223 6900V COMMON SWGR C ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
224 SPARE								
225 SPARE 125V DC CHGR 7-S TRANSFER SW 7DC-S		OFF	Open <input type="checkbox"/> 1 <sup>st</sup> CV					
226 125V BATTERY CHGR III		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
227 INTER TIE TO BKR 226		OFF	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
301 6900V S/D BD 2A-A BACKUP BUS ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
302 480V S/D BD 2A1-A NOR BUS NOR FDR, Under Voltage & Annunciator RELAYS, NOR SUP BKR 52N, ABGSF FAN 2A, CCS PMP 2A-A, CRDM FAN 2A-A, Elect Board Rm AHU B-A, AIR RET FAN 2A-A, LCC FAN 2A-A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
303 480V S/D BD 2A2-A NOR BUS NOR FDR, LCC FAN 2C-A, CRDM FAN 2C-A , SFP PMP A-A, 480V SDBR AHU B-A, FH EXH FAN A, ABDSF 2A, UV & ANN RELAYS, NOR SUP BKR 52N, HPFP 2A-A, EBR AIR COND A-A CPRSR, 480V S/D RM CHILLER PKG A-A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
304 6900V S/D BD 2A-A BACKUP BUS ALT FDR, PZR HTR CONT GRP 2D, CS PMP 2A-A, EMER FDR BKR, RHR PMP 2A-A, SIP 2A-A, BUS DIFF & UV AUX RLYS, CCP 2A-A, ERCW PUMP C-A & D-A, AFW PMP 2A-A, NOR FDR FROM CSST C, PZR HTR CONT GRP 2A-A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
305 480V S/D BD 2A1-A BACKUP BUS ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
306 480V S/D BD 2A2-A BACKUP BUS ALT FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
307 EMERGENCY DC LIGHTING CAB LD-3		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
308 SPARE								
309 SPARE								
310 U2 FUSE ASSEMBLY COLUMN A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
A1 - FCV-62-86		Removed						
A2 - TCV-62-79		Removed						
A3 - FCV-62-69		Removed						
A4 - LCV-62-118		Removed						
A5 - FCV-62-84		Removed						
A6 - FCV-62-72		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 473 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
A7 - FCV-62-73		Removed						
A8 - FCV-62-74		Removed						
A9 - FCV-62-70		Removed						
A10 - FCV-68-307		Removed						
A11 - PCV-68-340A		Removed						
A13 - FCV-63-64		Removed						
A14 - FCV-61-191		Removed						
A15 - FCV-61-193		Removed						
A16 - 1-LCV-3-172		Installed						
A17 - FCV-62-76		Removed						
A18 - FSV-68-394, 397		Removed						
A19 - FCV-63-185-A		Removed						
A20 - FCV-81-12		Removed						
A21 - TCV-67-84		Removed						
A22 - TCV-67-85		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 474 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
A23 - TCV-67-92		Removed						
A24 - TCV-67-93		Removed						
A25 - FCV-43-3		Removed						
A26 - FCV-62-140		Removed						
A27 - FCV-43-12		Removed						
A28 - FCV-62-128		Removed						
A29 - FCV-62-144		Removed						
A30 - FCV-43-23		Removed						
A31 - FCV-63-71		Removed						
A32 -1-LCV-3-175		Installed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 475 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
A33 - FCV-65-50		Removed						
A34 - PCV-65-81		Removed						
A35 - FCV-65-9		Removed						
A36 - FCO-65-46		Removed						
A37 - LCV-3-164		Removed						
A38 - FCV-65-47B		Installed						
A39 - FCV-65-5		Removed						
A40 - TCV-67-86		Removed						
A41 - TCV-67-94		Removed						
A42 - TCO-30-84		Removed						
A43 - TCO-30-85		Removed						
A44 - TCO-30-89		Removed						
A45 - TCO-30-90		Removed						
A46 - FCV-1-4		Removed						
A47 - FCV-1-11		Removed						



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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
A48 - FCV-1-22		Removed						
A49 - FCV-1-29		Removed						
A50 - FCV-43-35		Removed						
311 U2 FUSE ASSEMBLY COLUMN B		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
B1 - FCV-62-86		Removed						
B2 - TCV-62-79		Removed						
B3 - FCV-62-69		Removed						
B4 - LCV-62-118		Removed						
B5 - FCV-62-84		Removed						
B6 - FCV-62-72		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 477 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
B7 - FCV-62-73		Removed						
B8 - FCV-62-74		Removed						
B9 - FCV-62-70		Removed						
B10 - FCV-68-307		Removed						
B11 - PCV-68-340A		Removed						
B13 - FCV-63-64		Removed						
B14 - FCV-77-240		Installed						
B15 - 1-LCV-3-172		Installed						
B17 - SG FW CONTROL-A		Installed						
B19 - FCV-63-71		Removed						
B20 - FCV-81-12		Removed						
B21 - TCV-67-84		Removed						
B22 - TCV-67-85		Removed						
B23 - TCV-67-92		Removed						
B24 - TCV-67-93		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 478 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
B25 - Spare		Removed						
B26 - FCV-30-2		Installed						
B27 - FCV-30-61		Installed						
B28 - FCV-30-54		Installed						
B29 - FCV-30-10 & 52		Installed						
B30 - FCV-30-14 & 56		Installed						
B32 - FCV-30-20 & 59		Installed						
B33 - 1-LCV-3-175		Installed						
B34 - LCV-3-164		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 479 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
B35 - LCV-3-156		Removed						
B36 - FCV-30-40		Installed						
B37 - FCV-68-305		Removed						
B38 - FCV-62-143		Removed						
B39 - FCV-30-7, -51		Installed						
B40 - FCV-30-12		Installed						
B41 - SG FW CONTROL-A		Installed						
B42 - TCO-30-84		Removed						
B43 - TCO-30-85		Removed						
B44 - TCO-30-89		Removed						
B45 - TCO-30-90		Removed						
B46 - FCV-1-4		Removed						
B47 - FCV-1-11		Removed						
B48 - FCV-1-22		Removed						
B49 - FCV-1-29		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 480 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
312 U2 FUSE ASSEMBLY COLUMN C		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
C1 - FCO-30-271		Installed						
C2 - FCO-30-275		Installed						
C3 - FCV-31-306		Removed						
C4 - FCV-31-308		Removed						
C5 - FCV-31-326		Removed						
C6 - FCV-31-330		Removed						
C7 - FCV-68-305		Removed						
C8 - FCV-30-62		Installed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 481 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
C9 - 2-FSV-77-2561		Removed						
C10 - FCO-30-122		Installed						
C12 - FCO-30-129		Installed						
C13 -1-FCV-1-5		Installed						
C14 - FCV-61-96		Removed						
C15 - PCV-1-23		Removed						
C16 - FCV-61-110		Removed						
C17 - FCO-30-108		Installed						
C18 - FCO-30-21		Installed						
C19 - 1-FSV-77-2561		Installed						
C20 - FCV-43-58, -64		Removed						
C21 - FCV-77-20		Removed						
C22 - PCV-1-12		Removed						
C23 - SG FW CONTROL-A		Installed						
C24 - FCV-77-19		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 482 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
C25 - LCV-3-156		Removed						
C26 - FCV-77-128		Removed						
C27 - SG FW CONTROL-A		Installed						
C28 - FCV-77-10		Removed						
C29 - FCV-3-103		Installed						
C30 - FCV-77-17		Removed						
C31 - FSV-46-9A		Removed						
C32 - FCV-3-48		Installed						
C33 - FSV-46-36A		Removed						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 483 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
C34 - FCV-62-1228-A		Removed						
C38 - 2-PCV-1-30		Removed						
C39 - FCV-90-111		Removed						
C40 - FCV-90-113		Removed						
C41 - FCV-3-236, -242		Removed						
C42 - FCV-90-117		Removed						
C43 - FCV-1-147		Removed						
C44 - FCV-1-149		Removed						
C45 - FCV-90-107		Removed						
C46 - FCV-30-17		Installed						
C47 - FCV-30-5		Installed						
C49 - FCV-43-201, -434		Removed						
C50 - FCV-43-202, -433		Removed						



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 484 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
313 AUX RELAY RACK PANEL 2-R-54 (TRAIN A)		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
314 SPARE								
315 STEAM GENERATOR BLOWDOWN VALVES		OFF						
316 SPARE								
317 SPARE								
318 SPARE								
319 U2 REACTOR PROTECTION SYSTEM TRAIN A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
320 6.9KV S/D BD LOGIC RELAY PNL 2A-A		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 485 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>s</sup> CV IV		
125V Vital Battery III								
321 U1 AUX FEED PMP TURBINE NOR FDR		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
322 DG 2A-A EMERGENCY STOP/RESET		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
323 SPARE								
324 SPARE								
325 120 VAC VITAL INST INVERTER 2-III		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					
326 120 VAC VITAL INST INVERTER 0-III		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 486 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker/Description	Pre-Test			Post-Loop				
	As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1st CV IV		
125V Vital Battery III								
327 120 VAC VITAL INST INVERTER 1-III		ON	Closed <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 487 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/01	BOP INSTR RACK 2-R-127/128/143 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/02	INCORE TEMP MONITORING (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/03	MAIN CONTROL ROOM PNL 2-M-4 INSTRUMENT BUS 1		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/04	MAIN CONTROL ROOM PNL 2-M-5 PLUGMOLD INSTRUMENT BUS I		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/05	MCR PANEL 2-M-6 INSTR BUS I PLUG MOLD		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/06	FOXBORO I/A PRIMARY POWER TO PNL 2-R-14 /15 /16 /26		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2.BKR-235-1/07	AUX RELAY RACK 2-R-76 BUS A		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/08	AUX RELAY RACK C BUS TO PNL 2-R-76		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/09	NSSS AUX RELAY RACK PNL 2-R-58 A BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/10	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/11	AUX RELAY RACK PNL 2-R-75 A BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/12	SSPS DEMULTIPLEXER TO PNL 2-M-22		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/13	AUX CONT PNL 2-L-10 A INSTRUMENT BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/14	EMERGENCY VHF RADIO		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/15	AUX CONT BD PNL 2-L-11A INSTR BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 490 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/16	AB INSTR PANEL 2-L-57 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/17	AUX RELAY RACK BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/18	PNL 2-L-10 PLUGMOLD INST BUS 1 NEUTRON FLUX IND 2-NI-92-138		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/19	SYS 31 TR A ASSOCIATED FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/20	H2 CNTMT FLOW TO PNL 2-M-10		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As- Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As- Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/21	POWER FEED FOR 2-L-905		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/22	FOXBORO I/A PRIMARY POWER TO PNLS 2-R-141 & 142		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/23	RVL INSTUMENT SYSTEM (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/24	FOXBORO I/A PRIMARY POWER TO PNLS 2-R-124/125/126 & 141		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/25	VITAL SUPPLY TO PNL 2-R-3		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/26	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/27	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/28	CONTAINMENT PURGE DAMPER 2-FCO-30-294-A		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/29	SPARE (TO PNL 2-L-381 TDAFWP CONTROL)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/30	SPARE (NEUTRON FLUX MONITOR 2-NM-92-138-D)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/31	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/32	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/33	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/34	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/35	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 494 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/36	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/37	COMMON Q PAM SYSTEM TRAIN-A 2-R-179		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/38	INCORE TC MICROPROCESSOR (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/39	AFPT LEVEL CONT INSTR POWER TO PNL 2-L-11A		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/40	AFPT FLOW CONT NOR FDR 2-FIC-46-57		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 495 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/41	SYSTEM 31 TRAIN A FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/42	RCP 1 UV & UF RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BK2-235-1/43	SSPS (A) CH I INPUT RELAYS TO PNL 2-R-46		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/44	SSPS (B) CH I INPUT RELAYS TO PNL 2-R-49		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/45	NIS INST PWR CH 1 TO PNL 2-M-13		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 496 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-I									
2-BKR-235-1/46	NIS CONT PWR CH I TO PNL 2-M-13		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/47	PROCESS PROTECTION SET I		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-1/48	DG 2A-A METER RELAY INSTRUMENT POWER		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 497 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/01	FOXBORO I/A PRI PWR TO PNL 2-R-184		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/02	FOXBORO I/A PRI PWR TO PNLS 2-R-17/18/19		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/03	MCR PNL 2-M-3 INSTRUMENT BUS 2 PLUGMOLD		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/04	MCR PNL 2-M-6 INSTRUMENT BUS 2 PLUGMOLD		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 498 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/05	BOP INSTR RACK 2-R-130/131/140 BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/06	AUX RELAY RACK 2-R-76 BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/07	NSSS AUX RELAY RACK C BUS TO PNL 2-R-58		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/08	NSSS RELAY RACK PNL 2-R-58 'B' BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/09	AUX RELAY RACK PNL 2-R-75 'B' BUS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 499 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
		120V Vital AC BD 2-II							
2-BKR-235-2/10	AUX RELAY RACK 2-R-75 BUS C		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/11	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/12	AUX CONTROL BOARD PANEL 2-L-10 RELAY BUS C		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/13	AUX CONT PNL 2-L-10 'B' INSTRUMENT BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/14	SYS 31 TR B ASSOCIATED FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/15	PNL 2-L-27, 336, 43 AUX BLDG INSTR 'B' BUS I		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/16	AUX RELAY RACK BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/17	AUX RELAY RACK PNL 2-R-72,71 COMMON BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/18	LOCAL H2 CNTMT FLOW (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/19	FOXBORO I/A PRI PWR TO 2-R-185		OFF	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 501 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/20	SPARE (U1/U2 INTERFACE POINT)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/21	FOXBORO I/A PRI PWR TO PNL 2-R-121/122		ON	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/22	RVL INSTUMENT SYSTEM (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/23	PNL 1-R-1 PROCESS PROT SET 1 (OFF PER APP-R)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/24	AUX CONT BD PNL 2-L-11B INSTR BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 502 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/25 (1)	PROCESS PROTECTION SET II PNL 2-R-7		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/26	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/27	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/28	CNTMT PURGE ISLN DAMPER 2-FCO-30-295-B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/29	SPARE (TO PNL 2-L-381 TDAFWP CONTROL)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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Electrical Isolation Alignment

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/30	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/31	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/32	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/33	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/34	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/35	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/36	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/37	INCORE TC MICROPROCESSOR (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/38	COMMON Q PAMS SYSTEM TRAIN B 2-R-180		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/39	AFPT LEVEL CONT INSTR POWER TO PNL 2-L-11B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 505 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/40	AFPT FLOW CONT ALT FDR TO TRANS SW		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/41	SYSTEM 31 TRAIN B FLOW SWITCHES		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/42	RCP2 UV & UF RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/43	PNL 2-R-46 SSPS (A) CH II INPUT RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/44	PNL 2-R-49 SSPS (B) CH II INPUT RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 506 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-II									
2-BKR-235-2/45	NIS INST PWR CH II		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/46	MCR PNL 2-M-13 NIS CONT PWR CH II		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/47 (1)	PNL 2-R-5, 6, 7, 8 PROCESS PROTECTION SET II		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-2/48	DG 2B-B METER RELAY INSTRUMENT POWER		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 507 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/1	PROCESS CONTROL GROUP 3 TO PNL 2-R-20, 2-R-21		ON	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/2	TO PNL 2-M-3 INSTR & TRANS PWR		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/3	TO PNL 2-R-188 RCS LOOSE PARTS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/4	FOXBORO I/A DCS TO PNL 2-M-18		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/5	FOXBORO I/A DCS TO PNL 2-L-900		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/6	SPARE (UHF/VHF RADIO SYSTEM-HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/7	FOXBORO I/A DCS TO PNL 2-L-907/ 2-L-916		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/8	FOXBORO I/A DCS TO PNL 2-L-906		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/9	P-PENT-293-27 TO 2-L-201 (WINCISE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/10	PWR FD TO PNL 2-PNL-276-L13 INSTRUMENT LOOPS 2-TI-74-38C & 2-TI-74-40C		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 509 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/11	SPARE (PNL 0-L-29 -ERCW TO CCS HX B FLOWMETER)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/12	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/13	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/14	CNTMT PURGE AIR EXHAUST RAD MON 2-RE-90-130		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/15	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/16	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/17	PASF TO PNL 2-M-10 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/18	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/19	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/20	0-LI-78-43 SFP LEVEL INST		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/21	BORIC ACID TANK B HTR A CNTL 2-L-303		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/22	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/23	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/24	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/25	2-XX-55-6C MISP & 6E CISP ON 2-M-6		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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Date \_\_\_\_\_

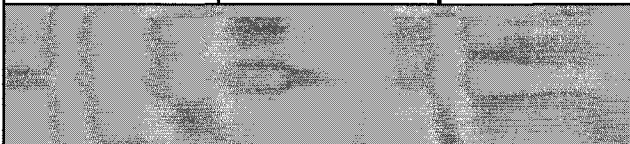
Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/26	AB INSTR PNLS 2-L-26/ 2-L-381/2-L-299 BUS A		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/27	TO PNL 2-R-46/ 2-R-48/ 2-R-52 SSPS (A) CH III TRAIN A INPUT, OUTPUT, & TEST RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/28	AUX FEEDWATER PUMP A PRESSURE CONT 2-PDIC-3- 122A(green tag 2-XI-68-340B)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/29	NSSS AUX RELAY RACK 2-R-54 A BUS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/30	SEPARATION AUX RELAY PANELS 2-R-73/2-R-74		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop					
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV			
	120V Vital AC BD 2-III									
	2-BKR-235-3/31	AUX CONTROL BOARD PANEL 2-L-11A RELAY BUS A		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-3/32	AUX CONT BUS TO PNL 2-L-11A (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-3/33	TO RCP 3 SENSOR PNL RCP3 UV & UF RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
	2-BKR-235-3/34	TO PNL 2-R-49 SSPS (B) CH III INPUT RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/35	NIS INST PWR CH III		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 514 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/36	TO PNL 2-M-13 NIS CONT PWR CH III		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/37	PNL 2-R-9 PROCESS PROTECTION SET III		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/38	FDR FOR SPEC 200 CNTL 2-R-129		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/39	CNTMT ANNULUS DP 2-PDIC-65-80 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/40	AUX RELAY RACK PNL 2-R-73,74 SSPS AUX RELAYS		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 515 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-III									
2-BKR-235-3/41	RX BLDG ISOL VLV 2-FCV-032-0081A		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/42	ERCW & CNTMT RADIATION MON 2-RE-90-106		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/43	PNL 2-R-11 PROCESS PROTECTION SET III		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/44	BOP INSTR RACK BUS A 2-R-127/2-R-143		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/45	MCR PNL 0-M-12 RAD RATE METER AND 2-RI-90-106		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 516 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop						
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV				
		120V Vital AC BD 2-III									
		2-BKR-235-3/46	125V DC VITAL BATTERY BD III INSTRUMENTATION		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
		2-BKR-235-3/47	CVCS LTDN FLOW DIVERT TEMP CNTL		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-3/48	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV							

Breaker	Description	Pre-Test	Post-Loop
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<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 517 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		As- Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/1	PROCESS CONTROL GRP 4		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/2	TO 2-M-4 INST BUS 4		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/3	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/4	FOXBORO I/A SEC PWR TO PNL 2-M-18		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/5	FOXBORO I/A PRI PWR TO PNL 2-L-901		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 518 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/6	SPARE (UHF/VHF RADIO SYSTEM -HARRIS)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/7	FOXBORO I/A SEC PWR TO 2-L-916 / 2-L-906		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/8	FOXBORO I/A SEC PWR TO PNL 2-L-907		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/9	SPARE (WINCISE 2-L-202)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/10	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/11	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/12	PWR TO PNL 2-M-23A (CNTMT NON-ESSENT AIR VENTS FOR APP R)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/13	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/14	CNTMT PURGE AIR EXHAUST RAD MON 2-RE-90-131		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/15	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/16	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/17	PASF SOL VLV 2-M-18 (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/18	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/19	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/20	0-LI-78-42 SFP LEVEL IND		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/21	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/22	BORIC ACID TK B HTR CONT 2-L-304		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/23	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/24	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/25	2-XX-55-6D MISP & 6F CISP ON 2-M-6		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found		
							1 <sup>st</sup> CV	IV	
<b>120V Vital AC BD 2-IV</b>									
2-BKR-235-4/26	AUX BLDG INST BUS B TO PNL 2-L-26, 381		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/27	PNL 2-R-46 SSPS (A) CH IV INPUT RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/28	SSPS (B) CH IV INPUT & TRAIN B OUTPUT RELAYS TO PNL 2-R-49, 51, 53		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/29	NIS INST PWR CH IV TO PNL 2-M-13		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/30	NIS CONT PWR CH IV TO PNL 2-M-13		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/31	PROCESS PROTECTION SET IV TO PNL 2-R-12, 13		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/32	U-2 RCP 4 UV & UF RELAYS		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/33	ERCW & CNTMT RADIATION MON TO 2-RE-90-112		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/34	2-PDIS-65-82 TO PNL 0-M-27B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/35	SSPS AUX RELAY RACK AUX RELAYS TO PNL 2-R-77, 78		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/36	RX BLDG ISOL VLV 2-FCV-32-103-B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/37	NSSS RELAY RACK B BUS TO PNL 2-R-55		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/38	FDR FOR SPEC 200 TO 2-R-132		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/39	SEPARATION AUX RELAY PANELS 2-R-77 / 2-R-78		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/40	AUX CONTROL PANEL 2-L-11B TO RELAY BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/41	AUX CONT PNL & INST BUS TO PNL 2-L-11B (SPARE)		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/42	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/43	AUX FEEDWATER PUMP B PRESS CONT PDIC-3-132A (RCS LOOP 1 PZR SPRAY CONT VLV POS IND 2-M-4)		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/44	125V DC VITAL BATTERY BD IV INSTRUMENTATION		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/45	PNL 2-R-28 PROCESS PROTECTION SET IV		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

Breaker	Description	Pre-Test			Post-Loop				
		As-Found	Req'd Pos	1 <sup>st</sup> CV	Post Test Pos	As-Left	Returned to Breaker ON or As-Found 1 <sup>st</sup> CV IV		
120V Vital AC BD 2-IV									
2-BKR-235-4/46	BOP INSTR RACK 2-R-131 BUS B		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/47	MCR PNL 0-M-12 RAD RATE METER AND 2-RI-90-112		ON	ON <input type="checkbox"/> 1 <sup>st</sup> CV					
2-BKR-235-4/48	SPARE		OFF	OFF <input type="checkbox"/> 1 <sup>st</sup> CV					

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Shutdown Board 2A1-A</b>									
NORM SUPPLY FROM 6.9KV SD	2-BKR-212-A001/1B C/1B				Closed				
AB GENERAL SUP FAN 2A (2- FAN-30-104)	2-BKR-30-104 C/2C				Closed				
CCS PUMP 2A-A	2-BKR-70-59 C/3B				Closed				
ALT SUPPLY FROM 6.9KV	2-BKR-212-A001/4B C/4B				Open				
NORM FDR FOR DIESEL AUX BD 2A1-A ALT FDR FOR DIESEL AUX BD 2A2-A	2-BKR-212-A001/4D C/4D				Closed				
CRDM CLR 2A-A FAN 1 (2-FAN-30-83/1)	2-BKR-30-83/1 C/7B				Open				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 528 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Shutdown Board 2A1-A</b>									
LOWER COMPT COOLER 2A-A (2-CCU-30-74)	2-BKR-30-74 C/7C				Open				
SPARE	2-BKR-30-83/2 C/7D				Open				
ALT FDR FOR 250V BATT CHGR 2 (0- CHGR-239-2) TSC INVERTER 2 (2-INV-264- 1)	0-BKR-239-2 C8A				Closed				
NORM FDR FOR RX MOV BD 2A1-A (2- MCC-213-A1) ALT FDR FOR RX MOV BD 2A2-A (2-MCC-213-A2)	2-BKR-212-A001/8B C/8B				Closed				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 529 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
480V Shutdown Board 2A1-A									
NORM FDR FOR RX VENT BD 2A-A (2- MCC-232-A)	2-BKR-212-A001/9B C/9B				Closed				
ELEC BOARD ROOM AHU B-A (0-AHU-31- 30D)	0-BKR-31-30D C/9C				Closed				
ALT FDR FOR VIT BATT CHGR IV (0- CHGR-236-4)	0-BKR-236-4 C/10A				Closed				
NORM FDR FOR C&A VENT BD 2A1-A (2-MCC-214-A1)	2-BKR-212-A001/10B				Closed				
CNTMT AIR RETURN FAN 2A-A (2-FAN- 30-38)	2-BKR-30-38 C/10C				Closed				

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Shutdown Board 2A1-A</b>									
ALT FDR FOR C&A VENT BD 2A2-A (2- MCC-214-A2)	2-BKR-212-A001/10D C/10D				Closed				
CURRENT LIMITING REACTOR BYPASS BREAKER	2-BKR-212-A001/12D C/12D				Closed				

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2A2-A</b>									
NORM SUPPLY FROM 6.9KV SD BD 2A-A	2-BKR-212-A002/1B C/1B		Closed						
ELEC BD RM CHLR A-A COMPR (0-COMP 31-128/2)	0-BKR-31-128/2 C/2C		Closed						
NORM FDR FOR DIESEL AUX BD 2A2-A (2- MCC-215-A2) ALT FDR FOR DIESEL AUX BD 2A1-A (2-MCC-215-A1)	2-BKR-212-A002/2D C/2D		Closed						
SD BD RM CHLR A-A (0-CHR-31-36/2)	0-BKR-31-36/2 C/3C		Closed						
ALT SUPPLY FROM 6.9KV SD BD 2A-A	2-BKR-212-A002/4B C/4B		Open						
HP FIRE PUMP 2A-A (0-PMP-26-9)	0-BKR-26-9 C/4D		Closed						
CRDM CLR 2C-A FAN 1 (2-FAN-30-88/1)	2-BKR-30-88/1 C/7A		Open						



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Shutdown Board 2A2-A</b>									
AB GENERAL EXH FAN 2A (2-FAN 30-274)	2-BKR-30-274 C/7B		Closed						
FH AREA EXH FAN A-A (0-FAN-30-136)	0-BKR-30-136 C/7C		Closed						
LOWER COMPT COOLER 2C-A (2-CCU-30-77)	2-BKR-30-77 C/7D								
NORM FDR FOR RX MOV BD 2A2-A (2-MCC-213-A2) ALT FDR FOR RX MOV BD 2A1-A (2-MCC-213-A1)	2-BKR-212-A002/8B C/8B		Closed						
SHUTDOWN BOARD ROOM AHU B-A (0-AHU-31-44)	0-BKR-31-44 C/8D		Closed						
NORM FDR FOR VIT BATT CHGR III (0-CHGR-236-3)	0-BKR-236-3 C/9A		Closed						
ALT FDR FOR C&A VENT BD 2A1-A (2-MCC-214-A1)	2-BKR-212-A002/9B C/9B		Closed						
NORM FDR FOR C&A VENT BD 2A2-A (2-MCC-214-A2)	2-BKR-212-A002/9C C/9C		Closed						



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
NORM SUPPLY FROM 480V SD BD 2A1-A	2-BKR-213-A001/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2A2-A	2-BKR-213-A001/1A2 C/1A2		Open						
BORIC ACID TANK B HTR A (2-HTR-62-239)	2-BKR-62-239A C/2A		Open						
BORIC ACID TRANSFER PMP 2A-A (2-PMP-62-230)	2-BKR-62-230 C/2B		Open						
CCS THRM BAR BSTR PMP 2A (2-PMP-70-131)	2-BKR-70-131 C/2C		Open						
RWST TO RHR SUCT (2-FCV-63-1)	2-BKR-63-1A C/2E1		Closed						
CCP MIN FLOW VALVE (2- FCV-62-98) (SHUNT TR)	2-BKR-62-98A C/2F2		Open						
480V FLEX FEED TO RMOV BOARD 2A1-A	2-BKR-360-A1/3B-A C/3B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 535 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
CCP AUX OIL PMP 2A	2-BKR-62-247 C/3E		Open						
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	2-BKR-63-118A C/3F2		Open						
SIS BORON INJ TANK HEATER 2A-A (2- HTR-63-37-A)	2-BKR-63-37 C/4A		Open						
ANNUNCIATOR BREAKER	2-BKR-213-A001/4C C/4C		Closed						
AFW PMP 2A-A LUBE OIL PMP (2-PMP-3-118D)	2-BKR-3-118D C/4E		Open						
THERMAL OVERLOAD BYPASS 2A1	2-BKR-213-A001/4F C/4F		Open						
LOOP 4 HOT LEG TO RHR SUCTION (2- FCV-74-1)	2-BKR-74-1A C/5B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 536 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
LWR CNTMT CLR HDR C ERCW SUP(2-FCV-67-97)	2-BKR-67-97 C/5C		Open						
PD CHG PMP RECIRC ISOL (2- FCV-62-275)	2-BKR-62-275 C/5F		Open						
PRESS RELIEF (2-FCV-68-333)	2-BKR-68-333 C/6D		Open						
CVCS SEAL WATER RETURN HDR ISOL (2-FCV-62-63)	2-BKR-62-63 C/7A		Open						
CVCS CHARGING HEADER ISOL (2-FCV-62-90)	2-BKR-62-90 C/7B		Open						
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	2-BKR-63-80B C/7D		Open						
CCP MIN FLOW VALVE (2-FCV-62-98)	2-BKR-62-98B C/8A		Open						
VCT OUTLET ISOL (2-LCV-62-132)	2-BKR-62-132 C/8B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 537 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
SIS CL ACCUM 1 OUT ISOL (2-FCV-63-118)	2-BKR-63-118B C/8D		Closed						
RWST CVCS SUPPLY HEADER ISOL (2-LCV-62-135)	2-BKR-62-135 C/9A		Open						
RHR HX 2A OUTLET TO SIP 2A SUCT (2-FCV-63-177)	2-BKR-63-177 C/9B		Open						
RCP OIL COOLERS CCS SUPPLY (2-FCV-70-100)	2-BKR-70-100 C/9D		Open						
RWST TO RHR SUCT 2-FCV-63-1	2-BKR-63-1B C/10A		Closed						
SIP PMP RECIRC TO RWST (2-FCV-63-3)	2-BKR-63-3 C/10B		Open						
LOOP 4 HOT LEG TO RHR SUCTION (2-FCV-74-1)	2-BKR-74-1B C/10D		Open						
CSP 2A-A MINIFLOW (2-FCV-72-34)	2-BKR-72-34 C/10F		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 538 of 569</b>
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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
SIS PMP INLET TO CVCS CHGR PMP (2-FCV-63-7)	2-BKR-63-7 C/11A		Open						
RHRP 2A TO CHG PMP/SIP 2A SUCT (2-FCV-63-8)	2-BKR-63-8 C/11B		Open						
SIS BORON INJ TNK OUT ISOL (2-FCV-63-26)	2-BKR-63-26 C/11D		Open						
SIP 2A SUCT ISOL (2-FCV-63-47)	2-BKR-63-47 C/12A		Open						
CNTMT SMP TO RHRP 2A ISOL (2-FCV-63-72)	2-BKR-63-72 C/12B		Open						
RHR TO COLD LEG 2/3 INJ ISOL (2-FCV-63-93)	2-BKR-63-93 C/12D		Open						
SIP 2A COLD LEG INJ FLOW (2-FCV-63-152)	2-BKR-63-152 C/12E		Open						
SIP 2A HOT LEG 1/3 INJ HDR ISOL (2-FCV-63-156)	2-BKR-63-156 C/13A		Open						
CNTMT SUMP TO CSP 2A-A SUCTION (2-FCV-72-44)	2-BKR-72-44 C/13B		Open						

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 539 of 569</b>
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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
CS HDR A ISOL (2-FCV-72-39)	2-BKR-72-39 C/13E		Open						
RHR SPRAY HDR A ISOL (2-FCV-72-40)	2-BKR-72-40 C/14A		Open						
RHR PMP 2A-A MINIFLOW (2-FCV-74-12)	2-BKR-74-12 C/14D		Open						
RHR HX 2A OUTLET XTIE (2-FCV-74-33)	2-BKR-74-33 C/14E		Open						
LWR CNTMT CLR HDR A ERCW SUP (2-FCV-67-89)	2-BKR-67-89 C/15D		Open						
INCORE INSTR RM AHU 2A (2-AHU-31-265)	2-BKR-31-265 C/16A		Open						
CONTAINMENT PIT SUMP PMP (2-PMP-77-129)	2-BKR-77-129 C/16B		Open						
ALT FDR BATT CHGR 1 XFER SW (0-XSW-252-1)	0-BKR-252-1/2 C/16F1		Closed						



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
INCORE INSTR RM CHLR COMPR 2A (2-MTR-31-303B)	2-BKR-31-303B C/16F2		Open						
BORIC ACID BATCH TANK HTR 4 (2-HTR-62-228/4)	2-BKR-62-228/4 C/17A		Open						
CNTMT STANDPIPE ISLN VLV (2-FCV-26-240)	2-BKR-26-240 C/17B		OPEN						
ANNULUS STANDPIPE ISLN VLV (2-FCV-26-242)	2-BKR-26-242 C/17C		OPEN						
POWER OUTLETS 1-PO-213-A1/1 - A1/5	2-BKR-213-A001/17E C/17E		OPEN						
SIS CL ACCUM 3 OUT ISOL (2-FCV-63-80)	2-BKR-63-80A C/17F2		OPEN						
INCORE INSTR RM CW PMP 2A (2-PMP-31-303/1)	2-BKR-31-303A C/18C		OPEN						
RCP SPRAY ISLN VLV (2-FCV-26-243)	2-BKR-26-243 C/18E		OPEN						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Rx MOV Board 2A1-A</b>									
Harris Radio Dist Panel A PNL-253-1100A (Spare)	0- 2-BKR-213-A1/18F1 C/18F1		Closed						
POWER OUTLET 2-PO-213-A1/6,7,8,9,10	2-BKR-213-A1/18F2 C/18F2		OPEN						

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2A2-A</b>									
NORM SUPPLY FROM 480V SD BD 2A2-A	2-BKR-213-A002/1A1 C/1A1				Closed				
ALT SUPPLY FROM 480V SD BD 2A1-A	2-BKR-213-A002/1A2 C/1A2				Open				
ERCW HDR A AFW PMP 2A-A SUCTION (2-FCV-3-116A)	2-BKR-3-116A C/2A				Open				
ERCW HDR A AFW PMP 2A-A SUCTION (2-FCV-3-116B)	2-BKR-3-116B C/2B				Open				

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		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2A2-A</b>									
SG 1 STM SUP TO TD AFW PMP (2-FCV-1-15)	2-BKR-1-15 C/2D				Open				
MS HDR TO TD AFW PMP (2-FCV-1-17)	2-BKR-1-17 C/2E				Open				
ERCW HDR A TD AFW PMP SUCTION (2-FCV-3-136A)	2-BKR-3-136A C/3A				Open				
ERCW HDR A TD AFW PMP SUCTION (2-FCV-3-136B)	2-BKR-3-136B C/3B				Open				
SG 1 MFW ISOL (2-FCV-3-33)	2-BKR-3-33 C/3D				Open				
MFW DEAERATION LINE LP 1 ISOL (2-FCV-3-191)	2-BKR-3-191 C/4A				Open				
MFW DEAERATION LINE LP 2 ISOL (2-FCV-3-192)	2-BKR-3-192 C/4B				Open				
ANNUNCIATOR BREAKER	2-BKR-213-A002/4C C/4C				Closed				

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
480V Reactor MOV Board 2A2-A									
SG 3 MFW ISOL (2-FCV-3-87)	2-BKR-3-87 C/4D				Open				
SAMPLE HX CCS INLET (2-FCV-70-215)	2-BKR-70-215 C/5A				Open				
2-FCV-74-2 BYPASS RHR SUCTION (2-FCV-74-8)	2-BKR-74-8 C/5C				Open				
CNTMT SPRAY HX 2A-A ERCW IN (2-FCV-67-125)	2-BKR-67-125 C/5E				Open				
CNTMT SPRAY HX 2A-A ERCW OUT (2-FCV-67-126)	2-BKR-67-126 C/5F				Open				
SG 4 STM SUP TO TD AFW PMP (2-FCV-1-16)	2-BKR-1-16 C/6A				Open				
CVCS HEAT TRACE XFMR A1 (0-DXF-234-A1/CVCS)	0-BKR-234-1/CVCS C/6B				Closed				
THERMAL OVERLOAD BYPASS 2A2	2-BKR-213-A002/6D C/6D				Open				

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2A2-A</b>									
NORM FDR SPARE BATT CHGR (0-CHGR-236-7)	0-BKR-236-7 C/6F				Closed				
ERCW STRAINER 2A-A IN ISOL (2-FCV-67-22)	2-BKR-67-22 C/7B				Closed				
LWR CNTMT A CLR ERCW RETURN (2-FCV-67-87)	2-BKR-67-87 C/7D				Open				
UPPER CNTMT VT CLR 2A ERCW SUP (2-FCV-67-130)	2-BKR-67-130 C/7F				Open				
AB ERCW SUP HDR 2A ISOL (2-FCV-67-81)	2-BKR-67-81 C/8A				Closed				
LWR CNTMT CLR HDR D ERCW SUP (2-FCV-67-107)	2-BKR-67-107 C/8B				Open				
LWR CNTMT C CLR ERCW RETURN (2-FCV-67-95)	2-BKR-67-95 C/8D				Open				
UPPER CNTMT VT CLR 2C ERCW SUP (2-FCV-67-133)	2-BKR-67-133 C/8F				Open				

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2A2-A</b>									
LWR CNTMT CLR HDR B ERCW SUP (2-FCV-67-99)	2-BKR-67-99 C/9A				Open				
LWR CNTMT B CLR ERCW RETURN (2-FCV-67-104)	2-BKR-67-104 C/9B				Open				
UPPER CNTMT VT CLR 2A ERCW RET (2-FCV-67-295)	2-BKR-67-295 C/9D				Open				
UPPER CNTMT VT CLR 2B ERCW RET (2-FCV-67-139)	2-BKR-67-139 C/9F				Open				
LWR CNTMT D CLR ERCW RETURN (2-FCV-67-112)	2-BKR-67-112 C/10A				Open				
AB AIR CLR ERCW SUP HDR 2A ISOL (2-FCV-67-127)	2-BKR-67-127 C/10B				Closed				
UPPER CNTMT VT CLR 2C ERCW RET (2-FCV-67-296)	2-BKR-67-296 C/10D				Open				
UPPER CNTMT VT CLR 2D ERCW RET	2-BKR-67-142 C/10F				Open				

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
480V Reactor MOV Board 2A2-A									
CCS HX B OUT ERCW FLOW CNTL (2-FCV-67-146)	2-BKR-67-146 C/11A				Closed				
RCP THERMAL BARRIER CCS RTN (2-FCV-70-90)	2-BKR-70-90A C/11D				Open				
RCP THERMAL BARRIER CCS SUPPLY (2-FCV-70-133)	2-BKR-70-133A C/11E				Open				
RCP OIL COOLER CCS RETURN (2-FCV-70-92)	2-BKR-70-92 C/12D				Open				
STANDBY LIGHTING CAB 1 XFMR (0-DXF-227-1)	0-BKR-227-1 C/12E				Closed				
SPARE	2-BKR-70-139 C/12F				Open				
CCS HX SUP ERCW HDR 2A/1B XTIE (2-FCV-67-223)	2-BKR-67-223 C/13A				Open				
ERCW DISCH HDR A CT ISOL (0-FCV-67-360)	0-BKR-67-360 C/13B				Closed				

<b>WBN Unit 2</b>	<b>Unit 2 Integrated Safeguards Test - Train 2B</b>	<b>2-PTI-262-02 Rev. 0000 Page 547 of 569</b>
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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
480V Reactor MOV Board 2A2-A									
SPARE	2-BKR-70-168 C/13D				Open				
2-FCV-26-245 ANN SPR ISV	2-BKR-26-245 C/13E				Open				
2A ESF EQUIP CCS SUP (2-FCV 70-2)	2-BKR-70-2 C/14A				Open				
MISC EQUIP CCS SUP HDR (2-FCV-70-4)	2-BKR-70-4 C/14B				Open				
CCS HX B OUTLET (2-FCV-70-15)	2-BKR-70-15 C/14D				Open				
CCS HX B/C OUTLET XTIE (2-FCV-70-195)	2-BKR-70-195 C/14E				Open				
CCS HX B OUT ERCW FLOW CNTL BYP (2-FCV-67-143)	2-BKR-67-143 C/15A				Closed				
CCS HX B/C IN XTIE (2-FCV-70-18)	2-BKR-70-18 C/15B				Open				
CCS HX B INLET (2-FCV-70-16)	2-BKR-70-16 C/15D				Open				



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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	1st	CV	Req'd Pos	As-Left	1st	CV	IV
<b>480V Reactor MOV Board 2A2-A</b>									
RCP THERMAL BARRIER CCS RETURN (TO CMPT 11D) (2-FCV-70-90)	2-BKR-70-90B C/16A				Open				
RCP THERMAL BARRIER CCS SUPPLY (TO CMPT 11E) (2-FCV-70-133)	2-BKR-70-133B C/16B				Open				
EXCESS LETDOWN HX CCS SUPPLY (2-FCV-70-143)	2-BKR-70-143 C/16D				Open				
RHR HX 2A CCS OUTLET (2-FCV-70-156)	2-BKR-70-156 C/16E				Open				
SAMPLE HX CCS OUTLET (2-FCV-70-183)	2-BKR-70-183 C/17A				Open				
480V ELEC BD RM COMPR 2A-A (2-COMP-31-465)	2-BKR-31-465 C/17E				Closed				

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
NORM SUPPLY FROM 480V SD BD 2A1-A	2-BKR-214-A001/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2A2-A	2-BKR-214-A001/1A2 C/1A2		Open						
AUX CNTL AIR COMPR A-A (0-COMP-32-60)	0-BKR-32-60 C/2A		Closed						
PENT RM EL 692 CLR 2A-A (2-CLR-30-186)	2-BKR-30-186 C/2C		Open						
PRIMARY WATER MAKEUP PMP 2A (2-MTR-81-3)	2-BKR-81-3 C/2D		Open						
SIS HEAT TRACE XFMR A2 (0)	0-BKR-234-A2/SIS C/2F1		Closed						
SHUTDOWN BOARD ROOM CW PMP A-A (0-PMP-31-36/1)	0-BKR-31-36/1 C/3A		Open						
CS PUMP 2A-A RM COOLER (2-PMCL-30-177)	2-BKR-30-177 C/3C		Open						

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
ABGTS EXHAUST FAN 1A-A (1-FAN-30-146)	1-BKR-30-146 C/3D		Closed						
COND VAC PMP AIR EXH RAD MON (2-RE-90-119)	2-BKR-90-119A C/3F1		Open						
EGTS ROOM CLR 2A-A (2-CLR-30-200)	2-BKR-30-200 C/4A		Closed						
ANNUNCIATOR BREAKER	2-BKR-214-A001/4C C/4C		Closed						
ERCW STR 2A-A BACKWASH (2-FCV-67-9A)	2-BKR-67-9A C/4E		Closed						
CVCS HEAT TRACE XFMR A4 (0-DXF-234-A4/CVCS)	0-BKR-234-A4/CVCS C/4F2		Open						
DISTRIBUTION PANEL 5C	2-BKR-214-A001/5B C/5B		Open						
AFW/BA XFER PMP SPACE CLR 2A-A (2-PMCL-30-184)	2-BKR-30-184 C/5E		Closed						

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		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
SD BD RM B PRESSURIZING FAN B-A (0-FAN-31-62)	0-BKR-31-62 C/6A		Closed						
ERCW STRAINER 2A-A (2-STN-67-9)	2-BKR-67-9C C/6B		Closed						
ERCW TRAV SCREEN 2A-A (2-TWS-67-439)	2-BKR-67-439 C/6C		Closed						
ERCW STR 2A-A FLUSH (2-FCV-67-9B)	2-BKR-67-9B C/6E		Closed						
CNTMT BLDG LOWER COMPT RAD MON (2-RE-90- 106)	2-BKR-90-106 C/6F1		Open						
VITAL BATT ROOM 4 EXH FAN 2A1-A (2-FAN-31-287)	2-BKR-31-287 C/7B		Closed						
RHR PUMP 2A-A SUCTION (2-FCV-74-3)	2-BKR-74-3 C/7D		Open						
RWST TO CSP 2A-A (2-FCV-72-22)	2-BKR-72-22 C/7E		Open						

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		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
SIS PUMP 2A-A RM COOLER (2-PMCL-30-180)	2-BKR-30-180 C/8A		Open						
PENT RM EL 737 CLR 2A-A (2-CLR-30-194)	2-BKR-30-194 C/8B		Closed						
XFMR RM 2A EXH FAN 2A2-A (2-FAN-30-250F)	2-BKR-30-250F C/8C		Closed						
XFMR RM 2A EXH FAN 2A3-A (2-FAN-30-250G)	2-BKR-30-250G C/8D		Closed						
EBR CHLR A-A OIL PMP (0-PMP-31-128/3)	0-BKR-31-128/3 C/8F1		Closed						
RHR PUMP 2A-A RM COOLER (2-PMCL-30-175)	2-BKR-30-175 C/9A		Open						
ELEC BD RM CW PMP A-A (0-PMP-31-128/1)	0-BKR-31-128/1 C/9B		Closed						
480V EBR PRESS AIR SUP FAN 2A1-A (2-FAN-31-462)	2-BKR-31-462 C/9C		Closed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
XFMR RM 2A EXH FAN 2A1-A (2-FAN-30-250E)	2-BKR-30-250E C/9D		Closed						
PHMS TRANSFORMER (2-DXF-268-1)	2-BKR-268-1 C/9E		Open						
MCR AIR INTAKE RAD MON (O- RE-90-125)	0-BKR-90-125 C/9F1		Closed						
CENT CHG PUMP 2A-A RM COOLER (2-PMCL-30-183)	2-BKR-30-183 C/10A		Open						
PENT RM EL 713 CLR 2A-A (2-CLR-30-196)	2-BKR-30-196 C/10B		Open						
AB EL 692 PIPE CHASE CLR 2A-A (2-CLR-30-201)	2-BKR-30-201 C/10C		Open						
ABGTS HUMIDITY HTR A-A (0-HTR-30-147)	0-BKR-30-147 C/10D		Closed						
IPS VLV & STR RM SUMP PUMP 2A-A (0-PMP-40-3B)	0-BKR-40-3B-A C/10F1		Closed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
480V EBR PRESS AIR SUP FAN 2B1-A (2-FAN-31-478)	2-BKR-31-478 C/11A		Closed						
480V EBR A/C UNIT 2A-A (2-AHU-31-461)	2-BKR-31-461 C/11C		Closed						
RAD MON/SAMP/FIRE PROT TRANSFORMER 2	2-BKR-242-1 C/11D		Closed						
VITAL BATT RM III EXH FAN 2B1-A (2-FAN-31-285)	2-BKR-31-285 C/12A		Closed						
AB MECH EQ RM COND 2A-A (2-COND-31-290)	2-BKR-31-290 C/12C		Closed						
SHLD BLDG VT MON SYS PRI SAMP VAC PMPS 1 & 2	2-BKR-90-452 C/12E1		Open						
CNTMT PURGE AIR EXH RAD MON (2-RE-90-130)	2-BKR-90-130 C/12F1		Open						
FLOOD MODE AUX CHG PMP 2A (2-PMP-84-16)	2-BKR-84-16 C/13A		Open						

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Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-left	1st	CV	IV
<b>480V C&amp;A Bldg Vent Board 2A1-A</b>									
EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77)	2-BKR-65-77 C/13C		Open						
ERCW SCREEN WASH PUMP 2A-A (2-PMP-67-437)	2-BKR-67-437 C/13D		Closed						
SD BD RM CHLR A-A OIL PMP (0-PMP-31-36/3)	0-BKR-31-36/3 C/13F1		Closed						



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2A2-A</b>									
NORM SUPPLY FROM 480V SD BD 2A2-A	2-BKR-214-A002/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2A1-A	2-BKR-214-A002/1A2 C1A2		Open						
480V BD RM 2A HTR A (2-HTR-30-A1A)	2-BKR-30-A1A C/2D1		Closed						
480V BD RM 2A HTR B (2-HTR-30-B1A)	2-BKR-30-B1A C/2E1		Closed						
NORTH MS VAULT EXH FAN 2A (2-FAN-30-25)	2-BKR-30-25 C/3A		Open						
CRD EQ RM HTR 2A (2-HTR-30-ACRD)	2-BKR-30-ACRD C/3D1		Open						
480V BD RM 2A HTR C (2-HTR-30-C1A)	2-BKR-30-C1A C/3E1		Closed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2A2-A</b>									
480V BD RM 2A DUCT HTR (2-HTR-31-D1A)	2-BKR-31-D1A C/3E2		Closed						
RECORD STORAGE VAULT DUCT HTR (0-HTR-31-91)	0-BKR-31-91 C/3F1		Closed						
480V SD BD RM UNIT HTR (2-HTR-30-1A1)	2-BKR-30-1A1 C/3F2		Closed						
U2 SAMPLE RM EXH FAN 2A (2-FAN-30-67)	2-BKR-30-67 C/4A		Open						
ANNUNCIATOR BREAKER	2-BKR-214-A002/4C C/4C		Closed						
CRD EQ RM HTR 2B (2-HTR-30-BCRD)	2-BKR-30-BCRD C/4E1		Open						
CRD EQ RM HTR 2C (2-HTR-30-CCRD)	2-BKR-30-CCRD C/4F1		Open						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2A2-A</b>									
NORTH MS VAULT BACKUP EXH FAN (2-FAN-30-301)	2-BKR-30-301 C/5A		Open						
SIS BORON INJ TNK INLET SHT OFF VLV	2-BKR-63-39 C/5C		Open						
SHUTDOWN BOARD ROOM B DUCT HTR (0-HTR-31-71)	0-BKR-31-71 C/5E		Closed						
TRANSFORMER RM 2A HTR (2-HTR-30-XM1A)	2-BKR-30-XM1A C/5F1		Closed						
PW MAKEUP PMP AREA HTR (2-HTR-30-AB1)	2-BKR-30-AB1 C/5F2		Open						
AB EL 737 HTR (0-HTR-30-AB1)	0-BKR-30-AB1 C/6D1		Closed						
SOUTH MS VAULT HEATER (2-HTR-30-SMS)	2-BKR-30-SMS C/6E1		Open						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2A2-A</b>									
NORTH MS VAULT HTR 1 (2-HTR-30-NM1)	2-BKR-30-NM1 C/6E2		Open						
HOT INSTRUMENT SHOP HEATER (0-HTR-31-339)	0-BKR-31-339/2 C/6F1		Closed						
VITAL BATT ROOM 3 HTR (0-HTR-30-RM3)	0-BKR-30-RM3 C/6F2		Closed						
AB EL 737 HTR (0-HTR-30-AB2)	0-BKR-30-AB2 C/7D1		Closed						
FH AREA HEATER D (0-HTR-30-DFH)	0-BKR-30-DFH C/7D2		Closed						
AUX CNTL INST RM 2A HTR (2-HTR-30-U1A)	2-BKR-30-U1A C/7E1		Closed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V C&amp;A Vent Board 2A2-A</b>									
FH AREA HEATER E (0-HTR-30-EFH)	0-BKR-30-EFH C/7E2		Closed						
FH AREA HEATER F (0-HTR-30-FFH)	0-BKR-30-FFH C/7F2		Closed						
CRD EQUIPMENT RM A/C 2A (2-ACU-30-CRD)	2-BKR-30-CRD C/8A		Open						
ELEC BD RM STEAM GEN (0-SGEN-31-156)	0-BKR-31-156 C/8B		Closed						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2A-A</b>									
NORM SUPPLY FROM 480V SD BD 2A1-A	2-BKR-232-A000/1A1 C/1A1		Closed						
ALT SUPPLY FROM 480V SD BD 2A2-A	2-BKR-232-A000/1A2		Open						
RB FLR/EQ DRN SUMP PUMP 2A (2-PMP-77-125A)	2-BKR-77-125A C/2A		Open						
LOCA H2 CNTMT MONITOR (2- H2AN-43-200)	2-BKR-43-200 C/2F1		Open						
SPARE	2-BKR-94-1D-A C/3A		Open						
SPARE	2-BKR-94-1E C/3B		Open						
SPARE	2-BKR-94-1F C/3C		Open						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2A-A</b>									
ANNUNCIATOR BREAKER	2-BKR-232-A000/4C C/4C		Closed						
ICE CONDENSER FLOOR COOLING PMP 2A (2-PMP-61-51)	2-BKR-61-51 C/4D		Open						
ICE CONDENSER FLOOR DEFROST HTR 2A (2-HTR-61-92)	2-BKR-61-92 C/4E		Open						
480V BOARD ROOM PORTABLE FAN	2-BKR-31-A/6B C/6B		Open						
WASTE GAS COMPRESSOR B (0-COMP-77-105)	0-BKR-77-105 C/6C		Closed						
RCP 1 MTR HTR (2-HTR-68-8AA)	2-BKR-68-8AA C/7B		Open						
RCP 1 OIL LIFT PUMP (2-PMP-68-84)	2-BKR-68-84 C/7D		Open						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2A-A</b>									
AB & CB POWER OUTLETS (2-PO-232-1/2/3/4)	2-BKR-232-A000/7F2		Open						
RCP 3 MTR HTR (2-HTR-68-50AA)	2-BKR-68-50AA C/8B		Open						
RCP 3 OIL LIFT PUMP (2-PMP-68-86)	2-BKR-68-86 C/8D		Open						
POWER OUTLETS (2-PO-232-9,10)	2-BKR-232-A000/8F2 C/8F2		Open						
CNTMT UPPER COMPARTMENT CLR 2A (2-CCU-30-95)	2-BKR-30-95 C/9B		Open						
CNTMT UPPER COMPARTMENT CLR 2C (2-CCU-30-99)	2-BKR-30-99 C/10B		Open						
STUD TENSION HOISTS (2-HST-271-ST1/ST2/ST3)	2-BKR-232-A000/10F C/10F		Open						
RCDT PUMP 2A (2-PMP-77-4)	2-BKR-77-4 C/11D		Open						



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**Electrical Isolation Alignment**

Date \_\_\_\_\_

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2A-A</b>									
CNTMT LOWER COMPARTMENT HTR 2A (2-HTR-30-74H)	2-BKR-30-74H C/11F		Open						
CNTMT INCORE INSTR ROOM HTR 2A (2-HTR-30-11H)	2-BKR-30-11H C/12F		Open						
RB MANIPULATOR CRANE (2-CRN-79-1M)	2-BKR-79-1M C/13A		Open						
ICE COND 2-AHU-61- 1/4/8/12/16/20/24/28	2-BKR-232-A/13D C/13D		Open						
END DOOR LIFT (2-DOOR-61-280A)	2-BKR-61-280A C/14B		Open						
ICE COND 2-AHU-61- 3/7/11/15/19/23/27	2-BKR-232-A000/14D C/14D		Open						
CNTMT UPPER COMPARTMENT HTR 2A (2-HTR-30-35H)	2-BKR-30-35H C/15A		Open						

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**Electrical Isolation Alignment**

Date \_\_\_\_\_

**1.0 DG-DAQ SETUP, DG PROTECTION PANEL (continued)**

		Test Preparation				Restoration			
Load	UNID	As Found	Req'd Pos	1st	CV	As-Left	1st	CV	IV
<b>480V Reactor Vent Board 2A-A</b>									
CNTMT PURGE SUP FAN 2A (2-FAN-30-1)	2-BKR-30-1 C/15D		Open						
CNTMT UPPER COMPARTMENT HTR 2C (2-HTR-30-33H)	2-BKR-30-33H C/16A		Open						
CNTMT PURGE EXH FAN 2A (2-FAN-30-1E)	2-BKR-30-1E C/16D		Open						

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**DG DAQ Connections, Operation, Disconnection**

Date \_\_\_\_\_

**1.0 DG-DAQ SETUP, DG PROTECTION PANEL**

**NOTES**

The System Engineer usually performs the DG-DAQ setup and keeps a set of PK Test Block plugs for DG-DAQ setup.

Equipment must comply with seismic and plant temporary equipment guidelines.

- [1] **ENSURE** the following M&TE or equivalent is available for DG data collection:

DESCRIPTION	MINIMUM RANGE	REQUIRED ACCURACY	INITIALS
Current probe	N/A	N/A	
DG-DAQ Data Acquisition System	Per Certification Report	Per Certification Report	

- [2] **DOCUMENT** test equipment or equivalent used during performance of this Instruction below:

TEST EQUIPMENT	MODEL NUMBER	TVA ID NO.	CAL DUE DATE	RANGE	INITIALS
DG-DAQ					
Current Probe			N/A	N/A	

- [3] **ENSURE** from Test Coordinator that permission has been obtained to stage and hookup equipment.

- [4] **CONNECT** DG-DAQ Channel 0 to PK block TB1 in 2A-A DG room as follows (PK Plug Points are numbered top to bottom and right to left looking at the handle side of the plug) :

- [4.1] **CONNECT** Channel Pos. To V<sub>a</sub>. (Point 2 on PK Plug)

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DG DAQ Connections, Operation, Disconnection

Date \_\_\_\_\_

2.0 OPERATION OF DG DAQ AND SUPPORT ACTIVITIES DURING  
TEST PERFORMANCE: (continued)

[4.2] **CONNECT** Channel Neg. to  $V_b$ . (Point 4 on PK Plug)

\_\_\_\_\_

[4.3] **LINK** all terminals on PK Block Plug ( $V_a$ ,  $V_b$ ,  $V_c$ ).

\_\_\_\_\_

[4.4] **INSERT** PK Plug into PK Block TB1

\_\_\_\_\_

[5] **CONNECT** DG-DAQ Channel 1 to PK block TB3 in 2A-A Diesel Generator room as follows (PK Plug Points are numbered top to bottom and right to left looking at the handle side of the plug):

[6] **CONNECT** DG-DAQ external current shunt in series with  $I_a$  current (Points 1 and 2 on PK plug) . Remove PK Block Plug Link for  $I_a$ .

\_\_\_\_\_

[7] **CONNECT** DG-DAQ Channel 1 to the current shunt, with channel positive connected to  $I_a$  "IN" and channel negative connected to  $I_a$  "OUT."

\_\_\_\_\_

[7.1] **LINK** all remaining terminals on PK Test Block Plug ( $I_b$ ,  $I_c$ ).

\_\_\_\_\_

[7.2] **INSERT** PK Plug into PK Block TB3

\_\_\_\_\_

**NOTE**

The current probe should be zeroed prior to connecting to the ES2AY relay.

[8] **ENSURE** that the current probe is on battery power mode with fresh batteries.

\_\_\_\_\_

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**DG DAQ Connections, Operation, Disconnection**

- [9]    **ZERO** the current probe indication. \_\_\_\_\_
  
- [10]   **PUT** Start signal into DG-DAQ Channel 2, using clamp-on probe around coil wire 11 or 12 of relay ES2AY. \_\_\_\_\_
  
- [11]   **SETUP** DG-DAQ Channel 0 for an input of +212 to -212 V dc and multiplication factor of 60.0. \_\_\_\_\_
  
- [12]   **SETUP** DG-DAQ Channel 1 for an input of  $\pm 0.472$  V dc and multiplication factor (MF) of  $120 \div X = MF$ , where X = actual ohms ( $\Omega$ ) of the shunt. \_\_\_\_\_
  
- [13]   **SETUP** DG-DAQ Channel 2 for an input of +0.1 to -0.1 V dc and multiplication factor of 1.0. \_\_\_\_\_
  
- [14]   **ENSURE** DG-DAQ System is configured per instructions and set for correct PT and CT. \_\_\_\_\_
  
- [15]   **NOTIFY** Test Coordinator that the DG-DAQ is ready for the test. \_\_\_\_\_

**2.0      OPERATION OF DG DAQ AND SUPPORT ACTIVITIES DURING TEST PERFORMANCE:**

**NOTE**

Each DG-DAQ recording should be marked or saved for the appropriate Section of the test.

- [1]    **WHEN** notified by Test Coordinator, **THEN**,  
  
**START** recording with DG DAQ. \_\_\_\_\_

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**DG DAQ Connections, Operation, Disconnection**

- [2] **WHEN** notified by Test Coordinator, **THEN**
- STOP** recording with DG DAQ.

**3.0 RESTORATION OF DG DAQ:**

- [1] **ENSURE** 2A-A Diesel PK blocks are returned to normal as follows:
- [1.1] **DISCONNECT** DG-DAQ from PK test block TB1, **AND**
- INSTALL** the cover.
- [1.2] **DISCONNECT** DG-DAQ from PK test block TB3, **AND**
- INSTALL** the cover.
- [2] **REMOVE** the current probe from the wire at ES2AY relay.
- [3] **ENSURE** panel doors are closed and equipment removed from the DG room.
- [4] **RETURN** this completed appendix to the Test Coordinator to be included in the test package.