WBN2Public Resource

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Sent:	Wednesday, June 22, 2011 8:51 AM
То:	Epperson, Dan; Poole, Justin; Raghavan, Rags; Milano, Patrick; Campbell, Stephen
Cc:	Crouch, William D; Hamill, Carol L; Boyd, Desiree L
Subject:	TVA letter to NRC_06-21-11_2-PTI-030I-01 transmittal to NRC
Attachments:	06-21-11_2-PTI-030I-01 transmittal to NRC_Final.pdf

Please see attached TVA letter that was sent to the NRC today.

Thank You,

~*~*~*~*~*~*~*~*~*~

Désireé L. Boyd

WBN 2 Licensing Support Sun Technical Services <u>dlboyd@tva.gov</u> 423-365-8764

Hearing Identifier:	Watts_Bar_2_Operating_LA_Public
Email Number:	432

Mail Envelope Properties (7AB41F650F76BD44B5BCAB7C0CCABFAF202774B7)

Subject:	TVA letter to NRC_06-21-11_2-PTI-030I-01	transmittal to NRC
Sent Date:	6/22/2011 8:51:11 AM	
Received Date:	6/22/2011 8:51:46 AM	
From:	Boyd, Desiree L	
	-	

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Post Office: TVANUCXVS2.main.tva.gov

Files	Size	Date & Time
MESSAGE	308	6/22/2011 8:51:46 AM
06-21-11_2-PTI-030I-01	transmittal to NRC_Final.pdf	541851

Options	
Priority:	Standard
Return Notification:	No
Reply Requested:	No
Sensitivity:	Normal
Expiration Date:	
Recipients Received:	



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.

June 21, 2011

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

> Watts Bar Nuclear Plant, Unit 2 NRC Docket No. 50-391

Subject: Watts Bar Nuclear Plant (WBN) Unit 2 - Submittal of Pre-op Test Instruction

The following approved WBN Unit 2 Pre-op Test Instruction (PTI) is enclosed:

PTI NUMBER	Rev.	TITLE
2-PTI-030I-01	0	Control Rod Drive Mechanism Coolers

If you have any questions, please contact Pete Olson at (423) 365-3294.

Respectfully,

David Stinson Watts Bar Unit 2 Vice President

Enclosure cc (Enclosure):

> U. S. Nuclear Regulatory Commission Region II Marquis One Tower 245 Peachtree Center Ave., NE Suite 1200 Atlanta, Georgia 30303-1257

NRC Resident Inspector Unit 2 Watts Bar Nuclear Plant 1260 Nuclear Plant Road Spring City, Tennessee 37381 U.S. Nuclear Regulatory Commission Page 2 June 21, 2011

bcc (Enclosure):

Stephen Campbell U.S. Nuclear Regulatory Commission MS 08H4A One White Flint North 11555 Rockville Pike Rockville, Maryland 20852-2738

Charles Casto, Deputy Regional Administrator for Construction U. S. Nuclear Regulatory Commission Region II Marquis One Tower 245 Peachtree Center Ave., NE Suite 1200 Atlanta, Georgia 30303-1257

WATTS BAR NUCLEAR PLA UNIT 2 PREOPERATIONAL T	
TITLE: <u>Control Rod Drive Mechanism Co</u>	oolers
Instruction No: <u>2-PTI-030I-01</u> Revision No: <u>0000</u>	
PREPARED BY: <u>Keith Jones Krk Samo</u> PRINT NAME / SIGNATURE	DATE: <u> </u>
REVIEWED BY: <u>Bethany Merriman</u> PRINT NAME / SIGNATURE) date: <u>4-11-11</u>
INSTRUCTION APPROVAL	
JTG MEETING No: 2-1-011	1
JTG CHAIRMAN: DOLL	_ DATE:
APPROVED BY : PREOPERATIONAL STARTUP MANAGER	DATE: ())))),
TEST RESULTS APPROVAL	· .
JTG MEETING No:	
JTG CHAIRMAN:	_ DATE:
APPROVED BY :	DATE:
PREOPERATIONAL STARTUP MANAGER	

SMP-8.0 R7 Administration of Preoperational Test instructions, Appendix B

WBN	Control Rod Drive Mechanism Coolers	1
Unit 2		Rev. 0000
		Page 2 of 164

Revision Log

Revision or Change Number	Effective Date	Affected Page Numbers	Description of Revision/Change
0000	6/16/11	ALL	This procedure is written using the Unit 1 PTI-030K-01 Rev 0 and Unit 2 design changes as a guide.

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1.0 INTRODUCTION

1.1 Test Objectives

- A. Demonstrate the proper operation of the Control Rod Drive Mechanism (CRDM) Cooling Units and Dampers.
- B. Demonstrate the proper operation of the Essential Raw Cooling Water (ERCW) control valves associated with each CRDM Cooler.

1.2 Scope

NOTES

- 1) 2-PTI-030L-01, HFT Containment Temperature Survey, will demonstrate the CRDM Coolers' ability to maintain design temperatures.
- 2) ERCW flowrates are verified during performance of 2-PTI-067-02-A and 2-PTI-067-02-B, ERCW System Flow Balance Train A and Train B.
- 3) ERCW Temperature Control Valves' logic is tested during performance of 2-PTI-067-03, ERCW Valve Logic Test.
- 4) System vibration testing is performed during performance of GTM-05, HVAC Air Balance for this system.

This test demonstrates the operability of the Unit 2 CRDM Coolers to ensure the following:

- A. CRDM Cooler Dampers
 - 1. The CRDM Cooler Dampers operate correctly from their respective handswitches in the Main Control Room and Auxiliary Control Room, and their indicating lights indicate correct status.
 - 2. The required CRDM Cooler Dampers (shroud suction dampers) open and close upon start/stop of their respective CRDM Cooler.

Date _____

1.2 Scope (continued)

- B. CRDM Cooler Units
 - 1. The CRDM Coolers operate correctly from their respective handswitches in the Main Control Room and on the 480V Shutdown Boards, and their indicating lights indicate correct status.
 - 2. Each CRDM Cooler stops on a simulated Phase B Containment Isolation Signal, and remains off when that signal is reset.
 - 3. Each CRDM Cooler stops on a simulated Bus Undervoltage condition.
 - 4. The inlet and outlet air temperatures for each CRDM Cooler can be monitored on the Plant Computer System.
 - 5. The CRDM Coolers maintain design air flows.
 - 6. Each ERCW control valve modulates open upon start and closes upon stop of its associated CRDM Cooler.
 - 7. The following features function only when the CRDM Coolers' Transfer Switch is in AUX:
 - a. Each CRDM Cooler can be started manually while a simulated Phase B Containment Isolation Signal is present.
 - b. Each CRDM Cooler restarts after a time delay when a simulated Bus Undervoltage condition is restored.
 - c. Each CRDM Cooler starts on a low flow condition in the other CRDM Cooler with which it is paired.

Date _____

2.0 **REFERENCES**

2.1 Performance References

- A. SMP-9.0. Conduct of Test
- B. GTM-05, HVAC Air Balance
- C. 0-SOI-67.01, Essential Raw Cooling Water
- D. 2-SOI-30.03, Containment HVAC and Pressure Control

2.2 Developmental References

- A. Final Safety Analysis Report, Amendment 104
 - 1. Section 9.2.1, Essential Raw Cooling Water (ERCW)
 - 2. Section 9.4.7, Containment Air Cooling System
 - 3. Table 14.2-1, Sheets 4 & 5, Essential Raw Cooling Water System Test Summary
 - 4. Table 14.2-1, Sheets 38 & 39, Containment Ventilation System Test Summary
- B. Drawings
 - 1. Flow Diagrams
 - a. 2-47W866-1, Rev 2, HEATING AND VENTILATION AIR FLOW DRA 53850-001, Rev 0 DRA 53850-002, Rev 0 DRA 54923-038, Rev 0 DRA 54923-039, Rev 0
 - b. 2-47W845-3, Rev 2, ESSENTIAL RAW COOLING WATER

Date _____

2.2 Developmental References (continued)

- 2. Electrical
 - a. 2-45W760-30-8, Rev 1, VENTILATING SYSTEM SCHEMATIC DIAGRAMS DRA 54172-032, Rev 0 DRA 54172-034, Rev 0 DRA 54172-070, Rev 0 DRA 54172-071, Rev 0
 - b. 2-45W760-30-26, Rev 1, VENTILAING SYSTEM SCHEMATIC DIAGRAMS DRA 54172-074, Rev 0 DRA 54172-075, Rev 0
 - c. 45W760-30-21, Rev 11, VENTILATING SYSTEM SCHEMATIC DIAGRAMS
 - d. 45W760-55-1, Rev 6, ANNUNCIATOR SYSTEM SCHEMATIC DIAGRAMS
 - e. 45W760-55-2, Rev 7, ANNUNCIATOR SYSTEM SCHEMATIC DIAGRAMS DRA 52639-76, Rev 0
 - f. 2-45W600-30-1, Rev 0, VENTILATING SYSTEM SCHEMATIC DIAGRAMS
 DRA 54172-120, Rev 0
 DRA 54172-121, Rev 0
 DRA 54172-122, Rev 0
 DRA 54172-123, Rev 0
 - g. 2-45W600-30-2, Rev 0, VENTILATING SYSTEM SCHEMATIC DIAGRAMS
 - h. 2-45W600-57-9, Rev 0, SEPARATION & MISC AUX RELAYS SCHEMATIC DIAGRAMS
 - i. 2-45W600-57-18, Rev 1, SEPARATION & MISC AUX RELAYS SCHEMATIC DIAGRAMS
 - j. 2-45W600-57-20, Rev 0, SEPARATION & MISC AUX RELAYS SCHEMATIC DIAGRAMS
 - k. 2-45W600-57-21, Rev 0, SEPARATION & MISC AUX RELAYS SCHEMATIC DIAGRAMS

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2.2 Developmental References (continued)

- I. 2-45W600-67-1, Rev 0, ESSENTIAL RAW COOLING WATER SYS SCHEMATIC DIAGRAM
- m. 2-45W600-67-2, Rev 0, ESSENTIAL RAW COOLING WATER SCHEMATIC DIAGRAM
- n. 1-45W760-212-4, Rev 16, 480V SHUTDOWN POWER SCHEMATIC DIAGRAMS
- 2-45W749-1, Rev 1, 480V SHUTDOWN BD 2A1-A DRA 54172-017, Rev 0 DRA 54172-068, Rev 0
- p. 2-45W749-2, Rev 1, 480V SHUTDOWN BD 2A2-A DRA 54172-018, Rev 0 DRA 54172-069, Rev 0
- q. 2-45W749-3, Rev 1, 480V SHUTDOWN BD 2B1-B DRA 54172-019, Rev 0 DRA 54172-067, Rev 0
- r. 2-45W749-4, Rev 2, 480V SHUTDOWN BD 2B2-B DRA 54172-020, Rev 0 DRA 54172-066, Rev 0
- s. 45W2748-1, Rev 13, 480V SHUTDOWN BD 2A1-A CONNECTION DIAGRAMS DRA 54172-021, Rev 0 DRA 54172-265, Rev 0
- t. 45W2748-2, Rev 12, 480V SHUTDOWN BD 2A2-A CONNECTION DIAGRAMS DRA 54172-022, Rev 0 DRA 54172-266, Rev 0
- u. 45W2748-3, Rev 14, 480V SHUTDOWN BD 2B1-B CONNECTION DIAGRAMS DRA 54172-023, Rev 0 DRA 54172-267, Rev 0
- v. 45W2748-4, Rev 12, 480V SHUTDOWN BD 2B2-B CONNECTION DIAGRAMS DRA 54172-024, Rev 0 DRA 54172-268, Rev 0

Date

Developmental References (continued) 2.2

- w. 45N2676-4, Rev 16, SOLID STATE PROTECTION SYS TRAIN A CONNECTION DIAGRAM
- 45N2677-4, Rev 18, SOLID STATE PROTECTION SYS TRAIN B Х. CONNECTION DIAGRAM
- 6947D02 (AC), Rev G, LVME 'DS' SWGR 480V 3PH 60HZ у. SUBSTATION INTERNALS
- 618F938, Rev 913, LVME 'DS' SWGR 480V SHUTDOWN BD 2A1-A Z. 480V 3PH 60HZ SUBSTATION CONN DIAG UNIT 6 DRA 53066-027, Rev 0 DRA 53066-031, Rev 0 DRA 53068-031. Rev 0
- aa. 618F938 (AC), Rev F, LVME 'DS' SWGR 480V SHUTDOWN BD 2A1-A 480V 3PH 60HZ SUBSTATION CONN DIAG UNIT 6
- bb. 6947D67. Rev 915. LVME 'DS' SWGR 480V SHUTDOWN BD 2A2-A 480V 3PH 60HZ SUBSTATION CONN DIAG UNIT 6 DRA 53067-012. Rev 1 DRA 53067-015, Rev 0 DRA 53068-034, Rev 0
- cc. 6947D67 (AC), Rev K, LVME 'DS' SWGR 480V SHUTDOWN BD 2A2-A 480V 3PH 60HZ SUBSTATION CONN DIAG UNIT 6
- dd. 618F941, Rev 913, LVME 'DS' SWGR 480V SHUTDOWN BD 2B1-B 480V 3Ø 60HZ SUBSTATION CONN DIAG UNIT 6 DRA 53068-010. Rev 0 DRA 53068-015, Rev 0
- ee. 618F941 (AC), Rev F, LVME 'DS' SWGR 480V SHUTDOWN BD 2B1-B 480V 3Ø 60HZ SUBSTATION CONN DIAG UNIT 6
- ff. 6947D85, Rev 915, LVME 'DS' SWGR 480V SHUTDOWN BD 2B2-B 480V 3Ø 60HZ SUBSTATION CONN DIAG UNIT 6 DRA 53069-010, Rev 0 DRA 53069-016, Rev 0
- gg. 6947D85 (AC), Rev H, LVME 'DS' SWGR 480V SHUTDOWN BD 2B2-B 480V 3Ø 60HZ SUBSTATION CONN DIAG UNIT 6

Date _____

2.2 **Developmental References (continued)**

- 3. Logic/Control
 - 2-47W610-30-2, Rev 1, CONTROL DIAGRAM VENTILATION a. SYSTEM DRA 54172-287, Rev 0 DRA 54172-288, Rev 0 DRA 54172-289, Rev 0 DRA 54172-290, Rev 0
 - 2-47W610-67-2, Rev 1, CONTROL DIAGRAM ERCW SYSTEM b.
 - 2-47W611-30-4, Rev 1, LOGIC DIAGRAM VENTILATION SYSTEM C. DRA 54172-282, Rev 0
 - d. 2-47W611-67-3, Rev 1, LOGIC DIAGRAM ESSENTIAL RAW COOLING WATER
- 4. Other
 - 2-47W600-171, Rev 0, ELECTRICAL INSTRUMENT AND a. CONTROLS DRA 53630-004, Rev 0 DRA 53630-046, Rev 1
 - 2-47B601-55-1, ELECTRICAL INSTRUMENT TABULATION [Later] b. DRA 52453-04, Rev 0
 - 2-47B601-55-2, ELECTRICAL INSTRUMENT TABULATION [Later] C. DRA 52453-05. Rev 0
 - d. 2-47B601-55-3, ELECTRICAL INSTRUMENT TABULATION [Later] DRA 52453-06, Rev 0
 - 2-47B601-55-4, ELECTRICAL INSTRUMENT TABULATION [Later] e. DRA 52453-07, Rev 0

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2.2 **Developmental References (continued)**

- f. 2-45B655-5C, Rev 0, ANNUNCIATOR INPUTS WINDOW BOX XA-55-5C
- 2-45B655-E5C, Rev 0, ANNUNCIATOR WINDOW BOX XA-55-5C g. ENGRAVING
- h. 2-45B655-6E, Rev 0, ANNUNCIATOR INPUTS WINDOW BOX XA-55-6E DCA 52630-091, Rev 0
- i. 2-45B655-E6E, Rev 0, ANNUNCIATOR WINDOW BOX XA-55-6E **ENGRAVING**
- 2-45B655-6F, Rev 0, ANNUNCIATOR INPUTS WINDOW BOX j. XA-55-6F DRA 52343-236, Rev 0 DCA 52630-092, Rev 0
- 2-45B655-E6F, Rev 0, ANNUNCIATOR WINDOW BOX XA-55-6F k. **ENGRAVING**
- 5. Vendor Manuals
 - VM-F180-3066, Rev 0, Foxboro Instruction Book 3473 743CB Field a. Station Micro Controller

Date _____

2.2 Developmental References (continued)

- C. Documents
 - 1. GTM-05, HVAC Air Balance (Draft)
 - 2. WBN2-30RB-4002, Rev 1, Reactor Building Ventilation System
 - 3. G-37, Rev 4, Testing and Balancing of HVAC Systems During Installation, Modification, and Maintenance
 - 4. 2-TSD-30I-1, Rev 1, Containment Air Cooling System Control Rod Drive Mechanism Coolers
 - 5. 2-PTI-030L-01, HFT Containment Temperature Survey (Draft)
 - 6. 2-PTI-067-02-A, Rev 0, ERCW System Flow Balance Train A
 - 7. 2-PTI-067-02-B, Rev 0, ERCW System Flow Balance Train B
 - 8. 2-PTI-067-03, ERCW Valve Logic Test (Draft)
 - 9. MI-57.002, Rev 39, Westinghouse DS Circuit Breaker Routine Maintenance, Inspection and Testing
 - 10. SSD-2-LPT-67-85, Rev 0, Control Rod Drive Vent Cooler A Temp
 - 11. SSD-2-LPT-67-101, Rev 0, Control Rod Drive Vent Cooler B Temp
 - 12. SSD-2-LPT-67-93, Rev 0, Control Rod Drive Vent Cooler C Temp
 - 13. SSD-2-LPT-67-109, Rev 0, Control Rod Drive Vent Cooler D Temp

Date _____

3.0 PRECAUTIONS AND LIMITATIONS

- A. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Procedure 1021.
- B. Steps may be repeated if all components cannot be tested in a step. However, if the test has been exited, prerequisite steps must be re-verified and a Chronological Test Log (CTL) entry made.
- C. Discrepancies between component ID tags and the description in a procedure/instruction 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. This condition does not require a Test Deficiency Notice (TDN) in accordance SMP-14.0. If the component label needs to be changed, a Tag Request Form (TR Card) should be processed in accordance with TI-12.14. Make an entry in the CTL and continue testing.
- D. IF/THEN steps may be marked N/A if stated condition does not exist.
- E. 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.
- F. All terminal points and connections are to be considered energized. Instrumentation must be used to determine if the circuits are de-energized.
- G. Retermination of lifted leads requires that their restored bend radius is equal to or greater than the as-found condition.
- H. CRDM Cooler Circuit Breakers have Overload Trip Switch (OTS) reset coils. Placing the Handswitch to STOP will energize the OTS Reset Coil and reset the OTS. The OTS Reset Coil should only be energized momentarily; the OTS contact in series with the coil should open to de-energize the coil. To avoid overheating the coil, do not hold Handswitch in STOP if the coil does not de-energize.
- I. When installing fuses with actuators, ensure that the actuating rod is oriented correctly to provide for proper alarm initiation and visual indication.
- J. All open problems are to be tracked by a corrective action document and entered on the appropriate system punchlist.

Date _____

3.0 PRECAUTIONS AND LIMITATIONS (continued)

- K. Problems identified during the test shall be annotated on the CTL, including a description of the problem, the procedure step when/where the problem was identified, corrective action steps taken to resolve the problem, and the number of the corrective action document, if one was required.
- L. Observe all Radiation Protection requirements when working in or near contaminated areas.
- M. Ensure there are no adverse effects to the operation of Unit 1 structures, systems, or components.
- N. Vibration testing of this system is performed during GTM-05, HVAC Air Balance for this system.
- O. During the performance of this procedure, visual observation of fans and ductwork is required. This includes steady-state and transient operations (fan starts and stops) with visual confirmation that vibration is not excessive.
- P. To verify that transient conditions are not causing excessive vibration, observe components (duct, dampers, fans, etc) during the transient, to the extent practical. If not practical to observe during the transient, verify after the transient that no damage has occurred.
- Q. If the vibration is determined to be excessive, the Test Engineer shall initiate a TDN.
- R. Operation of CRDM Cooler Fans could create a local personnel hazard due to high noise levels, high air velocity, and the possibility of flying debris. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.
- S. CRDM Cooler control switches in the Main Control Room may NOT be placed in PULL A-P AUTO. Auto-start features enabled by this switch position are disabled and are not tested in this instruction.

Date _____

4.0 PREREQUISITE ACTIONS

NOTE

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

4.1 **Preliminary Actions**

- [1] **VERIFY** the test/performance copy of this Preoperational Test Instruction (PTI) is the current revision and as needed, each test person assisting in this test has the current revision.
- [2] **OBTAIN** copies of the applicable forms from the latest revision of SMP-9.0, **AND**

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

- [3] **ENSURE** changes to the references listed on Appendix A have been reviewed, and determined NOT to adversely affect the test performance.
- [4] **VERIFY** current revisions and change paper for referenced drawings have been reviewed and determined NOT to adversely affect the test performance, **AND**

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

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

	WBN Unit 2		Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 17 of 164
	Data	Pack	kage: Page of	Date
.1	Preli	mina	ry Actions (continued)	
	[6]		ALUATE open items in Watts Bar Integrated uipment List (WITEL), AND	d Task
			SURE that they will NOT adversely affect th formance.	e test
		Α.	Section 6.1	
		В.	Section 6.2	
		C.	Section 6.3	
		D.	Section 6.4	
		E.	Section 6.5	
		F.	Section 6.6	
	[7]		SURE required Component Testing has been by to start of test.	en completed
		Α.	Section 6.1	
		В.	Section 6.2	
		C.	Section 6.3	
		D.	Section 6.4	
		E.	Section 6.5	
		F.	Section 6.6	
	[8]	Eng	SURE outstanding Design Change Notices gineering Document Construction Releases nporary Alterations (TAs) do NOT adversely D	(EDCRs), or

ATTACH documentation of DCNs, EDCRs, and TAs that were reviewed to the data package.

	Data	Package: Page of I	Date
4.1	Prelir	ninary Actions (continued)	
	[9]	ENSURE GTM-05, HVAC Air Balance, has been submitted to the Joint Test Group (JTG) for concurrence that it adequately satisfies the requirements of this instruction. JTG Meeting Number:	
	[10]	ATTACH completed GTM-05 HVAC Air Balance Package for system 30I to this instruction.	
	[11]	ENSURE a review of outstanding Clearances has been coordinated with Unit 2 Operations for impact to the test performance, AND	
		RECORD in Appendix B, Temporary Condition Log if required.	
	[12]	VERIFY plant instruments required for test performance have been placed in service and are within their calibration interval, AND	
		RECORD on Appendix C, Permanent Plant Instrumentation Log.	
		A. Section 6.2	
		B. Section 6.5	
	[13]	REVIEW preventive maintenance records for equipment within the scope of this test, AND	
		VERIFY no conditions exist that will impact test performance.	
		A. Section 6.1	
		B. Section 6.2	
		C. Section 6.3	
		D. Section 6.4	
		E. Section 6.5	

	WBN Unit 2	Control Rod Drive M	lechanism Coolers 2-PTI-030I-01 Rev. 0000 Page 19 of 164
	Data	Package: Page of	Date
4.1	Preli	ninary Actions (continued	t)
	[14]	•	down on equipment to be tested to t that will impact test performance.
		A. Section 6.1	
		B. Section 6.2	
		C. Section 6.3	

- D. Section 6.4
- E. Section 6.5
- [15] **CONDUCT** a pretest briefing with Test and Operations personnel in accordance with SMP-9.0.
- [16] **ENSURE** that communications are available for areas where testing is to be conducted.

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

- [1] **ENSURE** the following are available:
 - A. Switched Jumpers [2]
 - B. Handheld Jumper [1]

Date _____

4.3 Field Preparations

- [1] **ENSURE** the following systems are operable and have been placed in service to the extent necessary to perform this test:
 - A. System 32, Control Air
 - B. System 55, Annunciator and Sequential Events Recording System
 - C. System 67, Essential Raw Cooling Water
 - D. System 99, Reactor Protection System
 - E. System 212, 480V Shutdown Power
 - F. System 235, 120V AC Vital Power System
 - G. System 236, 125V DC Vital Power System
 - H. System 291, Integrated Computer System (ICS)
- [2] **ENSURE** the following ICS points are in scan:
 - A. HD2030, VENT SYS HS-38A, 88A, 74A, 77A, 83A
 - B. HD2064, VENT SYS HS-39A, 78A, 75A, 92A, 80A
 - C. T1100A, CRDM COOL UNIT A-A EXHAUST
 - D. T1101A, CRDM COOL UNIT B-B EXHAUST
 - E. T1102A CRDM COOL UNIT C-A EXHAUST
 - F. T1103A CRDM COOL UNIT D-B EXHAUST
 - G. T1104A CRDM COOL UNIT C-A B-B INTAKE
 - H. T1105A CRDM COOL UNIT A-A D-B INTAKE

Date _____

4.3 Field Preparations (continued)

NOTES

- 1) Any Annunciator points associated with 2-MUX-55-12 and 2-MUX-55-13 ONLY have master switches at the bottom of each terminal strip.
- 2) All points associated with 2-TBK-55-25, 2-TBK-55-26, 2-TBK-55-27, and 2-TBK-55-28 will not have individual switches or a master switch.

[3]	Rec app	ENSURE System 55, Annunciator and Sequential Events Recording System, applicable TBK Switches are ON, the applicable Master Switches are ON, and window software input(s) are ENABLED for the following Annunciator Windows:		
	A.	2-XA-55-5C-102A, CRDM COOLER FLOW LO		
	В.	2-XA-55-6E-138E, PANEL M-9 MOTOR TRIPOUT		
	C.	2-XA-55-6F-148B, ACR PNL 2-L-11A		
	D.	2-XA-55-6F-148C, ACR PNL 2-L-11B		
	E.	2-XA-55-6F-149B, 480 SD BD 2A1-A/2A2-A/CA VT BD 2A1-A		
	F.	2-XA-55-6F-150B, 480 SD BD 2B1-B/2B2-B/CA VT BD 2B1-B		

	Data	Pack	age: Page	of		Date
4.3	Field	Prep	parations (cont	tinued)		
	[4]	Valv	ves (TCVs) and	•	Vater Temperature Contrond ndicating Controllers (TIC	
		A.	2-TCV-67-85, (Subsection 6.		R 2A-A OUT TEMP CNTI	
		В.	2-TIC-67-85, 0 (Subsection 6.		R 2A OUT TEMP CNTL	
		C.	2-TCV-67-101 (Subsection 6.	•	LR 2B-B OUT TEMP CN	ΓL
		D.	2-TIC-67-101, (Subsection 6.		R 2B OUT TEMP CNTL	
		E.	2-TCV-67-93, (Subsection 6.		R 2C-A OUT TEMP CNTI	L
		F.	2-TIC-67-93, 0 (Subsection 6.		R 2C OUT TEMP CNTL	
		G.	2-TCV-67-109 (Subsection 6.	•	LR 2D-B OUT TEMP CN	TL
		H.	2-TIC-67-109, (Subsection 6.		.R 2D OUT TEMP CNTL	
	[5]	2-S		• •	d per 0-SOI-67.01 and/or port test performance.	

4.3

Page 23 of 164 Data Package: Page ____ of ____ Date _____ **Field Preparations (continued)** [6] **RECORD** the As-Found position of the following ERCW Temperature Indicating Controllers' Auto/Manual (A/M) Status, Setpoints and Outputs on Panel 2-L-26, [A15U/692 (Pent Rm)]: A. 2-TIC-67-85, CRD VENT CLR 2A OUT TEMP CNTL (SubSection 6.2.1) Auto/Manual Status: _____ Indicated Controller Setpoint: Indicated Controller Output: B. 2-TIC-67-101, CRD VENT CLR 2B OUT TEMP CNTL (SubSection 6.2.2) Auto/Manual Status: _____ Indicated Controller Setpoint: Indicated Controller Output: C. 2-TIC-67-93, CRD VENT CLR 2C OUT TEMP CNTL (SubSection 6.2.3) Auto/Manual Status: Indicated Controller Setpoint: Indicated Controller Output: D. 2-TIC-67-109, CRD VENT CLR 2D OUT TEMP CNTL (SubSection 6.2.4) Auto/Manual Status: Indicated Controller Setpoint:

Indicated Controller Output:

4.3

Data	Pack	age: Page of _		Date
Field	Prep	parations (continued)	
[7]	ENSURE the following system 67, ERCW Temperature Indicating Controllers on Panel 2-L-26, Auto/Manual Status is in Manual (M) and outputs are adjusted for maximum cooling (valve full open):		Status is	
	A.	2-TIC-67-85, CRD V (SubSection 6.2.1)	ENT CLR 2A TEMP CNTL	
	В.	2-TIC-67-101, CRD (SubSection 6.2.2)	VENT CLR 2B TEMP CNTL	
	C.	2-TIC-67-93, CRD V (SubSection 6.2.3)	ENT CLR 2C TEMP CNTL	
	D.	2-TIC-67-109, CRD (SubSection 6.2.4)	VENT CLR 2D OUT TEMP (CNTL
[8]	Sig or T	hals present by the $arnothing$	t 2 Phase B Containment Isc B window NOT LIT on either SIGNAL STATUS PNL (Winc -6D) on 2-M-6.	the TR-A
[9]	ENSURE system is configured in accordance with Appendix D, Switch Lineup.		pendix D,	
[10]	ENSURE system is configured in accordance with Appendix E, Power Lineup.		pendix E,	
[11]	ENSURE the Reactor Vessel Head is in place with the CRDM Shroud & Duct installed.			
[12]		VERIFY the Reactor Coolant System (RCS) is NOT filled and vented.		
	A.	Section 6.4		

B. Section 6.5

Date _____

4.3 Field Preparations (continued)

NOTE

The following jumpers will be used to simulate Phase B Containment Isolation Signals.

[13] **INSTALL** switched jumpers at the following locations, **AND**

ENSURE that the jumper test switches are OPEN (OFF).

[13.1] Labeled TS-1:

In SSPS Train-A Output Cabinet 2-R-48, at TB615, between Pt. 11 (wire 2340VL) and Pt. 12 (wire CNA1). (Drawing 45N2676-4).

A. Jumper Installed

		1st
		CV
	B. Test Switch OPEN (OFF)	
[13.2]	Labeled TS-2: In SSPS Train-B Output Cabinet 2-R-51, at TB615, between Pt. 11 (wire 2435VL) and Pt. 12 (wire CNB1). (Drawing 45N2677-4).	
	A. Jumper Installed	1st
		CV
	B. Test Switch OPEN (OFF)	

Date _____

4.3 Field Preparations (continued)

NOTE

The following step will disable the CRDM Coolers' Auto-start on Low Flow function.

[14] **LIFT** the following wires:

L 11	The following wires.	
A.	Wire A17BC3: Point 1 on Terminal Block TA in 2-JB-293-494 [Lwr Cntmt/703 AZ 50°] (Drawing 45W2748-1)	
		1st
		CV
В.	Wire B17CC3: Point 2 on Terminal Block TA in 2-JB-293-517 [Lwr Cntmt/703 AZ 135°] (Drawing 45W2748-3)	
		1st
		CV
C.	Wire A27AC3: Point 2 on Terminal Block TA in 2-JB-293-519 [Lwr Cntmt/703 AZ 221°] (Drawing 45W2748-2)	
		1st
		CV
D.	Wire B27BC3: Point 2 on Terminal Block TA in 2-JB-293-521 [Lwr Cntmt/703 AZ 315°] (Drawing 45W2748-4)	
	(,,,,,,	1st
		CV

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Date _____

4.4 Approvals and Notifications

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

101	Preoperational Startup Manager Signature	Date
[2]	OBTAIN the Unit 2 Supervisor's (US/SRO) or Shift Manager's (SM) authorization.	
	Unit 2 US/SRO/SM Signature	Date
[3]	OBTAIN the Unit 1 Supervisor's (US/SRO) or Shift Manager's (SM) authorization.	

Unit 1 US/SRO/SM Signature

Date

Date _____

5.0 ACCEPTANCE CRITERIA

- A. CRDM Cooler Dampers
 - 1. The CRDM Cooler Dampers' manual controls and indications operate correctly.

Damper	Controls and Indications (Main Control Room)	Controls and Indications (Auxiliary Control Room)
2-TCO-30-84	SubSection 6.1.1	SubSection 6.1.1
2-TCO-30-85	SubSection 6.1.2	SubSection 6.1.2
2-TCO-30-93	SubSection 6.1.3	SubSection 6.1.3
2-TCO-30-94	SubSection 6.1.4	SubSection 6.1.4
2-TCO-30-89	SubSection 6.1.5	SubSection 6.1.5
2-TCO-30-90	SubSection 6.1.6	SubSection 6.1.6
2-TCO-30-81	SubSection 6.1.7	SubSection 6.1.7
2-TCO-30-82	SubSection 6.1.8	SubSection 6.1.8

2. The Shroud Suction Damper associated with each CRDM Cooler operates correctly

Damper	Opens/Closes when associated CRDM Cooler starts/stops		
	XS in NOR	XS in AUX	
2-TCO-30-84	6.2.1[12]G	6.2.1[20]D	
(CRDM Cooler 2A-A)	6.2.1[15]F	6.2.1[21]D	
2-TCO-30-93	6.2.2[12]G	6.2.2[20]D	
(CRDM Cooler 2B-B)	6.2.2[15]F	6.2.2[21]D	
2-TCO-30-89	6.2.3[12]G	6.2.3[20]D	
(CRDM Cooler 2C-A)	6.2.3[15]F	6.2.3[21]D	
2-TCO-30-81	6.2.4[12]G	6.2.4[20]D	
(CRDM Cooler 2D-B)	6.2.4[15]F	6.2.4[21]D	

Date _____

ACCEPTANCE CRITERIA (continued) 5.0

- B. CRDM Cooler Units
 - The CRDM Coolers' manual and automatic controls, interlocks, 1. annunciations, alarms, and indications operate correctly.

Cooler	Controls and Indications (Main Control Room)	Controls and Indications (480V Shutdown Bds)
CRDM Cooler 2A-A (2-CLR-30-83)	SubSection 6.2.1	SubSection 6.2.1
CRDM Cooler 2B-B (2-CLR-30-92)	SubSection 6.2.2	SubSection 6.2.2
CRDM Cooler 2C-A (2-CLR-30-88)	SubSection 6.2.3	SubSection 6.2.3
CRDM Cooler 2D-B (2-CLR-30-80)	SubSection 6.2.4	SubSection 6.2.4

CRDM Cooler intake and exhaust air temperatures output to the ICS 2. properly.

ICS Points	ICS Point Qualities are GOOD
CRDM Cooler 2A-A: T1100A T1105A	6.2.1[13]
CRDM Cooler 2B-B: T1101A T1104A	6.2.2[13]
CRDM Cooler 2C-A: T1102A T1104A	6.2.3[13]
CRDM Cooler 2D-B: T1103A T1105A	6.2.4[13]

Date _____

5.0 ACCEPTANCE CRITERIA (continued)

3. The ERCW Control Valves associated with each CRDM Cooler operate correctly.

Valve	Valve modulates open/closes when CRDM Cooler starts/stops		
	XS in NOR	XS in AUX	
2-TCV-67-85	6.2.1[12]G	6.2.1[20]D	
(CRDM Cooler 2A-A)	6.2.1[15]F	6.2.1[21]D	
2-TCV-67-101	6.2.2[12]G	6.2.2[20]D	
(CRDM Cooler 2B-B)	6.2.2[15]F	6.2.2[21]D	
2-TCV-67-93	6.2.3[12]G	6.2.3[20]D	
(CRDM Cooler 2C-A)	6.2.3[15]F	6.2.3[21]D	
2-TCV-67-109	6.2.4[12]G	6.2.4[20]D	
(CRDM Cooler 2D-B)	6.2.4[15]F	6.2.4[21]D	

4. The CRDM Coolers respond appropriately to Engineered Safety Feature Actuation System (ESFAS) signals:

	Phase B (ØB) Containment Isolation Signal			
Cooler	XS in NORMAL		XS in AUX	
	Stops on ØB	Remains stopped after ØB reset	Can be manually started and run with ØB signal in effect	
CRDM Cooler 2A-A (2-CLR-30-83)	6.3.1[7]A	6.3.1[9]A	6.3.1[13]	
CRDM Cooler 2B-B (2-CLR-30-92)	6.3.2[7]A	6.3.2[9]A	6.3.2[13]	
CRDM Cooler 2C-A (2-CLR-30-88)	6.3.1[7]B	6.3.1[9]B	6.3.1[15]	
CRDM Cooler 2D-B (2-CLR-30-80)	6.3.2[7]B	6.3.2[9]B	6.3.2[15]	

Date _____

5.0 ACCEPTANCE CRITERIA (continued)

5. The CRDM Coolers respond appropriately to a Bus Undervoltage condition.

	XS in NORMAL		XS in AUX	
Cooler	Stops on LOOP	Remains stopped after bus voltage is restored	Stops on LOOP	Restarts after bus voltage is restored
CRDM Cooler 2A-A (2-CLR-30-83)	6.4.1[6]	6.4.1[8]	6.4.1[12]	6.4.1[14]
CRDM Cooler 2B-B (2-CLR-30-92)	6.4.2[6]	6.4.2[8]	6.4.2[12]	6.4.2[14]
CRDM Cooler 2C-A (2-CLR-30-88)	6.4.3[6]	6.4.3[8]	6.4.3[12]	6.4.3[14]
CRDM Cooler 2D-B (2-CLR-30-80)	6.4.4[6]	6.4.4[8]	6.4.4[12]	6.4.4[14]

6. The CRDM Coolers respond appropriately to a Low Flow condition in their paired CRDM cooler. (Only when XS is in AUX)

Cooler Pair	Auto-start on Low Flow in paired Cooler to maintain 1 Cooler per pair in operation.	
CRDM Cooler 2A-A and 2D-B	2A-A auto-start:	6.5.1[8]
(2-CLR-30-83 and -80)	2D-B auto-start:	6.5.1[11]
CRDM Cooler 2B-B and 2C-A (2-CLR-30-92 and -88)	2B-B auto-start:	6.5.2[8]
	2C-A auto-start;	6.5.2[11]

Date _____

5.0 ACCEPTANCE CRITERIA (continued)

7. The CRDM Coolers provide the required minimum air flows with suction aligned to the CRDM Shroud:

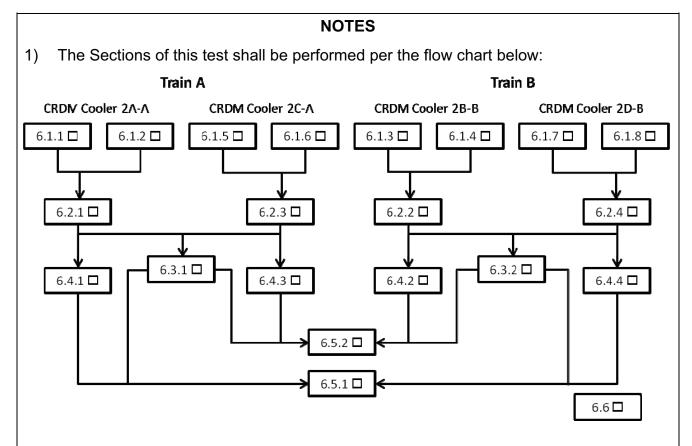
Cooler	Minimum Flow per cooler: 21,500 CFM*
CRDM Cooler 2A-A (2-CLR-30-83)	6.6[4]
CRDM Cooler 2B-B (2-CLR-30-92)	6.6[5]
CRDM Cooler 2C-A (2-CLR-30-88)	6.6[6]
CRDM Cooler 2D-B (2-CLR-30-80)	6.6[7]

* This instruction does not perform any air flow measurements. These are done in GTM-05, HVAC Air Balance. The uncertainties associated with taking these measurements will be handled within GTM-05 and will not be calculated in this instruction.

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6.0 PERFORMANCE



- 2) The Subsections of Sections 6.1 through 6.4 may be performed in any order provided that each Subsection's applicable predecessor Subsection(s) are completed. Section 6.5 is to be performed last and Section 6.6 may be performed at any time during this instruction. Unless otherwise noted, steps within each section are to be performed in the order written. The flowchart above may be used as a placekeeping tool throughout the performance of this instruction.
- 3) CRDM Cooler Handswitches in the Main Control Room spring return to A AUTO from START and STOP positions.
- 4) CRDM Cooler Handswitches on the 480V Shutdown Boards spring return to AUTO from CLOSE and TRIP positions.
- 5) CRDM Coolers have status indication lights at two locations in the Main Control Room:
 - On 2-M-9 at their associated Handswitch
 - On 2-M-6, on Train A (2-XX-55-6E) or Train B (2-XX-55-6F) CONTAINMENT ISOL STATUS PNL, hereafter abbreviated in this instruction as CISP.

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Date _____

6.1 CRDM Cooler Dampers Logic Test

NOTE

Subsections 6.1.1 through 6.1.8 may be performed in any order. The diagram at the beginning of Section 6.0 may be used as a placekeeping tool throughout the performance of this Section. Unless otherwise noted, the steps within each Subsection shall be performed in the order written.

6.1.1 2-TCO-30-84, CRDM Cooler 2A-A Shroud Suction

[1]	ENSURE all prerequisites listed in Section 4.0 for
	Subsection 6.1 have been completed.

- [2] **ENSURE** Handswitch 2-HS-30-84A, CRDM CLR A-A SHROUD SUCT, [2-M-9], is in CLOSE.
- [3] **ENSURE** Transfer Switch 2-XS-30-84, CRDM CLR A-A SHROUD SUCT DMPR, [2-L-11A], is in NOR.
- [4] **VERIFY** on 2-HS-30-84C, CRDM CLR A-A SHROUD SUCTION, [2-L-10]:
 - Green Light OFF
 - Red Light OFF
- [5] **PLACE** Handswitch 2-HS-30-84A, CRDM CLR A-A SHROUD SUCT, to OPEN, **AND**

- A. On Handswitch 2-HS-30-84A:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-84, CRDM COOLER 2A-A SHROUD SUCTION, [Lwr Cntmt/703 AZ 15°], is OPEN. (locally)

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	Data	Pack	cage: Page of	Date
6.1.1	2-TC	O-30	-84, CRDM Cooler 2A-A Shroud Suction (continued)
	[6]		ACE Handswitch 2-HS-30-84A, CRDM CLR ROUD SUCT, to CLOSE, AND	A-A
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-84A:	
			Green Light ON	
			Red Light OFF	
		B.	2-TCO-30-84, CRDM COOLER 2A-A SHF SUCTION, is CLOSED. (locally)	ROUD
	[7]		SURE Handswitch 2-HS-30-84C, CRDM CL ROUD SUCTION, is in CLOSE.	.R A-A
	[8]	EN	SURE 2-XA-55-6F-148B, ACR PNL 2-L-11 <i>A</i>	A, is CLEAR.
	[9]		ACE Transfer Switch 2-XS-30-84, CRDM Cl ROUD SUCT DMPR, to AUX, AND	_R A-A
		VE	RIFY the following:	

- A. 2-XA-55-6F-148B, ACR PNL 2-L-11A, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates
 148-B ACR PNL 2-L-11A XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-84A, CRDM CLR A-A SHROUD SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-84C, CRDM CLR A-A SHROUD SUCTION:
 - Green Light ON
 - Red Light OFF

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6.1.1	2-TC	O-30-84, CRDM Cooler 2A-A Shroud Suction (continued)	
	[10]	PLACE Handswitch 2-HS-30-84C, CRDM CLR A-A SHROUD SUCTION, to OPEN, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-84C:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-84, CRDM COOLER 2A-A SHROUD SUCTION, is OPEN. (locally)	
	[11]	PLACE Handswitch 2-HS-30-84C, CRDM CLR A-A SHROUD SUCT, to CLOSE, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-84C:	
		Green Light ON	
		Red Light OFF	
		B. 2-TCO-30-84, CRDM COOLER 2A-A SHROUD SUCTION, is CLOSED. (locally)	

	WBN Unit 2		Control Rod Drive Mechanism Coolers		2-PTI-030I-01 Rev. 0000 Page 37 of 164	
	Data	Pacl	age: Page o	of	Dat	e
6.1.1	2-TC	O-30	-84, CRDM Cooler	2A-A Shroud Suction (continued)	
	[12]		ACE Transfer Switc ROUD SUCT DMP	h 2-XS-30-84, CRDM CI R, to NOR, AND	_R A-A	
		VE	RIFY the following:			
		A.	2-XA-55-6F-148B	, ACR PNL 2-L-11A, is C	LEAR.	
		B.		nts Display Screen indica 2-L-11A XS IN AUX, en).	tes	
		C.	On 2-HS-30-84A,	CRDM CLR A-A SHROU	JD SUCT:	
			Green Light	N		
			Red Light OF	F		
		D.	On Handswitch 2- SUCTION:	HS-30-84C, CRDM CLR	A-A SHROUD	
			Green Light	OFF		
			Red Light OF	F		

[13] **VERIFY** successful completion of this Subsection 6.1.1. (Acc Crit)

WBN Unit 2			Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 38 of 164
	Data	Pack	kage: Page of	Date
6.1.2	2-TC	O-30	-85, CRDM Cooler 2A-A Lower Containme	ent Suction
	[1]		SURE all prerequisites listed in Section 4.0 f psection 6.1 have been completed.	For
	[2]		SURE Handswitch 2-HS-30-85A, CRDM CL R CNTMT SUCT, [2-M-9], is in OPEN.	R A-A
	[3]		SURE Transfer Switch 2-XS-30-85, CRDM (R CNTMT SUCT DMPR, [2-L-11A], is in NO	
	[4]		RIFY on 2-HS-30-85C, CRDM CLR A-A LWI CT, [2-L-10]:	R CNTMT
			Green Light OFF	
			Red Light OFF	
	[5]		ACE Handswitch 2-HS-30-85A, CRDM CLR R CNTMT SUCT, to CLOSE, AND	A-A
		VEI	RIFY the following:	
		A.	On Handswitch 2-HS-30-85A:	
			Green Light ON	
			Red Light OFF	
		B.	2-TCO-30-85, CRDM COOLER 2A-A LOW COMPARTMENT SUCT, [Lwr Cntmt/703 A is CLOSED. (locally)	

6.1.2 2-TCO-30-85, CRDM Cooler 2A-A Lower Containment Suction (continued)

[6] **PLACE** Handswitch 2-HS-30-85A, CRDM CLR A-A LWR CNTMT SUCT, to OPEN, **AND**

VERIFY the following:

- A. On Handswitch 2-HS-30-85A:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-85, CRDM COOLER 2A-A LOWER COMPARTMENT SUCT, is OPEN. (locally)
- [7] **ENSURE** Handswitch 2-HS-30-85C, CRDM CLR A-A LWR CNTMT SUCT, is in OPEN.
- [8] **ENSURE** 2-XA-55-6F-148B, ACR PNL 2-L-11A, is CLEAR.
- [9] **PLACE** Transfer Switch 2-XS-30-85, CRDM CLR A-A LWR CNTMT SUCT DMPR, to AUX, **AND**

- A. 2-XA-55-6F-148B, ACR PNL 2-L-11A, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates
 148-B ACR PNL 2-L-11A XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-85A, CRDM CLR A-A LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-85C, CRDM CLR A-A LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light ON

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6.1.2	2-TCO-30-85, CRDM Cooler 2A-A Lower Containment Suction (continued)	

[10] **PLACE** Handswitch 2-HS-30-85C, CRDM CLR A-A LWR CNTMT SUCT, to CLOSE, **AND**

VERIFY the following:

- A. On Handswitch 2-HS-30-85C:
 - Green Light ON
 - Red Light OFF
- B. 2-TCO-30-85, CRDM COOLER 2A-A LOWER COMPARTMENT SUCT, is CLOSED. (locally)
- [11] **PLACE** Handswitch 2-HS-30-85C, CRDM CLR A-A LWR CNTMT SUCT, to OPEN, **AND**

- A. On Handswitch 2-HS-30-85C:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-85, CRDM COOLER 2A-A LOWER COMPARTMENT SUCT, is OPEN. (locally)

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	Data	Pacl	kage: Page of	Date
6.1.2	2-TCO-30-85, CRDM Cooler 2A-A Lower Containment Suction (continued)			ent Suction
	[12]		ACE Transfer Switch 2-XS-30-85, CRDM CI R CNTMT SUCT DMPR, to NOR, AND	_R A-A
		VE	RIFY the following:	
		Α.	2-XA-55-6F-148B, ACR PNL 2-L-11A, is C	CLEAR
		В.	Unit 2 Alarm Events Display Screen indica 148-B ACR PNL 2-L-11A XS IN AUX, is NORMAL (Green).	tes
		C.	On 2-HS-30-85A, CRDM CLR A-A LWR C	NTMT SUCT:
			Green Light OFF	
			Red Light ON	
		D.	On Handswitch 2-HS-30-85C, CRDM CLR LWR CNTMT SUCT:	A-A

- Green Light OFF
- Red Light OFF
- [13] **VERIFY** successful completion of this Subsection 6.1.2. (Acc Crit)

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6.1.3	2-TCC	-30-93, CRDM Cooler 2B-B Shroud Suction	I
	[1]	ENSURE all prerequisites listed in Section 4.0 Subsection 6.1 have been completed.) for
	[2]	ENSURE Handswitch 2-HS-30-93A, CRDM C SHROUD SUCT, [2-M-9], is in CLOSE.	LR B-B
	[3]	ENSURE Transfer Switch 2-XS-30-93, CRDM SHROUD SUCT DMPR, [2-L-11B], is in NOR	
	[4]	VERIFY on 2-HS-30-93C, CRDM CLR B-B SI SUCTION, [2-L-10]:	HROUD
		Green Light OFF	
		Red Light OFF	
	[5]	PLACE Handswitch 2-HS-30-93A, CRDM CL SHROUD SUCT, to OPEN, AND	R B-B
		VERIFY the following:	
		A. On Handswitch 2-HS-30-93A:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-93, CRDM COOLER 2B-B SH SUCTION, [Lwr Cntmt/703 AZ 165°], is C	

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6.1.3	2-TC	O-30-93, CRDM Cooler 2B-B Shroud Suction	(continued)	
	[6]	PLACE Handswitch 2-HS-30-93A, CRDM CLF SHROUD SUCT, to CLOSE, AND	₹В-В	
		VERIFY the following:		
		A. On Handswitch 2-HS-30-93A:		
		Green Light ON		

- Red Light OFF
- B. 2-TCO-30-93, CRDM COOLER 2B-B SHROUD SUCTION, is CLOSED. (locally)
- [7] **ENSURE** Handswitch 2-HS-30-93C, CRDM CLR B-B SHROUD SUCTION, is in CLOSE.
- [8] **ENSURE** 2-XA-55-6F-148C, ACR PNL 2-L-11B, is CLEAR.
- [9] **PLACE** Transfer Switch 2-XS-30-93, CRDM CLR B-B SHROUD SUCT DMPR, to AUX, **AND**

- A. 2-XA-55-6F-148C, ACR PNL 2-L-11B, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates 148-C ACR PNL 2-L-11B XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-93A, CRDM CLR B-B SHROUD SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-93C, CRDM CLR B-B SHROUD SUCTION:
 - Green Light ON
 - Red Light OFF

	Data	Package: Page of	Date
6.1.3	2-TC	O-30-93, CRDM Cooler 2B-B Shroud Suction (continued)	
	[10]	PLACE Handswitch 2-HS-30-93C, CRDM CLR B-B SHROUD SUCTION, to OPEN, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-93C:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-93, CRDM COOLER 2B-B SHROUD SUCTION, is OPEN. (locally)	
	[11]	PLACE Handswitch 2-HS-30-93C, CRDM CLR B-B SHROUD SUCT, to CLOSE, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-93C:	
		Green Light ON	
		Red Light OFF	
		 B. 2-TCO-30-93, CRDM COOLER 2B-B SHROUD SUCTION, is CLOSED. (locally) 	

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6.1.3	2-TC	O-30	-93, CRDM Cooler 2B-B Shroud Suction ((continued)
	[12]		ACE Transfer Switch 2-XS-30-93, CRDM C ROUD SUCT DMPR, to NOR, AND	LR B-B
		VE	RIFY the following:	
		Α.	2-XA-55-6F-148C, ACR PNL 2-L-11B, is 0	CLEAR
		В.	Unit 2 Alarm Events Display Screen indica 148-C ACR PNL 2-L-11B XS IN AUX, is NORMAL (Green).	ites
		C.	On 2-HS-30-93A, CRDM CLR B-B SHRO	UD SUCT:
			Green Light ON	
			Red Light OFF	
		D.	On Handswitch 2-HS-30-93C, CRDM CLF SUCTION:	R B-B SHROUD
			Green Light OFF	
			Red Light OFF	

[13] **VERIFY** successful completion of this Subsection 6.1.3. (Acc Crit)

	WBN Unit 2		Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 46 of 164
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6.1.4	2-TC	D-30	-94, CRDM Cooler 2B-B Lower Containme	ent Suction
	[1]		SURE all prerequisites listed in Section 4.0 f psection 6.1 have been completed.	For
	[2]		SURE Handswitch 2-HS-30-94A, CRDM CL R CNTMT SUCT, [2-M-9], is in OPEN.	R B-B
	[3]		SURE Transfer Switch 2-XS-30-94, CRDM (R CNTMT SUCT DMPR, [2-L-11B], is in NO	
	[4]		RIFY on 2-HS-30-94C, CRDM CLR B-B LWI CT, [2-L-10]:	R CNTMT
			Green Light OFF	
			Red Light OFF	
	[5]		ACE Handswitch 2-HS-30-94A, CRDM CLR R CNTMT SUCT, to CLOSE, AND	B-B
		VEI	RIFY the following:	
		A.	On Handswitch 2-HS-30-94A:	
			Green Light ON	
			Red Light OFF	
		B.	2-TCO-30-94, CRDM COOLER 2B-B LOW COMPARTMENT SUCT, [Lwr Cntmt/703 A is CLOSED. (locally)	

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	Data	Pacl	kage: Page of	Date	
6.1.4	2-TC (cont		-94, CRDM Cooler 2B-B Lower Containme d)	ent Suction	
	[6]		ACE Handswitch 2-HS-30-94A, CRDM CLR R CNTMT SUCT, to OPEN, AND	В-В	
		VE	RIFY the following:		
		A.	On Handswitch 2-HS-30-94A:		
			Green Light OFF		
			Red Light ON		
		В.	2-TCO-30-94, CRDM COOLER 2B-B LOV COMPARTMENT SUCT, is OPEN. (locally		
	[7]		SURE Handswitch 2-HS-30-94C, CRDM CL R CNTMT SUCT, is in OPEN.	.R B-B	

- [8] **ENSURE** 2-XA-55-6F-148C, ACR PNL 2-L-11B, is CLEAR.
- [9] **PLACE** Transfer Switch 2-XS-30-94, CRDM CLR B-B LWR CNTMT SUCT DMPR, to AUX, **AND**

- A. 2-XA-55-6F-148C, ACR PNL 2-L-11B, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates
 148-C ACR PNL 2-L-11B XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-94A, CRDM CLR B-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-94C, CRDM CLR B-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light ON

	Data I	Pacl	kage: Page of	Date
6.1.4	2-TCC (conti		-94, CRDM Cooler 2B-B Lower Containment Suction d)	
	[10]		ACE Handswitch 2-HS-30-94C, CRDM CLR B-B R CNTMT SUCT, to CLOSE, AND	
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-94C:	
			Green Light ON	
			Red Light OFF	
		В.	2-TCO-30-94, CRDM COOLER 2B-B LOWER COMPARTMENT SUCT, is CLOSED. (locally)	
	[11]		ACE Handswitch 2-HS-30-94C, CRDM CLR B-B R CNTMT SUCT, to OPEN, AND	

- A. On Handswitch 2-HS-30-94C:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-94, CRDM COOLER 2B-B LOWER COMPARTMENT SUCT, is OPEN. (locally)

	WBN Unit 2		Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 49 of 164
	Data	Pack	cage: Page of	Date
6.1.4	2-TC (cont		-94, CRDM Cooler 2B-B Lower Containm d)	ent Suction
	[12]		ACE Transfer Switch 2-XS-30-94, CRDM CI R CNTMT SUCT DMPR, to NOR, AND	LR B-B
		VE	RIFY the following:	
		Α.	2-XA-55-6F-148C, ACR PNL 2-L-11B, is C	CLEAR
		В.	Unit 2 Alarm Events Display Screen indica 148-C ACR PNL 2-L-11B XS IN AUX, is NORMAL (Green).	
		C.	On 2-HS-30-94A, CRDM CLR B-B LWR C	NTMT SUCT:
			Green Light OFF	
			Red Light ON	
		D.	On Handswitch 2-HS-30-94C, CRDM CLR LWR CNTMT SUCT:	R B-B
			Green Light OFF	
			Red Light OFF	

VERIFY successful completion of this Subsection 6.1.4. **(Acc Crit)** [13]

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6.1.5	2-ТСС	0-30-89, CRDM Cooler 2C-A Shroud Suction	
	[1]	ENSURE all prerequisites listed in Section 4.0 Subsection 6.1 have been completed.	for
	[2]	ENSURE Handswitch 2-HS-30-89A, CRDM CL SHROUD SUCT, [2-M-9], is in CLOSE.	_R C-A
	[3]	ENSURE Transfer Switch 2-XS-30-89, CRDM SHROUD SUCT DMPR, [2-L-11A], is in NOR.	CLR C-A
	[4]	VERIFY on 2-HS-30-89C, CRDM CLR C-A SH SUCTION, [2-L-10]:	IROUD
		Green Light OFF	
		Red Light OFF	
	[5]	PLACE Handswitch 2-HS-30-89A, CRDM CLF SHROUD SUCT, to OPEN, AND	₹C-A
		VERIFY the following:	
		A. On Handswitch 2-HS-30-89A:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-89, CRDM COOLER 2C-A SHE SUCTION, [Lwr Cntmt/703 AZ 195°], is O	

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6.1.5	2-TC	D-30	-89, CRDM Cooler 2C-A Shroud Suction (continued)
	[6]		ACE Handswitch 2-HS-30-89A, CRDM CLR ROUD SUCT, to CLOSE, AND	C-A
		VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-89A:	
			Green Light ON	
			Red Light OFF	
		В.	2-TCO-30-89, CRDM COOLER 2C-A SHR SUCTION, is CLOSED. (locally)	OUD
	[7]		SURE Handswitch 2-HS-30-89C, CRDM CL ROUD SUCTION, is in CLOSE.	R C-A
	[8]	EN	SURE 2-XA-55-6F-148B, ACR PNL 2-L-11A	, is CLEAR.
	[9]		ACE Transfer Switch 2-XS-30-89, CRDM CL ROUD SUCT DMPR, to AUX, AND	.R C-A
		VE	RIFY the following:	
		A.	2-XA-55-6F-148B, ACR PNL 2-L-11A, is in	ALARM.
		В.	Unit 2 Alarm Events Display Screen indica 148-B ACR PNL 2-L-11A XS IN AUX, is in	
		C.	On 2-HS-30-89A, CRDM CLR C-A SHROU	JD SUCT:
			Green Light OFF	
			Red Light OFF	
		D.	On Handswitch 2-HS-30-89C, CRDM CLR SUCTION:	C-A SHROUD

- Green Light ON
- Red Light OFF

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6.1.5	2-TC	O-30-89, CRDM Cooler 2C-A Shroud Suction (continued)	
	[10]	PLACE Handswitch 2-HS-30-89C, CRDM CLR C-A SHROUD SUCTION, to OPEN, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-89C:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-89, CRDM COOLER 2C-A SHROUD SUCTION, is OPEN. (locally)	
	[11]	PLACE Handswitch 2-HS-30-89C, CRDM CLR C-A SHROUD SUCT, to CLOSE, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-89C:	
		Green Light ON	
		Red Light OFF	
		B. 2-TCO-30-89, CRDM COOLER 2C-A SHROUD SUCTION, is CLOSED. (locally)	

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6.1.5	2-TC	O-30	-89, CRDM Cooler	2C-A Shroud Suction (continued)	
	[12]		ACE Transfer Switc ROUD SUCT DMPF	h 2-XS-30-89, CRDM Cl R, to NOR, AND	_R C-A	
		VE	RIFY the following:			
		Α.	2-XA-55-6F-148B,	ACR PNL 2-L-11A, is C	LEAR.	
		В.		ts Display Screen indica -L-11A XS IN AUX, n).	tes	
		C.	On 2-HS-30-89A,	CRDM CLR C-A SHRO	JD SUCT:	
			Green Light C	DN		
			Red Light OF	F		
		D.	On Handswitch 2- SUCTION:	HS-30-89C, CRDM CLR	C-A SHROUD	
			Green Light C	DFF		
			Red Light OF	F		
	[4:0]			mulation of this Subscrit		

[13] **VERIFY** successful completion of this Subsection 6.1.5. (Acc Crit)

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6.1.6	2-TC	O-30	-90, CRDM Cooler 2C-A Lower Containme	ent Suction
	[1]		SURE all prerequisites listed in Section 4.0 postection 6.1 have been completed.	for
	[2]		SURE Handswitch 2-HS-30-90A, CRDM CL R CNTMT SUCT, [2-M-9], is in OPEN.	R C-A
	[3]		SURE Transfer Switch 2-XS-30-90, CRDM (R CNTMT SUCT DMPR, [2-L-11A], is in NC	
	[4]		RIFY on 2-HS-30-90C, CRDM CLR C-A LW CT, [2-L-10]:	R CNTMT
			Green Light OFF	
			Red Light OFF	
	[5]		ACE Handswitch 2-HS-30-90A, CRDM CLR R CNTMT SUCT, to CLOSE, AND	C-A
		VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-90A:	
			Green Light ON	
			Red Light OFF	
		B.	2-TCO-30-90, CRDM COOLER 2C-A LOV COMPARTMENT SUCT, [Lwr Cntmt/703 / is CLOSED. (locally)	

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6.1.6		D-30-90, CRDM Cooler 2C-A Lower Containment Suction inued)	
	[6]	PLACE Handswitch 2-HS-30-90A, CRDM CLR C-A LWR CNTMT SUCT, to OPEN, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-90A:	
		Green Light OFF	
		Red Light ON	
		B. 2-TCO-30-90, CRDM COOLER 2C-A LOWER COMPARTMENT SUCT, is OPEN. (locally)	
	[7]	ENSURE Handswitch 2-HS-30-90C, CRDM CLR C-A LWR CNTMT SUCT, is in OPEN.	
	[8]	ENSURE 2-XA-55-6F-148B, ACR PNL 2-L-11A, is CLEAR.	
	[9]	PLACE Transfer Switch 2-XS-30-90, CRDM CLR C-A LWR CNTMT SUCT DMPR, to AUX, AND	
		VERIFY the following:	
		A. 2-XA-55-6F-148B, ACR PNL 2-L-11A, is in ALARM.	
		 B. Unit 2 Alarm Events Display Screen indicates 148-B ACR PNL 2-L-11A XS IN AUX, is in ALARM (Red). 	
		C. On 2-HS-30-90A, CRDM CLR C-A LWR CNTMT SUCT:	
		Green Light OFF	
		Red Light OFF	
		D. On Handswitch 2-HS-30-90C, CRDM CLR C-A LWR CNTMT SUCT:	
		Green Light OFF	

• Red Light ON

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6.1.6	2-TCO-30-90, CRDM Cooler 2C-A Lower Containment Suction (continued)	

[10] **PLACE** Handswitch 2-HS-30-90C, CRDM CLR C-A LWR CNTMT SUCT, to CLOSE, **AND**

VERIFY the following:

- A. On Handswitch 2-HS-30-90C:
 - Green Light ON
 - Red Light OFF
- B. 2-TCO-30-90, CRDM COOLER 2C-A LOWER COMPARTMENT SUCT, is CLOSED. (locally)
- [11] **PLACE** Handswitch 2-HS-30-90C, CRDM CLR C-A LWR CNTMT SUCT, to OPEN, **AND**

- A. On Handswitch 2-HS-30-90C:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-90, CRDM COOLER 2C-A LOWER COMPARTMENT SUCT, is OPEN. (locally)

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6.1.6	2-TC (con		-90, CRDM Cooler 2C-A Lower Containm d)	ent Suction	
	[12]		ACE Transfer Switch 2-XS-30-90, CRDM CI R CNTMT SUCT DMPR, to NOR, AND	_R C-A	
		VE	RIFY the following:		
		Α.	2-XA-55-6F-148B, ACR PNL 2-L-11A, is C	LEAR.	
		В.	Unit 2 Alarm Events Display Screen indica 148-B ACR PNL 2-L-11A XS IN AUX, is NORMAL (Green).	tes	
		C.	On 2-HS-30-90A, CRDM CLR C-A LWR C	NTMT SUCT:	
			Green Light OFF		

[13] **VERIFY** successful completion of this Subsection 6.1.6. (Acc Crit)

D. On Handswitch 2-HS-30-90C, CRDM CLR C-A

Red Light ON

LWR CNTMT SUCT:

Green Light OFF

Red Light OFF

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6.1.7	2-TCO	-30-81,	, CRDM Cooler 2D-B Shroud Suction	
			RE all prerequisites listed in Section 4.0 ction 6.1 have been completed.	for
			RE Handswitch 2-HS-30-81A, CRDM CL UD SUCT, [2-M-9], is in CLOSE.	.R D-B
			RE Transfer Switch 2-XS-30-81, CRDM UD SUCT DMPR, [2-L-11B], is in NOR.	CLR D-B
			Y on 2-HS-30-81C, CRDM CLR D-B SH ON, [2-L-10]:	ROUD
		•	Green Light OFF	
		•	Red Light OFF	
			E Handswitch 2-HS-30-81A, CRDM CLR UD SUCT, to OPEN, AND	с D-B
		VERIF	Y the following:	
		A. Oi	n Handswitch 2-HS-30-81A:	
		•	Green Light OFF	
		•	Red Light ON	
			TCO-30-81, CRDM COOLER 2D-B SHF JCTION, [Lwr Cntmt/703 AZ 345°], is Of	

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6.1.7	2-TC	O-30-81, CRDM Cooler 2D-B Shroud Suction	(continued)	
	[6]	PLACE Handswitch 2-HS-30-81A, CRDM CLF SHROUD SUCT, to CLOSE, AND	R D-B	
		VERIFY the following:		
		A. On Handswitch 2-HS-30-81A:		
		Green Light ON		
		Red Light OFF		
		B. 2-TCO-30-81, CRDM COOLER 2D-B SH SUCTION, is CLOSED. (locally)	ROUD	

- [7] **ENSURE** Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCTION, is in CLOSE.
- [8] **ENSURE** 2-XA-55-6F-148C, ACR PNL 2-L-11B, is CLEAR.
- [9] **PLACE** Transfer Switch 2-XS-30-81, CRDM CLR D-B SHROUD SUCT DMPR, to AUX, **AND**

- A. 2-XA-55-6F-148C, ACR PNL 2-L-11B, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates 148-C ACR PNL 2-L-11B XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-81A, CRDM CLR D-B SHROUD SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCTION:
 - Green Light ON
 - Red Light OFF

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6.1.7	2-TC	O-30-81, CRDM Cooler 2D-B Shroud Suction (continued)	
	[10]	PLACE Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCTION, to OPEN, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-81C:	
		Green Light OFF	
		Red Light ON	
		 B. 2-TCO-30-81, CRDM COOLER 2D-B SHROUD SUCTION, is OPEN. (locally) 	
	[11]	PLACE Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCT, to CLOSE, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-81C:	
		Green Light ON	
		Red Light OFF	
		 B. 2-TCO-30-81, CRDM COOLER 2D-B SHROUD SUCTION, is CLOSED. (locally) 	

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6.1.7	.1.7 2-TCO-30-81, CRDM Cooler 2D-B Shroud Suction (continued)			continued)
	[12]		ACE Transfer Switch 2-XS-30-81, CRDM CL ROUD SUCT DMPR, to NOR, AND	R D-B
		VE	RIFY the following:	
		A.	2-XA-55-6F-148C, ACR PNL 2-L-11B, is CI	LEAR
		В.	Unit 2 Alarm Events Display Screen indicate 148-C ACR PNL 2-L-11B XS IN AUX, is NORMAL (Green).	es
		C.	On 2-HS-30-81A, CRDM CLR D-B SHROU	ID SUCT:
			Green Light ON	
			Red Light OFF	
		D.	On Handswitch 2-HS-30-81C, CRDM CLR SUCTION:	D-B SHROUD
			Green Light OFF	
			Red Light OFF	
	[13]		RIFY successful completion of this Subsection c Crit)	on 6.1.7.

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6.1.8	2-TCC)-30	-82, CRDM Cooler 2D-B Lower Containme	ent Suction	
	[1]		SURE all prerequisites listed in Section 4.0 to section 6.1 have been completed.	for	
	[2]		SURE Handswitch 2-HS-30-82A, CRDM CL R CNTMT SUCT, [2-M-9], is in OPEN.	R D-B	
	[3]		SURE Transfer Switch 2-XS-30-82, CRDM (R CNTMT SUCT DMPR, [2-L-11B], is in NC		
	[4]		RIFY on 2-HS-30-82C, CRDM CLR D-B LW CT, [2-L-10]:	R CNTMT	
			Green Light OFF		
			Red Light OFF		
	[5]		ACE Handswitch 2-HS-30-82A, CRDM CLR R CNTMT SUCT, to CLOSE, AND	D-B	
		VEI	RIFY the following:		
		A.	On Handswitch 2-HS-30-82A:		
			Green Light ON		
			Red Light OFF		
		B.	2-TCO-30-82, CRDM COOLER 2D-B LOW COMPARTMENT SUCT, [Lwr Cntmt/703 A is CLOSED. (locally)		

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6.1.8	2-TCO-30-82, CRDM Cooler 2D-B Lower Containment Suction (continued)		
	[6] PLACE Handswitch 2-HS-30-82A, CRDM CLR D-B LWR CNTMT SUCT, to OPEN, AND		

- A. On Handswitch 2-HS-30-82A:
 - Green Light OFF
 - Red Light ON
- B. 2-TCO-30-82, CRDM COOLER 2D-B LOWER COMPARTMENT SUCT, is OPEN. (locally)
- [7] **ENSURE** Handswitch 2-HS-30-82C, CRDM CLR D-B LWR CNTMT SUCT, is in OPEN.
- [8] **ENSURE** 2-XA-55-6F-148C, ACR PNL 2-L-11B, is CLEAR.
- [9] **PLACE** Transfer Switch 2-XS-30-82, CRDM CLR D-B LWR CNTMT SUCT DMPR, to AUX, **AND**

- A. 2-XA-55-6F-148C, ACR PNL 2-L-11B, is in ALARM.
- B. Unit 2 Alarm Events Display Screen indicates
 148-C ACR PNL 2-L-11B XS IN AUX, is in ALARM (Red).
- C. On 2-HS-30-82A, CRDM CLR D-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light OFF
- D. On Handswitch 2-HS-30-82C, CRDM CLR D-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light ON

			r age 0-	
	Data	Pac	kage: Page of	Date
6.1.8	2-TC (cont		9-82, CRDM Cooler 2D-B Lower Containment Sucti ed)	ion
	[10]		ACE Handswitch 2-HS-30-82C, CRDM CLR D-B /R CNTMT SUCT, to CLOSE, AND	
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-82C:	
			Green Light ON	
			Red Light OFF	
		В.	2-TCO-30-82, CRDM COOLER 2D-B LOWER COMPARTMENT SUCT, is CLOSED. (locally)	
	[11]		ACE Handswitch 2-HS-30-82C, CRDM CLR D-B /R CNTMT SUCT, to OPEN, AND	
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-82C:	
			Green Light OFF	
			Red Light ON	
		В.	2-TCO-30-82, CRDM COOLER 2D-B LOWER COMPARTMENT SUCT, is OPEN. (locally)	

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6.1.8	5.1.8 2-TCO-30 (continue		-82, CRDM Cooler 2D-B Lower Containm d)	ent Suction
[12] PLACE Transfer Switch 2-XS-30-82, CRDM CLR D-B LWR CNTMT SUCT DMPR, to NOR, AND		LR D-B		
		VE	RIFY the following:	
	A.		2-XA-55-6F-148C, ACR PNL 2-L-11B, is C	CLEAR
		В.	Unit 2 Alarm Events Display Screen indica 148-C ACR PNL 2-L-11B XS IN AUX, is NORMAL (Green).	

- C. On 2-HS-30-82A, CRDM CLR D-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light ON
- D. On Handswitch 2-HS-30-82C, CRDM CLR D-B LWR CNTMT SUCT:
 - Green Light OFF
 - Red Light OFF
- [13] **VERIFY** successful completion of this Subsection 6.1.8. (Acc Crit)

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6.2 CRDM Cooler Logic Test

NOTE

Subsections 6.2.1 through 6.2.4 may be performed in any order, provided their applicable predecessor Subsections are completed. Unless otherwise noted, the steps within each Subsection shall be performed in the order written. The diagram at the beginning of Section 6.0 may be used as a placekeeping tool throughout the performance of this Section.

6.2.1 CRDM Cooler 2A-A Logic

NOTE

Subsection 6.2.1 will be starting a stopping CRDM Cooler 2A-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.2 and Subsection 6.2.1 have been completed.
- [2] **ENSURE** Subsections 6.1.1 and 6.1.2 have been completed.
- [3] **RACK** Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83), [480V SHUTDOWN BOARD 2A1-A, Compartment 7B], to the TEST position.
- [4] **VERIFY** 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.
- [5] PRESS the CRDM CLR FAN 2A-A MTR 1 BKR TEST CLOSE switch at Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83), AND

- A. At Breaker 2-BKR-30-83:
 - Green Light OFF
 - Red Light ON
 - Red Flag at Breaker Panel

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.2.1	CRDN	l Cooler 2A-A Logic (continued)	
		B. 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is in ALARM (after approximately 30 seconds).	
		C. Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER A-A AIR FLOW LO, is in ALARM (Red).	
	[6]	PRESS the CRDM CLR FAN 2A-A MTR 1 BKR TEST switch at Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83), AND	TRIP
		VERIFY the following:	
		A. At Breaker 2-BKR-30-83:	
		Green Light ON	
		Red Light OFF	
		Green Flag at Breaker Panel	
		B. 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.	
		 C. Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER A-A AIR FLOW LO, is NORMAL (Green). 	
	[7]	ENSURE Transfer Switch 2-XS-30-83, CRDM CLR 2A FAN 1 & 2, [480V SHUTDOWN BOARD 2A1-A, Compartment 5A], is in NORMAL.	-A
	[8]	RACK Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83), to the CONNECTED position.	
	[9]	PLACE Handswitch 2-HS-30-84A, CRDM CLR A-A SHROUD SUCT, [2-M-9], to P AUTO.	
	[10]	PLACE Handswitch 2-HS-30-85A, CRDM CLR A-A LWR CNTMT SUCT, [2-M-9], to CLOSE.	

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	Data	Pack	age: Page of	Date
6.2.1	CRDM Cooler 2A-A Logic (continued)		oler 2A-A Logic (continued)	
	[11]	VE	RIFY the following:	
		A.	Cooler 2-CLR-30-83, CRDM COOLER 2A [Lwr Cntmt/703 AZ 25°], is OFF.	-A,
		В.	Damper 2-TCO-30-84, CRDM COOLER 2 SUCTION, [Lwr Cntmt/703 AZ 15°], is CLC	
		C.	2-XA-55-6E-138E, PANEL M-9 MOTOR T is CLEAR	RIPOUT,
	[12]	12] PLACE Handswitch 2-HS-30-83A, CRDM CLR A-A, [2-M-9], to START, AND		A-A, [2-M-9],
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-83A:	
			Green Light OFF	
			Red Light ON	
			White Light OFF	
		В.	On Handswitch 2-HS-30-84A, CRDM CLR SHROUD SUCT:	A-A
			Green Light OFF	
			Red Light ON	
		C.	On 2-XX-55-6E, Train A CISP, Window 10 CRDM CLR A FAN-30-83, [2-M-6]:	5,
			Green Light OFF	
			Red Light ON	
		D.	2-XA-55-5C-102A, CRDM COOLER FLOV remains CLEAR. (after approximately 30 s	

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	Data I	Pack	kage	: Page _		_ of	-			Date	e
6.2.1	CRDM	l Co	oler	2A-A Lo	ogic	(continu	ued)				
		E.	FAI		[480	V SHUT	•	RDM CLR 30ARD 2			
			•	Green	Ligh	t OFF					
			•	Red Li	ght (NC					
		F.		Breaker 2 CLR-30-8		(R-30-83	, CRDM	CLR 2A-	Ą		
			•	Green	Ligh	t OFF					
			•	Red Lig	ght (NC					
		G.	Loc	ally:							
			•	Cooler	2-C	LR-30-83	3, CRDM	COOLE	R 2A-A, is	ON.	
			•				•	M COOLI EN. (Acc			
			•	TEMP	CNT		Cntmt/71	6 AZ 8° (2A-A OU S Fan Rm		
	[13]	tem		ture ICS				ntake and OOD (Gr	d exhaust een).	air	
			•	T1105/	4, C	RDM CC		Г А-А D-E	INTAKE		
			•	T1100A	4, C	RDM CC		Γ Α-Α ΕΧΙ	HAUST		
	[14]							and exha log points			
			1105A RDM	-	NIT	A-A D-B I	NTAKE:			_°F	
			1100A RDM	-	NIT	A-A EXHA	AUST:			_°F	

Data Package: Page ____ of ____ Date _____ 6.2.1 CRDM Cooler 2A-A Logic (continued) PLACE Handswitch 2-HS-30-83A, CRDM CLR A-A, to STOP, [15] AND **VERIFY** the following: A. On Handswitch 2-HS-30-83A: Green Light ON • Red Light OFF • White Light OFF • B. On Handswitch 2-HS-30-84A, CRDM CLR A-A SHROUD SUCT: Green Light ON • **Red Light OFF** • C. On 2-XX-55-6E, Train A CISP, Window 105 CRDM CLR A FAN-30-83: Green Light ON • Red Light OFF • D. On Handswitch 2-HS-30-83C, CRDM CLR 2A-A FAN 1 & 2: Green Light ON • Red Light OFF • E. At Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83):

- Green Light ON
- Red Light OFF

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6.2.1	CRDI	M Co	oler 2A-A Logic (continued)		
		F.	Locally:		
			Cooler 2-CLR-30-83, CRDM COOLER	R 2A-A, is OFF	
			Damper 2-TCO-30-84, CRDM COOLI SHROUD SUCTION, is CLOSED. (A		
			• Valve 2-TCV-67-85, CRD VENT CLR OUT TEMP CNTL, is CLOSED. (Acc		
	[16]		SURE 2-XA-55-6F-149B,) SD BD 2A1-A/2A2-A/CA VT BD 2A1-A, is (CLEAR.	
	[17]	PL	ACE the following Transfer Switches to AUX	Κ:	
		Α.	2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2		
		В.	2-XS-30-84, CRDM CLR A-A SHROUD SI [2-L-11A]	UCTION,	
		C.	2-XS-67-85, CRDM CLR A-A ERCW OUT [2-L-11A]	LET TCV,	
	[18]		SURE the following Handswitches on 2-L-10 PAUTO:) are	
		Α.	2-HS-30-84C, CRDM CLR A-A SHROUD	SUCTION	
		В.	2-HS-67-85C, CRDM CLR A-A ERCW OU	ITLET TCV	

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6.2.1	CRD	M Co	ooler 2A-A Logic (continued)							
	[19]	VE	RIFY the following:							
		A.	On Handswitch 2-HS-30-83A, CRDM CLR	A-A:						
			Green Light OFF							
			Red Light OFF							
			White Light OFF							
		В.	On 2-XX-55-6E, Train A CISP, Window 10 CRDM CLR A FAN-30-83:	5						
			Green Light OFF							
			Red Light OFF							
		C.	Annunciation & Alarms:							
			 2-XA-55-6F-149B, 480 SD BD 2A1-A/2A2-A/CA VT BD 2 is in ALARM 	2A1-A,						
			 Unit 2 Alarm Events Display Screen ir 149-B 480 SD BD 2A1-A/2A2-A XS IN is in ALARM (Red). 							
		D.	On Handswitch 2-HS-30-83C, CRDM CLR FAN 1 & 2:	2A-A						
			Green Light ON							
			Red Light OFF							
		E.	On Handswitch 2-HS-30-84C, CRDM CLR SHROUD SUCTION:	A-A						
			Green Light ON							
			Red Light OFF							

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	Data	Pacl	age: Page of	Date		
.2.1	CRDI	M Co	oler 2A-A Logic (continued)			
		F.	At Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83):			
			Green Light ON			
			Red Light OFF			
	[20]		ACE Handswitch 2-HS-30-83C, CRDM CLR 2 N 1 & 2, to CLOSE, AND	2A-A		
		VE	RIFY the following:			
		Α.	On Handswitch 2-HS-30-83C:			
			Green Light OFF			
			Red Light ON			
		В.	On Handswitch 2-HS-30-84C, CRDM CLR A SHROUD SUCTION:	λ-A		
			Green Light OFF			
			Red Light ON			
		C.	At Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83):			
			Green Light OFF			
			Red Light ON			
		D.	Locally:			
			• Cooler 2-CLR-30-83, CRDM COOLER	2A-A, is ON		
			Damper 2-TCO-30-84, CRDM COOLEI SHROUD SUCTION, is OPEN (Acc C			
			• Valve 2-TCV-67-85, CRD VENT CLR 2 OUT TEMP CNTL, modulates OPEN.			

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6.2.1	CRDM Cooler 2A-A Logic (continued)								
	[21]	PLACE Handswitch 2-HS-30-83C, CRDM CLR 2A-A FAN 1 & 2, to TRIP, AND							
		VERIFY the following:							
		A. On Handswitch 2-HS-30-83C:							
		Green Light ON							
		Red Light OFF							
		B. On Handswitch 2-HS-30-84C, CRDM CLR A-A SHROUD SUCTION:							
		Green Light ON							
		Red Light OFF							
		C. At Breaker 2-BKR-30-83, CRDM CLR 2A-A (2-CLR-30-83):							
		Green Light ON							
		Red Light OFF							
		D. Locally:							
		• Cooler 2-CLR-30-83, CRDM COOLER 2A-A, is OFF.							
		 Damper 2-TCO-30-84, CRDM COOLER 2A-A SHROUD SUCTION, is CLOSED. (Acc Crit) 							
		 Valve 2-TCV-67-85, CRD VENT CLR 2A-A OUT TEMP CNTL, is CLOSED. (Acc Crit) 							
	[22]	PLACE Transfer Switch 2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2, to NORMAL.							
	[23]	PLACE the following Transfer Switches on 2-L-11A to NOR:							
		A. 2-XS-30-84, CRDM CLR A-A SHROUD SUCTION							

B. 2-XS-67-85, CRDM CLR A-A ERCW OUTLET TCV

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6.2.1	CRDI	M Co	oler 2A-A Logic (continued)	
	[24]		ACE Handswitch 2-HS-30-84A, CRDM CLR ROUD SUCT, to CLOSE.	A-A
	[25]	VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-83A, CRDM CLR	к А-А:
			Green Light ON	
			Red Light OFF	
			White Light OFF	
		B.	On 2-XX-55-6E, Train A CISP, Window 10 CRDM CLR A FAN-30-83:	5
			Green Light ON	
			Red Light OFF	
		C.	Annunciation & Alarms:	
			• 2-XA-55-6E-138E, PANEL M-9 MOTO is CLEAR.	DR TRIPOUT,
			• Motor Tripout Buzzer, [2-M-2], is OFF	
			 2-XA-55-6F-149B, 480 SD BD 2A1-A/2A2-A/CA VT BD 2 is CLEAR. 	2A1-A,
			 Unit 2 Alarm Events Display Screen in 149-B 480 SD BD 2A1-A/2A2-A XS IN is NORMAL (Green). 	

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6.2.1	CRDM Cooler 2A-A Logic (continued)								
	[26]		Breaker 2-BKR-30-83, CRDM CLR 2A-A R-30-83), to the REMOVED position.	۹					
	[27]		VE front cover of Breaker 2-BKR-30-83,	CRDM					
		ULK Z	A-A (2-CLR-30-83).	1st					
				CV					
	[28]	(2-CLF	E Breaker 2-BKR-30-83, CRDM CLR 2A R-30-83), Overload Trip Switch (OTS) me DTA plunger) to the TRIP position.						
	[29]		LL front cover of Breaker 2-BKR-30-83,	CRDM					
		CLR 2	A-A (2-CLR-30-83).	1st					
				CV					
	[30]		Breaker 2-BKR-30-83, CRDM CLR 2A-A R-30-83), to the CONNECTED position.	۹					
	[31]	VERIF	Y the following:						
		A. O	n Handswitch 2-HS-30-83A, CRDM CLR	RA-A:					
		•	Green Light ON						
		•	Red Light OFF						
		•	White Light ON						
		B. A	nnunciation & Alarms:						
		•	2-XA 55-6E-138E, PANEL M-9 MOTO is in ALARM.	DR TRIPOUT,					
		•	Unit 2 Alarm Events Display Screen in 138-E PANEL M-9 MOTOR TRIPOUT is in ALARM (Red).						
		•	Motor Tripout Buzzer is ON.						

Date _____

6.2.1 CRDM Cooler 2A-A Logic (continued)

NOTES

- 1) The following step will electrically reset the Overload Trip Switch (OTS) for Breaker 2-BKR-30-83. Refer to Precaution 3.0H for further details.
- 2) If the following step does not reset the OTS, then the OTS may be reset manually by pressing the OTS Reset button on the front of the Breaker, and a Test Deficiency Notice shall be initiated.
 - [32] **RESET** the OTS by

PLACING Handswitch 2-HS-30-83A, CRDM CLR A-A to STOP, **AND**

- A. On Handswitch 2-HS-30-83A:
 - Green Light ON
 - Red Light OFF
 - White Light OFF
- B. Annunciation & Alarms:
 - 2-XA 55-6E-138E, PANEL M-9 MOTOR TRIPOUT, is CLEAR.
 - Unit 2 Alarm Events Display Screen indicates 138-E PANEL M-9 MOTOR TRIPOUT, is NORMAL (Green).
 - Motor Tripout Buzzer is OFF.

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6.2.1	CRDM Cooler 2A-A Logic (continued)									
	[33]	RECORD the As-Found position of the following Handswitches on 2-M-9, AND								
		IF any of the following Handswitches are found in STOP PULL TO LOCK, THEN								
		PLACE that Handswitch in A AUTO.								
		A. 2-HS-30-38A, AIR RETURN FAN A-A								
		As-Found:								
		Place in A AUTO? Yes No								
		B. 2-HS-30-74A, LWR CNTMT CLR A-A								
		As-Found:								
		Place in A AUTO? Yes No								
		C. 2-HS-30-77A, LWR CNTMT CLR C-A								
		As-Found:								
		Place in A AUTO? Yes No								
		D. 2-HS-30-88A, CRDM CLR C-A								
		As-Found:								
		Place in A AUTO? Yes No								
	[34]	VERIFY ICS Point HD2030, VENT SYS HS-38A, 88A, 74A, 77A, 83A, displays NOT P-L.								
	[35]	PLACE Handswitch 2-HS-30-83A, CRDM CLR A-A to STOP PULL TO LOCK, AND								
		VERIFY ICS Point HD2030, VENT SYS HS-38A, 88A, 74A, 77A, 83A, displays PULLT-L.								

[36] **PLACE** Handswitch 2-HS-30-85A, CRDM CLR A-A LWR CNTMT SUCT, to OPEN.

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6.2.1	CRDM Cooler 2A-A Logic (continued)										
	[37]	As-l (The	Found p e As-Le	osition re ft positior	ecorded in St n recorded in	ches are returned to tep 6.2.1[33]. this step should ma tep 6.2.1[33].)					
		A.	2-HS-3	80-38A, A	AR RETURN	I FAN A-A					
				As-Lef	t:						
		В.	2-HS-3	80-74A, L	WR CNTMT	CLR A-A					
				As-Lef	t:						
		C.	2-HS-3	80-77A, L	WR CNTMT	CLR C-A					
				As-Lef	t:						
		D.	2-HS-3	80-88A, C	RDM CLR C	C-A					
				As-Lef	t:						
	[38]	2-TI	IC-67-8	5, CRD V	ENT CLR 2	ndicating Controller A TEMP CNTL, is re in Step 4.3[6]A.	eturned to				
				Auto/N	Manual Statu	IS:					
			Indica			nt:					
			Indic	ated Cor	ntroller Outpu	ut:					
								1st			
								CV			
	[39]		RIFY su c Crit)	ccessful o	completion o	f this Subsection 6.	2.1.				

WBN	
Unit 2)

6.2.2 CRDM Cooler 2B-B Logic

NOTE							
Subsection 6.2.2 will be starting a stopping CRDM Cooler 2B-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.							
[1]	ENSURE all prerequisites listed in Section 4.0 for Section 6.2 and Subsection 6.2.2 have been completed.						
[2]	ENSURE Subsections 6.1.3 and 6.1.4 have been completed.						
[3]	RACK Breaker 2-BKR-30-92, CRDM CLR 2B-B (2-CLR-30-92), [480V SHUTDOWN BOARD 2B1-B, Compartment 7C], to the TEST position.						
[4]	VERIFY 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.						
[5]	PRESS the CRDM CLR FAN 2B-B MTR 1 BKR TEST CLOSE switch at Breaker 2-BKR-30-92, CRDM CLR 2B-B (2-CLR-30-92), AND						
	VERIFY the following:						
	A. At Breaker 2-BKR-30-92:						
	Green Light OFF						
	Red Light ON						
	Red Flag at Breaker Panel						
	 B. 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is in ALARM (after approximately 30 seconds). 						
	C. Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER B-B AIR FLOW LO, is in ALARM (Red).						

I		•		
	Data	Pack	age: Page of	Date
6.2.2	CRD			
	[6]	swit	ESS the CRDM CLR FAN 2B-B MTR 1 BKR TEST TRIP tch at Breaker 2-BKR-30-92, CRDM CLR 2B-B CLR-30-92), AND	
		VE	RIFY the following:	
		A.	At Breaker 2-BKR-30-92:	
			Green Light ON	
			Red Light OFF	
			Green Flag at Breaker Panel	
		В.	2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.	
		C.	Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER B-B AIR FLOW LO, is NORMAL (Green).	
	[7]	FAN	SURE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B N 1 & 2, [480V SHUTDOWN BOARD 2B1-B, npartment 5A], is in NORMAL.	
	[8]		CK Breaker 2-BKR-30-92, CRDM CLR 2B-B CLR-30-92), to the CONNECTED position.	
	[9]		ACE Handswitch 2-HS-30-93A, CRDM CLR B-B ROUD SUCT, [2-M-9], to P AUTO.	
	[10]		ACE Handswitch 2-HS-30-94A, CRDM CLR B-B R CNTMT SUCT, [2-M-9], to CLOSE.	

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6.2.2	CRD	M Co	oler 2B-B Logic (continued)				
	[11]	VE	RIFY the following:				
		A.	Cooler 2-CLR-30-92, CRDM COOLER 2B [Lwr Cntmt/703 AZ 155°], is OFF.	-В,			
		В.	Damper 2-TCO-30-93, CRDM COOLER 2 SUCTION, [Lwr Cntmt/703 AZ 165°], is CL				
		C.	2-XA-55-6E-138E, PANEL M-9 MOTOR T is CLEAR	RIPOUT,			
	[12]		PLACE Handswitch 2-HS-30-92A, CRDM CLR B-B, [2-M-9], o START, AND				
		VE	RIFY the following:				
		Α.	On Handswitch 2-HS-30-92A:				
			Green Light OFF				
			Red Light ON				
			White Light OFF				
		В.	On Handswitch 2-HS-30-93A, CRDM CLR SHROUD SUCT:	B-B			
			Green Light OFF				
			Red Light ON				
		C.	On 2-XX-55-6F, Train B CISP, Window 11 CRDM CLR B FAN-30-92, [2-M-6]:	7,			
			Green Light OFF				
			Red Light ON				
		D.	2-XA-55-5C-102A, CRDM COOLER FLOW remains CLEAR. (after approximately 30 s	•			

	WBN Unit 2	(Cont	trol Rod [Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 83 of 164	
	Data F	Packa	ge:	Page	of	Date	
6.2.2	CRDM	Coo	ler 2	B-B Logi	c (continued)		
		I	FAN		h 2-HS-30-92C, CRDM CLR 30V SHUTDOWN BOARD 21 5A]:		
		•	Ð	Green Lig	ht OFF		
			•	Red Light	ON		
				reaker 2-E LR-30-92)	8KR-30-92, CRDM CLR 2B-6 ::	3	
			•	Green Lig	ht OFF		
			•	Red Light	ON		
		G. I	Loca	lly:			
			•	Cooler 2-0	CLR-30-92, CRDM COOLEF	R 2B-B, is ON.	
		•		•	2-TCO-30-93, CRDM COOLE SUCTION, is OPEN. (Acc		
		•		TEMP CN	CV-67-101, CRD VENT CLF ITL, [Lwr Cntmt/716 AZ 172° s OPEN. (Acc Crit)		
			eratı	ure ICS Po	RDM Cooler 2B-B intake and pint Qualities are GOOD (Gr		
			Đ	T1104A, (CRDM COOL UNIT C-A B-B	INTAKE	
			•	T1101A, (CRDM COOL UNIT B-B EXH	HAUST	
					cooler 2B-B intake and exhaud exhaud exhaud by the ICS log points		
			04A, DM C		C-A B-B INTAKE:	°F	
			01A, DM C		B-B EXHAUST:	°F	

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6.2.2 CRDM Cooler 2B-B Logic (continued)

PLACE Handswitch 2-HS-30-92A, CRDM CLR B-B, to STOP, [15] AND

- A. On Handswitch 2-HS-30-92A:
 - Green Light ON •
 - Red Light OFF •
 - White Light OFF •
- B. On Handswitch 2-HS-30-93A, CRDM CLR B-B SHROUD SUCT:
 - Green Light ON •
 - **Red Light OFF** •
- C. On 2-XX-55-6F, Train B CISP, Window 117 CRDM CLR B FAN-30-92:
 - Green Light ON •
 - Red Light OFF •
- D. On Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2:
 - Green Light ON •
 - Red Light OFF •
- E. At Breaker 2-BKR-30-92, CRDM CLR 2B-B (2-CLR-30-92):
 - Green Light ON •
 - Red Light OFF •

	WBN Unit 2	Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 86 of 164
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5.2.2	CRDM Co	oler 2B-B Logic (continued)	
	В.	On 2-XX-55-6F, Train B CISP, Window 11 CRDM CLR B FAN-30-92:	7
		Green Light OFF	
		Red Light OFF	
	C.	Annunciation & Alarms:	
		 2-XA-55-6F-150B, 480 SD BD 2B1-B/2B2-B/CA VT BD 2 is in ALARM 	2В1-В,
		 Unit 2 Alarm Events Display Screen in 150-B 480 SD BD 2B1-B/2B2-B XS IN is in ALARM (Red). 	
	D.	On Handswitch 2-HS-30-92C, CRDM CLR FAN 1 & 2:	2В-В
		Green Light ON	
		Red Light OFF	
	E.	On Handswitch 2-HS-30-93C, CRDM CLR SHROUD SUCTION:	8 В-В
		Green Light ON	
		Red Light OFF	
	F.	At Breaker 2-BKR-30-92, CRDM CLR 2B- (2-CLR-30-92):	В
		Green Light ON	
		Red Light OFF	

	Data	Pack	age:	Page of	Date
6.2.2	CRDM	/I Co	oler	2B-B Logic (continued)	
	[20]			Handswitch 2-HS-30-92C, CRDM CLR 2B-B 2, to CLOSE, AND	
		VEF	RIFY	the following:	
		A.	On	Handswitch 2-HS-30-92C:	
			٠	Green Light OFF	
			•	Red Light ON	
		В.		Handswitch 2-HS-30-93C, CRDM CLR B-B ROUD SUCTION:	
			•	Green Light OFF	
			•	Red Light ON	
		C.		Breaker 2-BKR-30-92, CRDM CLR 2B-B CLR-30-92):	
			•	Green Light OFF	
			•	Red Light ON	
		D.	Loc	ally:	
			•	Cooler 2-CLR-30-92, CRDM COOLER 2B-B, is ON.	
			•	Damper 2-TCO-30-93, CRDM COOLER 2B-B SHROUD SUCTION, is OPEN (Acc Crit)	
			•	Valve 2-TCV-67-101, CRD VENT CLR 2B-B OUT TEMP CNTL, modulates OPEN. (Acc Crit)	

			r
	Data	Package: Page of [Date
6.2.2	CRD	M Cooler 2B-B Logic (continued)	
	[21]	PLACE Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2, to TRIP, AND	
		VERIFY the following:	
		A. On Handswitch 2-HS-30-92C:	
		Green Light ON	
		Red Light OFF	
		B. On Handswitch 2-HS-30-93C, CRDM CLR B-B SHROUD SUCTION:	
		Green Light ON	
		Red Light OFF	
		C. At Breaker 2-BKR-30-92, CRDM CLR 2B-B (2-CLR-30-92):	
		Green Light ON	
		Red Light OFF	
		D. Locally:	
		• Cooler 2-CLR-30-92, CRDM COOLER 2B-B, is OFF.	
		 Damper 2-TCO-30-93, CRDM COOLER 2B-B SHROUD SUCTION, is CLOSED. (Acc Crit) 	
		 Valve 2-TCV-67-101, CRD VENT CLR 2B-B OUT TEMP CNTL, is CLOSED. (Acc Crit) 	
	[22]	PLACE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, to NORMAL.	
	[23]	PLACE the following Transfer Switches on 2-L-11B to NOR:	
		A. 2-XS-30-93, CRDM CLR B-B SHROUD SUCTION	
		B. 2-XS-67-101, CRDM CLR B-B ERCW OUTLET TCV	

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	Data	Pack	age: Page of	Date
6.2.2	CRDI	M Co	oler 2B-B Logic (continued)	
	[24]		ACE Handswitch 2-HS-30-93A, CRDM CLR ROUD SUCT, to CLOSE.	В-В
	[25]	VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-92A, CRDM CLR	В-В:
			Green Light ON	
			Red Light OFF	
			White Light OFF	
		В.	On 2-XX-55-6F, Train B CISP, Window 11 CRDM CLR B FAN-30-92:	7
			Green Light ON	
			Red Light OFF	
		C.	Annunciation & Alarms:	
			• 2-XA-55-6E-138E, PANEL M-9 MOTO is CLEAR.	DR TRIPOUT,
			• Motor Tripout Buzzer, [2-M-2], is OFF	
			 2-XA-55-6F-150B, 480 SD BD 2B1-B/2B2-B/CA VT BD 2 is CLEAR. 	2B1-B,
			 Unit 2 Alarm Events Display Screen ir 150-B 480 SD BD 2B1-B/2B2-B XS IN is NORMAL (Green). 	

	WBN Jnit 2	Cor	trol Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 90 of 164			
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6.2.2	CRD	CRDM Cooler 2B-B Logic (continued)					
	[26]		reaker 2-BKR-30-92, CRDM CLR 2B-B 30-92), to the REMOVED position.	3			
	[27]		E front cover of Breaker 2-BKR-30-92,	CRDM			
		ULK 2D-	B (2-CLR-30-92).				
				CV			
	[28]	(2-CLR-3	Breaker 2-BKR-30-92, CRDM CLR 2B 30-92), Overload Trip Switch (OTS) me rA plunger) to the TRIP position.				
	[29]		L front cover of Breaker 2-BKR-30-92,	CRDM			
		CLR 2B-	B (2-CLR-30-92).	1st			
				CV			
	[30]		reaker 2-BKR-30-92, CRDM CLR 2B-I 30-92), to the CONNECTED position.	3			
	[31]	VERIFY	the following:				
		A. On	Handswitch 2-HS-30-92A, CRDM CLR	8 В-В:			
		•	Green Light ON				
		•	Red Light OFF				
		•	White Light ON				
		B. Ann	unciation & Alarms:				
		•	2-XA 55-6E-138E, PANEL M-9 MOTO is in ALARM.	DR TRIPOUT,			
		•	Unit 2 Alarm Events Display Screen in 138-E PANEL M-9 MOTOR TRIPOUT is in ALARM (Red).				
		•	Motor Tripout Buzzer is ON.				

Date _____

6.2.2 CRDM Cooler 2B-B Logic (continued)

NOTES

- 1) The following step will electrically reset the Overload Trip Switch (OTS) for Breaker 2-BKR-30-92. Refer to Precaution 3.0H for further details.
- 2) If the following step does not reset the OTS, then the OTS may be reset manually by pressing the OTS Reset button on the front of the Breaker, and a Test Deficiency Notice shall be initiated.
 - [32] **RESET** the OTS by

PLACING Handswitch 2-HS-30-92A, CRDM CLR B-B to STOP, **AND**

- A. On Handswitch 2-HS-30-92A:
 - Green Light ON
 - Red Light OFF
 - White Light OFF
- B. Annunciation & Alarms:
 - 2-XA 55-6E-138E, PANEL M-9 MOTOR TRIPOUT, is CLEAR.
 - Unit 2 Alarm Events Display Screen indicates 138-E PANEL M-9 MOTOR TRIPOUT, is NORMAL (Green).
 - Motor Tripout Buzzer is OFF.

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	Data	Package: Page of	Date
6.2.2	CRDI	M Cooler 2B-B Logic (continued)	
	[33]	RECORD the As-Found position of the followin on 2-M-9, AND	g Handswitches
		IF any of the following Handswitches are found STOP PULL TO LOCK, THEN	in
		PLACE that Handswitch in A AUTO.	
		A. 2-HS-30-39A, AIR RETURN FAN B-B	
		As-Found:	
		Place in A AUTO? Yes No	
		B. 2-HS-30-75A, LWR CNTMT CLR B-B	
		As-Found:	
		Place in A AUTO? Place In A AUTO? Place Verse Place Place	
		C. 2-HS-30-78A, LWR CNTMT CLR D-B	
		As-Found:	
		Place in A AUTO? Place In A AUTO? Place Verse Place Place	
		D. 2-HS-30-80A, CRDM CLR D-B	
		As-Found:	
		Place in A AUTO? Yes No	
	[34]	VERIFY ICS Point HD2064, VENT SYS HS-39, 92A, 80A, displays NOT P-L.	A, 78A, 75A,
	[35]	PLACE Handswitch 2-HS-30-92A, CRDM CLR to STOP PULL TO LOCK, AND	B-B
		VERIFY ICS Point HD2064, VENT SYS HS-39, 92A, 80A, displays PULLT-L.	A, 78A, 75A,

[36] **PLACE** Handswitch 2-HS-30-94A, CRDM CLR B-B LWR CNTMT SUCT, to OPEN.

	Data	Pack	kage:	Page	_ of			Date	;
6.2.2	CRD	M Co	oler 2	B-B Logic	c (continue	d)			
	[37]	As- (Th	Found e As-L	position re eft position	ing Handsw ecorded in n recorded ecorded in	Step 6.2.2[in this step	33]. should ma		
		A.	2-HS	-30-39A, A	AIR RETUR	RN FAN B-E	3		
				As-Let	ft:				
		В.	2-HS	-30-75A, L		IT CLR B-E	3		
				As-Let	ft:				
		C.	2-HS	-30-78A, L	WR CNTM	IT CLR D-E	3		
				As-Let	ft:				
		D.	2-HS	-30-80A, (CRDM CLR	D-B			
				As-Let	ft:				
	[38]	2-T	IC-67-	101, CRD	emperature VENT CLF ns recorded	R 2B TEMP	CNTL, is i	returned to	
				Auto/I	Manual Sta	tus:			
			Indic		troller Setpo				
			Ind	icated Co	ntroller Out	put:			
									1st
									CV
	[39]		RIFY s c Crit)		completion	of this Sub	osection 6.	2.2.	

6.2.3 CRDM Cooler 2C-A Logic

NOTE							
Subsection 6.2.3 will be starting a stopping CRDM Cooler 2C-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.							
[1]	ENSURE all prerequisites listed in Section 4.0 for Section 6.2 and Subsection 6.2.3 have been completed.						
[2]	ENSURE Subsections 6.1.5 and 6.1.6 have been completed.						
[3]	RACK Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88), [480V SHUTDOWN BOARD 2A2-A, Compartment 7A], to the TEST position.						
[4]	VERIFY 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.						
[5]	PRESS the CRDM CLR FAN 2C-A MTR 1 BKR TEST CLOSE switch at Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88), AND						
	VERIFY the following:						
	A. At Breaker 2-BKR-30-88:						
	Green Light OFF						
	Red Light ON						
	Red Flag at Breaker Panel						
	 B. 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is in ALARM (after approximately 30 seconds). 						
	 C. Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER C-A AIR FLOW LO, is in ALARM (Red). 						

	Data	Pacl	kage: Page of	Date
6.2.3	CRD			
	[6]	swi	ESS the CRDM CLR FAN 2C-A MTR 1 BKR TEST TRIP tch at Breaker 2-BKR-30-88, CRDM CLR 2C-A CLR-30-88), AND	
		VE	RIFY the following:	
		A.	At Breaker 2-BKR-30-88:	
			Green Light ON	
			Red Light OFF	
			Green Flag at Breaker Panel	
		В.	2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.	
		C.	Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER C-A AIR FLOW LO, is NORMAL (Green).	
	[7]	FAI	SURE Transfer Switch 2-XS-30-88, CRDM CLR 2C-A N 1 & 2, [480V SHUTDOWN BOARD 2A2-A, mpartment 5A], is in NORMAL.	
	[8]		CK Breaker 2-BKR-30-88, CRDM CLR 2C-A CLR-30-88), to the CONNECTED position.	
	[9]		ACE Handswitch 2-HS-30-89A, CRDM CLR C-A ROUD SUCT, [2-M-9], to P AUTO.	
	[10]		ACE Handswitch 2-HS-30-90A, CRDM CLR C-A R CNTMT SUCT, [2-M-9], to CLOSE.	

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	Data	Pack	age: Page of	Date	
6.2.3	CRD	CRDM Cooler 2C-A Logic (continued)			
	[11]	VE	RIFY the following:		
		A.	Cooler 2-CLR-30-88, CRDM COOLER 2C- [Lwr Cntmt/703 AZ 205°], is OFF.	-A,	
		B.	Damper 2-TCO-30-89, CRDM COOLER 20 SUCTION, [Lwr Cntmt/703 AZ 195°], is CL		
		C.	2-XA-55-6E-138E, PANEL M-9 MOTOR T is CLEAR	RIPOUT,	
	[12]		ACE Handswitch 2-HS-30-88A, CRDM CLR START, AND	C-A, [2-M-9],	
		VE	RIFY the following:		
		A.	On Handswitch 2-HS-30-88A:		
			Green Light OFF		
			Red Light ON		
			White Light OFF		
		В.	On Handswitch 2-HS-30-89A, CRDM CLR SHROUD SUCT:	C-A	
			Green Light OFF		
			Red Light ON		
		C.	On 2-XX-55-6E, Train A CISP, Window 11 CRDM CLR C FAN-30-88, [2-M-6]:	7,	
			Green Light OFF		
			Red Light ON		
		D.	2-XA-55-5C-102A, CRDM COOLER FLOV remains CLEAR. (after approximately 30 s		

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6.2.3	CRDM	/I Co	oler	2C-A Logic (continued)	
		E.	FA	Handswitch 2-HS-30-88C, CRDM CLR N 1 & 2, [480V SHUTDOWN BOARD 2 mpartment 5A]:	
			•	Green Light OFF	
			•	Red Light ON	
		F.		Breaker 2-BKR-30-88, CRDM CLR 2C- CLR-30-88):	A
			•	Green Light OFF	
			•	Red Light ON	
		G.	Loc	cally:	
			•	Cooler 2-CLR-30-88, CRDM COOLE	R 2C-A, is ON.
			•	Damper 2-TCO-30-89, CRDM COOL SHROUD SUCTION, is OPEN. (Acc	
			•	Valve 2-TCV-67-93, CRD VENT CLR TEMP CNTL, [Lwr Cntmt/716 AZ 188 modulates OPEN. (Acc Crit)	
	[13]	tem		that the CRDM Cooler 2C-A intake an ture ICS Point Qualities are GOOD (Gi it)	
			•	T1104A, CRDM COOL UNIT C-A B-E	3 INTAKE
			•	T1102A, CRDM COOL UNIT C-A EX	HAUST
	[14]			D CRDM Cooler 2C-A intake and exha tures as indicated by the ICS log points	
			1104 <i>/</i> RDM	A, COOL UNIT C-A B-B INTAKE:	°F
			1102/ RDM	A, COOL UNIT C-A EXHAUST:	°F

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6.2.3 CRDM Cooler 2C-A Logic (continued)

PLACE Handswitch 2-HS-30-88A, CRDM CLR C-A, to STOP, [15] AND

- A. On Handswitch 2-HS-30-88A:
 - Green Light ON •
 - Red Light OFF •
 - White Light OFF •
- B. On Handswitch 2-HS-30-89A, CRDM CLR C-A SHROUD SUCT:
 - Green Light ON •
 - **Red Light OFF** •
- C. On 2-XX-55-6E, Train A CISP, Window 117 CRDM CLR C FAN-30-88:
 - Green Light ON •
 - Red Light OFF •
- D. On Handswitch 2-HS-30-88C, CRDM CLR 2C-A FAN 1 & 2:
 - Green Light ON •
 - Red Light OFF •
- E. At Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88):
 - Green Light ON •
 - Red Light OFF •

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6.2.3	CRD	/ Co	oler 2C-A Logic (continued)	
		F.	Locally:	
			Cooler 2-CLR-30-88, CRDM COOLEI	R 2C-A, is OFF.
			• Damper 2-TCO-30-89, CRDM COOL SHROUD SUCTION, is CLOSED. (A	
			• Valve 2-TCV-67-93, CRD VENT CLR OUT TEMP CNTL, is CLOSED. (Acc	
	[16]		SURE 2-XA-55-6F-149B, SD BD 2A1-A/2A2-A/CA VT BD 2A1-A, is	CLEAR
	[17]	PL/	CE the following Transfer Switches to AUX	<u>.</u>
		A.	2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2	
		В.	2-XS-30-89, CRDM CLR C-A SHROUD S [2-L-11A]	UCTION,
		C.	2-XS-67-93, CRDM CLR C-A ERCW OUT [2-L-11A]	LET TCV,
	[18]		SURE the following Handswitches on 2-L-10 AUTO:) are
		A.	2-HS-30-89C, CRDM CLR C-A SHROUD	SUCTION
		В.	2-HS-67-93C, CRDM CLR C-A ERCW OL	
	[19]	VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-88A, CRDM CLR	C-A:
			Green Light OFF	
			Red Light OFF	
			White Light OFF	

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6.2.3	CRDM Co	ooler 2C-A Logic (continued)	
	В.	On 2-XX-55-6E, Train A CISP, Window 117 CRDM CLR C FAN-30-88:	
		Green Light OFF	
		Red Light OFF	
	C.	Annunciation & Alarms:	
		 2-XA-55-6F-149B, 480 SD BD 2A1-A/2A2-A/CA VT BD 2A1-A, is in ALARM 	
		 Unit 2 Alarm Events Display Screen indicates 149-B 480 SD BD 2A1-A/2A2-A XS IN AUX, is in ALARM (Red). 	
	D.	On Handswitch 2-HS-30-88C, CRDM CLR 2C-A FAN 1 & 2:	
		Green Light ON	
		Red Light OFF	
	E.	On Handswitch 2-HS-30-89C, CRDM CLR C-A SHROUD SUCTION:	
		Green Light ON	
		Red Light OFF	
	F.	At Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88):	
		Green Light ON	
		Red Light OFF	

_	Data	Pac	kage: Page of E)ate
6.2.3	CRD			
	[20]		ACE Handswitch 2-HS-30-88C, CRDM CLR 2C-A N 1 & 2, to CLOSE, AND	
		VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-88C:	
			Green Light OFF	
			Red Light ON	
		В.	On Handswitch 2-HS-30-89C, CRDM CLR C-A SHROUD SUCTION:	
			Green Light OFF	
			Red Light ON	
		C.	At Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88):	
			Green Light OFF	
			Red Light ON	
		D.	Locally:	
			• Cooler 2-CLR-30-88, CRDM COOLER 2C-A, is ON.	
			 Damper 2-TCO-30-89, CRDM COOLER 2C-A SHROUD SUCTION, is OPEN (Acc Crit) 	
			 Valve 2-TCV-67-93, CRD VENT CLR 2C-A OUT TEMP CNTL, modulates OPEN. (Acc Crit) 	

	Data	Package: Page of D	ate					
6.2.3	CRDM Cooler 2C-A Logic (continued)							
	[21]	PLACE Handswitch 2-HS-30-88C, CRDM CLR 2C-A FAN 1 & 2, to TRIP, AND						
		VERIFY the following:						
		A. On Handswitch 2-HS-30-88C:						
		Green Light ON						
		Red Light OFF						
		B. On Handswitch 2-HS-30-89C, CRDM CLR C-A SHROUD SUCTION:						
		Green Light ON						
		Red Light OFF						
		C. At Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88):						
		Green Light ON						
		Red Light OFF						
		D. Locally:						
		• Cooler 2-CLR-30-88, CRDM COOLER 2C-A, is OFF.						
		 Damper 2-TCO-30-89, CRDM COOLER 2C-A SHROUD SUCTION, is CLOSED. (Acc Crit) 						
		 Valve 2-TCV-67-93, CRD VENT CLR 2C-A OUT TEMP CNTL, is CLOSED. (Acc Crit) 						
	[22]	PLACE Transfer Switch 2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2, to NORMAL.						
	[23]	PLACE the following Transfer Switches on 2-L-11A to NOR:						
		A. 2-XS-30-89, CRDM CLR C-A SHROUD SUCTION						
		B. 2-XS-67-93, CRDM CLR C-A ERCW OUTLET TCV						

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6.2.3	CRD	M Co	oler 2C-A Logic (continued)	
	[24]		ACE Handswitch 2-HS-30-89A, CRDM CLR ROUD SUCT, to CLOSE.	C-A
	[25]	VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-88A, CRDM CLR	C-A:
			Green Light ON	
			Red Light OFF	
			White Light OFF	
		В.	On 2-XX-55-6E, Train A CISP, Window 11 CRDM CLR C FAN-30-88:	7
			Green Light ON	
			Red Light OFF	
		C.	Annunciation & Alarms:	
			 2-XA-55-6E-138E, PANEL M-9 MOTO is CLEAR. 	DR TRIPOUT,
			• Motor Tripout Buzzer, [2-M-2], is OFF	
			 2-XA-55-6F-149B, 480 SD BD 2A1-A/2A2-A/CA VT BD 2 is CLEAR. 	2A1-A,
			 Unit 2 Alarm Events Display Screen ir 149-B 480 SD BD 2A1-A/2A2-A XS IN is NORMAL (Green). 	
			IS NORMAL (Green).	-

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6.2.3	CRDI	M Cooler 2C-A Logic (continued)	
	[26]	RACK Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88), to the REMOVED position.	
	[27]	REMOVE front cover of Breaker 2-BKR-30-88, CRDM	
		CLR 2C-A (2-CLR-30-88).	1st
			CV
	[28]	PLACE Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88), Overload Trip Switch (OTS) mechanical lever (DTA plunger) to the TRIP position.	
	[29]	INSTALL front cover of Breaker 2-BKR-30-88, CRDM	
		CLR 2C-A (2-CLR-30-88).	1st
			CV
	[30]	RACK Breaker 2-BKR-30-88, CRDM CLR 2C-A (2-CLR-30-88), to the CONNECTED position.	
	[31]	VERIFY the following:	
		A. On Handswitch 2-HS-30-88A, CRDM CLR C-A:	
		Green Light ON	
		Red Light OFF	
		White Light ON	
		B. Annunciation & Alarms:	
		 2-XA 55-6E-138E, PANEL M-9 MOTOR TRIPO is in ALARM. 	OUT,
		 Unit 2 Alarm Events Display Screen indicates 138-E PANEL M-9 MOTOR TRIPOUT, is in ALARM (Red). 	
		Motor Tripout Buzzer is ON.	

Date _____

6.2.3 CRDM Cooler 2C-A Logic (continued)

NOTES

- 1) The following step will electrically reset the Overload Trip Switch (OTS) for Breaker 2-BKR-30-88. Refer to Precaution 3.0H for further details.
- 2) If the following step does not reset the OTS, then the OTS may be reset manually by pressing the OTS Reset button on the front of the Breaker, and a Test Deficiency Notice shall be initiated.
 - [32] **RESET** the OTS by

PLACING Handswitch 2-HS-30-88A, CRDM CLR C-A to STOP, **AND**

VERIFY the following:

- A. On Handswitch 2-HS-30-88A:
 - Green Light ON
 - Red Light OFF
 - White Light OFF
- B. Annunciation & Alarms:
 - 2-XA 55-6E-138E, PANEL M-9 MOTOR TRIPOUT, is CLEAR.
 - Unit 2 Alarm Events Display Screen indicates 138-E PANEL M-9 MOTOR TRIPOUT, is NORMAL (Green).
 - Motor Tripout Buzzer is OFF.

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6.2.3	CRD	M Cooler 2C-A Logic (continued)
	[33]	RECORD the As-Found position of the following Handswitches on 2-M-9, AND
		IF any of the following Handswitches are found in STOP PULL TO LOCK, THEN
		PLACE that Handswitch in A AUTO.
		A. 2-HS-30-38A, AIR RETURN FAN A-A
		As-Found:
		Place in A AUTO? Yes No
		B. 2-HS-30-74A, LWR CNTMT CLR A-A
		As-Found:
		Place in A AUTO? Yes No
		C. 2-HS-30-77A, LWR CNTMT CLR C-A
		As-Found:
		Place in A AUTO? Yes No
		D. 2-HS-30-83A, CRDM CLR A-A
		As-Found:
		Place in A AUTO? Yes No
	[34]	VERIFY ICS Point HD2030, VENT SYS HS-38A, 88A, 74A, 77A, 83A, displays NOT P-L.
	[35]	PLACE Handswitch 2-HS-30-88A, CRDM CLR C-A to STOP PULL TO LOCK, AND
		VERIFY ICS Point HD2030, VENT SYS HS-38A, 88A, 74A, 77A, 83A, displays PULLT-L.

[36] **PLACE** Handswitch 2-HS-30-90A, CRDM CLR C-A LWR CNTMT SUCT, to OPEN.

	Data	Package: Page of	Date
6.2.3		I Cooler 2C-A Logic (continued)	
	[37]	ENSURE the following Handswitches are returned to their As-Found position recorded in Step 6.2.3[33]. (The As-Left position recorded in this step should match the As-Found position recorded in Step 6.2.3[33].)	
		A. 2-HS-30-38A, AIR RETURN FAN A-A	
		As-Left:	
		B. 2-HS-30-74A, LWR CNTMT CLR A-A	
		As-Left:	
		C. 2-HS-30-77A, LWR CNTMT CLR C-A	
		As-Left:	
		D. 2-HS-30-83A, CRDM CLR A-A	
		As-Left:	
	[38]	ENSURE ERCW Temperature Indicating Controller 2-TIC-67-93, CRD VENT CLR 2C TEMP CNTL, is returned to its As-Found positions recorded in Step 4.3[6]C.	0
		Auto/Manual Status:	
		Indicated Controller Setpoint:	
		Indicated Controller Output:	
			1st
			CV
	[39]	VERIFY successful completion of this Subsection 6.2.3. (Acc Crit)	

6.2.4 CRDM Cooler 2D-B Logic

NOTE						
Subsection 6.2.4 will be starting a stopping CRDM Cooler 2D-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.						
[1]	ENSURE all prerequisites listed in Section 4.0 for Section 6.2 and Subsection 6.2.4 have been completed.					
[2]	ENSURE Subsections 6.1.7 and 6.1.8 have been completed.					
[3]	RACK Breaker 2-BKR-30-80, CRDM CLR 2D-B (2-CLR-30-80), [480V SHUTDOWN BOARD 2B2-B, Compartment 7B], to the TEST position.					
[4]	[4] VERIFY 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.					
[5]	PRESS the CRDM CLR FAN 2D-B MTR 1 BKR TEST CLOSE switch at 2-BKR-30-80, CRDM CLR 2D-B (2-CLR-30-80), AND					
	VERIFY the following:					
	A. At Breaker 2-BKR-30-80:					
	Green Light OFF					
	Red Light ON					
	Red Flag at Breaker Panel					
	B. 2-XA-55-5C-102A, CRDM COOLER FLOW LO, is in ALARM (after approximately 30 seconds).					
	 Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER D-B AIR FLOW LO, is in ALARM (Red). 					

	Data	Pack	cage: Page of	Date					
6.2.4	CRDM Cooler 2D-B Logic (continued)								
	[6] PRESS the CRDM CLR FAN 2D-B MTR 1 BKR TEST TRIP switch at 2-BKR-30-80, CRDM CLR 2D-B (2-CLR-30-80), AN								
		VEI	RIFY the following:						
		A.	At Breaker 2-BKR-30-80:						
			Green Light ON						
			Red Light OFF						
			Green Flag at Breaker Panel						
		В.	2-XA-55-5C-102A, CRDM COOLER FLOW LO, is CLEAR.						
		C.	Unit 2 Alarm Events Display Screen indicates 102-A CRDM COOLER D-B AIR FLOW LO, is NORMAL (Green).						
	[7]	FAI	SURE Transfer Switch 2-XS-30-80, CRDM CLR 2D-B N 1 & 2, [480V SHUTDOWN BOARD 2B2-B, mpartment 5A], is in NORMAL.						
	[8]		CK Breaker 2-BKR-30-80, CRDM CLR 2D-B CLR-30-80), to the CONNECTED position.						
	[9]		ACE Handswitch 2-HS-30-81A, CRDM CLR D-B ROUD SUCT, [2-M-9], to P AUTO.						
	[10]		ACE Handswitch 2-HS-30-82A, CRDM CLR D-B R CNTMT SUCT, [2-M-9], to CLOSE.						

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5.2.4	CRD	M Co	oler 2D-B Logic (continued)	
	[11]	VE	RIFY the following:	
		A.	Cooler 2-CLR-30-80, CRDM COOLER 2D [Lwr Cntmt/703 AZ 335°], is OFF.	-В,
		В.	Damper 2-TCO-30-81, CRDM COOLER 2 SUCTION, [Lwr Cntmt/703 AZ 345°], is CL	
		C.	2-XA-55-6E-138E, PANEL M-9 MOTOR T is CLEAR	RIPOUT,
	[12]		ACE Handswitch 2-HS-30-80A, CRDM CLR START, AND	D-В, [2-М-9],
		VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-80A:	
			Green Light OFF	
			Red Light ON	
			White Light OFF	
		В.	On Handswitch 2-HS-30-81A, CRDM CLR SHROUD SUCT:	D-B
			Green Light OFF	
			Red Light ON	
		C.	On 2-XX-55-6F, Train B CISP, Window 10 CRDM CLR D FAN-30-80, [2-M-6]:	5,
			Green Light OFF	
			Red Light ON	
		D.	2-XA-55-5C-102A, CRDM COOLER FLOV remains CLEAR. (after approximately 30 s	

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6.2.4	CRDM	l Cod	oler 2	2D-B Lo	ogic	(continued))			
		E.	FAN		[480	V SHUTDO	C, CRDM CLR WN BOARD 2			
			•	Green	Ligh	t OFF				
			•	Red Lig	ght (NC				
		F.		reaker 2 LR-30-8		(R-30-80, CF	RDM CLR 2D-I	В		
			•	Green	Ligh	t OFF				
			•	Red Lig	ght (NC				
		G.	Loca	ally:						
			•	Cooler	2-C	LR-30-80, CI	RDM COOLEF	R 2D-B, is (ON.	
			•			•	CRDM COOLI OPEN. (Acc			
			•	TEMP	CNT	•	RD VENT CLF nt/716 AZ 352° c Crit)			
		tem		ure ICS			D-B intake and are GOOD (Gr		air	
			•	T1105/	4, C	RDM COOL	UNIT A-A D-B	INTAKE		
			•	T1103/	4, C	RDM COOL	UNIT D-B EXI	HAUST		
							ake and exha			
			105A, RDM (NIT /	A-A D-B INTA	KE:		°F	
			103A, RDM (ΝΙΤ Ι	D-B EXHAUS	T:		°F	

Page 112 of 164 Data Package: Page ____ of ____ Date _____ 6.2.4 CRDM Cooler 2D-B Logic (continued) PLACE Handswitch 2-HS-30-80A, CRDM CLR D-B, to STOP, [15] AND **VERIFY** the following: A. On Handswitch 2-HS-30-80A: Green Light ON • Red Light OFF • White Light OFF • B. On Handswitch 2-HS-30-81A, CRDM CLR D-B SHROUD SUCT: Green Light ON • **Red Light OFF** • C. On 2-XX-55-6F, Train B CISP, Window 105 CRDM CLR D FAN-30-80: Green Light ON • Red Light OFF • D. On Handswitch 2-HS-30-80C, CRDM CLR 2D-B FAN 1 & 2: Green Light ON • Red Light OFF • E. At Breaker 2-BKR-30-80, CRDM CLR 2D-B

Green Light ON

(2-CLR-30-80):

Red Light OFF

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6.2.4	CRDI	M Co	oler 2D-B Logic (continued)	
		F.	Locally:	
			Cooler 2-CLR-30-80, CRDM COOLEI	R 2D-B, is OFF.
			Damper 2-TCO-30-81, CRDM COOLI SHROUD SUCTION, is CLOSED. (A	
			• Valve 2-TCV-67-109, CRD VENT CLI TEMP CNTL, is CLOSED. (Acc Crit)	
	[16]		SURE 2-XA-55-6F-150B, SD BD 2B1-B/2B2-B/CA VT BD 2B1-B, is	CLEAR
	[17]	PL/	ACE the following Transfer Switches to AUX	(:
		A.	2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2	
		В.	2-XS-30-81, CRDM CLR D-B SHROUD S [2-L-11B]	UCTION,
		C.	2-XS-67-109, CRDM CLR D-B ERCW OU [2-L-11B]	TLET TCV,
	[18]		SURE the following Handswitches on 2-L-10 AUTO:) are
		A.	2-HS-30-81C, CRDM CLR D-B SHROUD	SUCTION
		Β.	2-HS-67-109C, CRDM CLR D-B ERCW O	UTLET TCV
	[19]	VE	RIFY the following:	
		Α.	On Handswitch 2-HS-30-80A, CRDM CLR	D-В:
			Green Light OFF	
			Red Light OFF	
			White Light OFF	

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6.2.4	CRDM Co	oler 2D-B Logic (continued)	
	В.	On 2-XX-55-6F, Train B CISP, Window 10 CRDM CLR D FAN-30-80:	05
		Green Light OFF	
		Red Light OFF	
	C.	Annunciation & Alarms:	
		 2-XA-55-6F-150B, 480 SD BD 2B1-B/2B2-B/CA VT BD is in ALARM 	2В1-В,
		 Unit 2 Alarm Events Display Screen i 150-B 480 SD BD 2B1-B/2B2-B XS II is in ALARM (Red). 	
	D.	On Handswitch 2-HS-30-80C, CRDM CLF FAN 1 & 2:	R 2D-B
		Green Light ON	
		Red Light OFF	
	E.	On Handswitch 2-HS-30-81C, CRDM CLF SHROUD SUCTION:	R D-B
		Green Light ON	
		Red Light OFF	
	F.	At Breaker 2-BKR-30-80, CRDM CLR 2D- (2-CLR-30-80):	В
		Green Light ON	
		Red Light OFF	

	Data	Pac	kage: Page of D)ate
6.2.4	CRD	M Co	ooler 2D-B Logic (continued)	
	[20]		ACE Handswitch 2-HS-30-80C, CRDM CLR 2D-B N 1 & 2, to CLOSE, AND	
		VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-80C:	
			Green Light OFF	
			Red Light ON	
		В.	On Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCTION:	
			Green Light OFF	
			Red Light ON	
		C.	At Breaker 2-BKR-30-80, CRDM CLR 2D-B (2-CLR-30-80):	
			Green Light OFF	
			Red Light ON	
		D.	Locally:	
			• Cooler 2-CLR-30-80, CRDM COOLER 2D-B, is ON.	
			 Damper 2-TCO-30-81, CRDM COOLER 2D-B SHROUD SUCTION, is OPEN (Acc Crit) 	
			 Valve 2-TCV-67-109, CRD VENT CLR 2D-B OUT TEMP CNTL, modulates OPEN. (Acc Crit) 	

	Data	a Package: Page of Da	ate						
6.2.4	CRDM Cooler 2D-B Logic (continued)								
	[21]	PLACE Handswitch 2-HS-30-80C, CRDM CLR 2D-B FAN 1 & 2, to TRIP, AND							
		VERIFY the following:							
		A. On Handswitch 2-HS-30-80C:							
		Green Light ON							
		Red Light OFF							
		B. On Handswitch 2-HS-30-81C, CRDM CLR D-B SHROUD SUCTION:							
		Green Light ON							
		Red Light OFF							
		C. At Breaker 2-BKR-30-80, CRDM CLR 2D-B (2-CLR-30-80):							
		Green Light ON							
		Red Light OFF							
		D. Locally:							
		• Cooler 2-CLR-30-80, CRDM COOLER 2D-B, is OFF.							
		 Damper 2-TCO-30-81, CRDM COOLER 2D-B SHROUD SUCTION, is CLOSED. (Acc Crit) 							
		 Valve 2-TCV-67-109, CRD VENT CLR 2D-B OUT TEMP CNTL, is CLOSED. (Acc Crit) 							
	[22]	PLACE Transfer Switch 2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2, to NORMAL.							
	[23]	PLACE the following Transfer Switches on 2-L-11B to NOR:							
		A. 2-XS-30-81, CRDM CLR D-B SHROUD SUCTION							
		B. 2-XS-67-109, CRDM CLR D-B ERCW OUTLET TCV							

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6.2.4	CRD	M Co	oler 2D-B Logic (continued)	
	[24]		ACE Handswitch 2-HS-30-81A, CRDM CLR ROUD SUCT, to CLOSE.	D-В
	[25]	VEI	RIFY the following:	
		Α.	On Handswitch 2-HS-30-80A, CRDM CLR	с D-В:
			Green Light ON	
			Red Light OFF	
			White Light OFF	
		В.	On 2-XX-55-6F, Train B CISP, Window 10 CRDM CLR D FAN-30-80:	5
			Green Light ON	
			Red Light OFF	
		C.	Annunciation & Alarms:	
			• 2-XA-55-6E-138E, PANEL M-9 MOTO is CLEAR.	DR TRIPOUT,
			• Motor Tripout Buzzer, [2-M-2], is OFF	
			 2-XA-55-6F-150B, 480 SD BD 2B1-B/2B2-B/CA VT BD 2 is CLEAR. 	2B1-B,
			 Unit 2 Alarm Events Display Screen ir 150-B 480 SD BD 2B1-B/2B2-B XS IN is NORMAL (Green). 	

	WBN Jnit 2	Control Rod Drive Me	Rev. 00	
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6.2.4	CRD	l Cooler 2D-B Logic (conti	nued)	
	[26]	RACK Breaker 2-BKR-30-8 (2-CLR-30-80), to the REM	•	
	[27]		of Breaker 2-BKR-30-80, CF	RDM
		CLR 2D-B (2-CLR-30-80).		1st
				CV
	[28]	PLACE Breaker 2-BKR-30- (2-CLR-30-80), Overload Tr lever (DTA plunger) to the T	ip Switch (OTS) mechanical	
	[29]		of Breaker 2-BKR-30-80, CF	RDM
		CLR 2D-B (2-CLR-30-80).		1st
				CV
	[30]	RACK Breaker 2-BKR-30-8 (2-CLR-30-80), to the CON	•	
	[31]	VERIFY the following:		
		A. On Handswitch 2-HS-3	0-80A, CRDM CLR D-B:	
		Green Light ON		
		Red Light OFF		
		White Light ON		
		B. Annunciation & Alarms	:	
		• 2-XA 55-6E-138E is in ALARM.	PANEL M-9 MOTOR TRIP	OUT,
			ts Display Screen indicates MOTOR TRIPOUT,).	
		Motor Tripout Buz	zer is ON.	

Date _____

6.2.4 CRDM Cooler 2D-B Logic (continued)

NOTES

- 1) The following step will electrically reset the Overload Trip Switch (OTS) for Breaker 2-BKR-30-80. Refer to Precaution 3.0H for further details.
- 2) If the following step does not reset the OTS, then the OTS may be reset manually by pressing the OTS Reset button on the front of the Breaker, and a Test Deficiency Notice shall be initiated.
 - [32] **RESET** the OTS by

PLACING Handswitch 2-HS-30-80A, CRDM CLR D-B to STOP, **AND**

VERIFY the following:

- A. On Handswitch 2-HS-30-80A:
 - Green Light ON
 - Red Light OFF
 - White Light OFF
- B. Annunciation & Alarms:
 - 2-XA 55-6E-138E, PANEL M-9 MOTOR TRIPOUT, is CLEAR.
 - Unit 2 Alarm Events Display Screen indicates 138-E PANEL M-9 MOTOR TRIPOUT, is NORMAL (Green).
 - Motor Tripout Buzzer is OFF.

	Data	Package: Page of	Date
6.2.4	CRD	M Cooler 2D-B Logic (continued)	
	[33]	RECORD the As-Found position of the following Handswitches on 2-M-9, AND	;
		IF any of the following Handswitches are found in STOP PULL TO LOCK, THEN	
		PLACE that Handswitch in A AUTO.	
		A. 2-HS-30-39A, AIR RETURN FAN B-B	
		As-Found:	
		Place in A AUTO?	
		B. 2-HS-30-75A, LWR CNTMT CLR B-B	
		As-Found:	
		Place in A AUTO?	
		C. 2-HS-30-78A, LWR CNTMT CLR D-B	
		As-Found:	
		Place in A AUTO?	
		D. 2-HS-30-92A, CRDM CLR B-B	
		As-Found:	
		Place in A AUTO?	
	[34]	VERIFY ICS Point HD2064, VENT SYS HS-39A, 78A, 75A, 92A, 80A, displays NOT P-L.	
	[35]	PLACE Handswitch 2-HS-30-80A, CRDM CLR D-B to STOP PULL TO LOCK, AND	
		VERIFY ICS Point HD2064, VENT SYS HS-39A, 78A, 75A,	

92A, 80A, displays PULLT-L.[36] PLACE Handswitch 2-HS-30-82A, CRDM CLR D-B LWR CNTMT SUCT, to OPEN.

	Data	Package: Page of Date	
6.2.4	CRD	M Cooler 2D-B Logic (continued)	
	[37]	ENSURE the following Handswitches are returned to their As-Found position recorded in Step 6.2.4[33]. (The As-Left position recorded in this step should match the As-Found position recorded in Step 6.2.4[33].)	
		A. 2-HS-30-39A, AIR RETURN FAN B-B	
		As-Left:	
		B. 2-HS-30-75A, LWR CNTMT CLR B-B	
		As-Left:	
		C. 2-HS-30-78A, LWR CNTMT CLR D-B	
		As-Left:	
		D. 2-HS-30-92A, CRDM CLR B-B	
		As-Left:	
	[38]	ENSURE ERCW Temperature Indicating Controller 2-TIC-67-109, CRD VENT CLR 2D TEMP CNTL, is returned to its As-Found positions recorded in Step 4.3[6]D.	
		Auto/Manual Status:	
		Indicated Controller Setpoint:	
		Indicated Controller Output:	
		-	1st
		-	CV
	[39]	VERIFY successful completion of this Subsection 6.2.4. (Acc Crit)	

Date _____

6.3 CRDM Coolers Response to Phase B Containment Isolation Signal

NOTE

Subsections 6.3.1 and 6.3.2 may be performed in any order, provided their applicable predecessor Subsections are completed. Unless otherwise noted, the steps within each Subsection shall be performed in the order written. The diagram at the beginning of Section 6.0 may be used as a placekeeping tool throughout the performance of this Section.

6.3.1 Train A CRDM Coolers (2A-A and 2C-A)

NOTE

Subsection 6.3.1 will be starting a stopping CRDM Cooler 2A-A and 2C-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.3 have been completed.
- [2] **ENSURE** Subsections 6.2.1 and 6.2.3 have been completed.
- [3] **PLACE** Handswitch 2-HS-30-83A, CRDM CLR A-A, to START, **AND**

VERIFY on Handswitch 2-HS-30-83A:

- Green Light OFF
- Red Light ON
- [4] **PLACE** Handswitch 2-HS-30-88A, CRDM CLR C-A, to START, **AND**

VERIFY on Handswitch 2-HS-30-88A:

- Green Light OFF
- Red Light ON

Date

6.3.1 Train A CRDM Coolers (2A-A and 2C-A) (continued)

- [5] **ENSURE** the following Lower Compartment Coolers are OFF:
 - 2-CCU-30-74, CNTMT LOWER COMPARTMENT COOLER 2A-A
 - 2-CCU-30-77, CNTMT LOWER COMPARTMENT COOLER 2C-A

NOTE

The following steps will simulate a Train A Phase B Containment Isolation Signal and Phase B signal reset by closing and opening a test switch (TS-1, installed in Step 4.3[13.1]) in SSPS Train A Output Cabinet 2-R-48.

- [6] **PLACE** Test Switch TS-1 in the CLOSED (ON) position.
- [7] **VERIFY** the following:
 - A. On Handswitch 2-HS-30-83A, CRDM CLR A-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
 - B. On Handswitch 2-HS-30-88A, CRDM CLR C-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
- [8] **PLACE** Test Switch TS-1 in the OPEN (OFF) position.
- [9] **VERIFY** the following:
 - A. On Handswitch 2-HS-30-83A, CRDM CLR A-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
 - B. On Handswitch 2-HS-30-88A, CRDM CLR C-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

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6.3.1	Train	AC	RDM Coolers (2A-A and 2C-A) (continued	(k
	[10]	PL	ACE the following Transfer Switches in AUX	:
		Α.	2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2	
		В.	2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2	
	[11]	PL	ACE Test Switch TS-1 in the CLOSED (ON)	position.
	[12]	VE	RIFY the following:	
		A.	On Handswitch 2-HS-30-83C, CRDM CLR FAN 1 & 2:	2A-A
			Green Light ON	
			Red Light OFF	
		В.	On Handswitch 2-HS-30-88C, CRDM CLR FAN 1 & 2:	2C-A
			Green Light ON	
			Red Light OFF	
	[13]		ACE Handswitch 2-HS-30-83C, CRDM CLR N 1 & 2, to CLOSE, AND	2A-A
		VE	RIFY the following on Handswitch 2-HS-30-	83C:
			• Green Light OFF (Acc Crit)	
			• Red Light ON (Acc Crit)	
	[14]		ACE Handswitch 2-HS-30-83C, CRDM CLR N 1 & 2, to TRIP, AND	2A-A
		VE	RIFY the following on Handswitch 2-HS-30-	83C:
			Green Light ON	
			Red Light OFF	

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6.3.1	Train	A CI	RDM Coolers (2A-A and 2C-A) (continued	d)
	[15]		ACE Handswitch 2-HS-30-88C, CRDM CLR N 1 & 2, to CLOSE, AND	R 2C-A
		VEF	RIFY the following on Handswitch 2-HS-30-	88C:
			• Green Light OFF (Acc Crit)	
			• Red Light ON (Acc Crit)	
	[16]		ACE Handswitch 2-HS-30-88C, CRDM CLR N 1 & 2, to TRIP, AND	R 2C-A
		VEF	RIFY on Handswitch 2-HS-30-88C:	
			Green Light ON	
			Red Light OFF	
	[17]	PL/	ACE Test Switch TS-1 in the OPEN (OFF) p	position.
	[18]	VEF	RIFY the following:	
		Α.	On Handswitch 2-HS-30-83C, CRDM CLR FAN 1 & 2:	R 2A-A
			Green Light ON	
			Red Light OFF	
		В.	On Handswitch 2-HS-30-88C, CRDM CLF FAN 1 & 2:	R 2C-A
			Green Light ON	
			Red Light OFF	

WBN Unit 2			Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 126 of 164
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6.3.1	Train	AC	RDM Coolers (2A-A and 2C-A) (continued	1)
	[19]	PL	ACE the following Transfer Switches in NOF	RMAL:
		Α.	2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2	
		В.	2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2	
	[20]	PL	ACE the following Handswitches in STOP P	ULL TO LOCK:
		Α.	2-HS-30-83A, CRDM CLR A-A	
		В.	2-HS-30-88A, CRDM CLR C-A	

WBN	
Unit 2	

6.3.2 Train B CRDM Coolers (2B-B and 2D-B)

NOTE Subsection 6.3.2 will be starting a stopping CRDM Cooler 2B-B and 2D-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler. **ENSURE** all prerequisites listed in Section 4.0 for Section 6.3 [1] have been completed. [2] **ENSURE** Subsections 6.2.2 and 6.2.4 have been completed. PLACE Handswitch 2-HS-30-92A, CRDM CLR B-B, [3] to START, AND **VERIFY** on Handswitch 2-HS-30-92A: Green Light OFF • Red Light ON • PLACE Handswitch 2-HS-30-80A, CRDM CLR D-B, [4] to START, AND VERIFY on Handswitch 2-HS-30-80A: Green Light OFF • Red Light ON • [5] **ENSURE** the following Lower Compartment Coolers are OFF: 2-CCU-30-75, CNTMT LOWER COMPARTMENT • COOLER 2B-B 2-CCU-30-78, CNTMT LOWER COMPARTMENT • COOLER 2D-B

Date _____

6.3.2 Train B CRDM Coolers (2B-B and 2D-B) (continued)

NOTE

The following steps will simulate a Train B Phase B Containment Isolation Signal and Phase B signal reset by closing and opening a test switch (TS-2, installed in Step 4.3[13.2]) in SSPS Train B Output Cabinet 2-R-51.

- [6] **PLACE** Test Switch TS-2 in the CLOSED (ON) position.
- [7] **VERIFY** the following:
 - A. On Handswitch 2-HS-30-92A, CRDM CLR B-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
 - B. On Handswitch 2-HS-30-80A, CRDM CLR D-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
- [8] **PLACE** Test Switch TS-2 in the OPEN (OFF) position.
- [9] **VERIFY** the following:
 - A. On Handswitch 2-HS-30-92A, CRDM CLR B-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
 - B. On Handswitch 2-HS-30-80A, CRDM CLR D-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)
- [10] **PLACE** the following Transfer Switches in AUX:
 - A. 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2
 - B. 2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2

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6.3.2	Train	B C	RDM	Coolers (2B-B and 2D-B) (continued	(k	
	[11]	PL/	ACE	Test Switch TS-2 in the CLOSED (ON)	position.	
	[12]	VEI	RIFY	the following:		
		A.		Handswitch 2-HS-30-92C, CRDM CLR N 1 & 2:	2B-B	
			•	Green Light ON		
			•	Red Light OFF		
		В.		Handswitch 2-HS-30-80C, CRDM CLR N 1 & 2:	2D-B	
			•	Green Light ON		
			•	Red Light OFF		
	[13]			Handswitch 2-HS-30-92C, CRDM CLR 2, to CLOSE, AND	2B-B	
		VEI	RIFY	the following on Handswitch 2-HS-30-	92C:	
			•	Green Light OFF (Acc Crit)		
			•	Red Light ON (Acc Crit)		
	[14]			Handswitch 2-HS-30-92C, CRDM CLR 2, to TRIP, AND	2B-B	
		VEI	RIFY	the following on Handswitch 2-HS-30-	92C:	
			•	Green Light ON		
			•	Red Light OFF		
	[15]			Handswitch 2-HS-30-80C, CRDM CLR 2, to CLOSE, AND	2D-B	
		VEI	RIFY	the following on Handswitch 2-HS-30-	80C:	
			•	Green Light OFF (Acc Crit)		
			•	Red Light ON (Acc Crit)		

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	Data	Pack	age: Page of	Date
6.3.2	Train	ВС	RDM Coolers (2B-B and 2D-B) (continued	1)
	[16]		ACE Handswitch 2-HS-30-80C, CRDM CLR N 1 & 2, to TRIP, AND	2D-В
		VEI	RIFY on Handswitch 2-HS-30-80C:	
			Green Light ON	
			Red Light OFF	
	[17]	PL/	ACE Test Switch TS-2 in the OPEN (OFF) p	osition.
	[18]	VEI	RIFY the following:	
		A.	On Handswitch 2-HS-30-92C, CRDM CLR FAN 1 & 2:	2В-В
			Green Light ON	
			Red Light OFF	
		В.	On Handswitch 2-HS-30-80C, CRDM CLR FAN 1 & 2:	2D-В
			Green Light ON	
			Red Light OFF	
	[19]	PL/	ACE the following Transfer Switches in NOR	RMAL:
		Α.	2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2	
		Β.	2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2	
	[20]	PL/	ACE the following Handswitches in STOP P	ULL TO LOCK:
		Α.	2-HS-30-92A, CRDM CLR B-B	
		Β.	2-HS-30-80A, CRDM CLR D-B	

WBN	
Unit 2	

Date _____

6.4 CRDM Coolers Response To Bus Undervoltage

NOTE

Subsections 6.4.1 through 6.4.4 may be performed in any order, provided their applicable predecessor Subsection is completed. Unless otherwise noted, the steps within each Subsection shall be performed in the order written. The diagram at the beginning of Section 6.0 may be used as a placekeeping tool throughout the performance of this Section.

6.4.1 CRDM Cooler 2A-A

NOTE

Subsection 6.4.1 will be starting a stopping CRDM Cooler 2A-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.4 have been completed.
- [2] **ENSURE** Subsection 6.2.1 has been completed
- [3] **ENSURE** Handswitch 2-HS-30-74A, LWR CNTMT CLR A-A, is in STOP PULL TO LOCK.
- [4] **PLACE** Handswitch 2-HS-30-83A, CRDM CLR A-A, to START, **AND**

VERIFY on Handswitch 2-HS-30-83A:

- Green Light OFF
- Red Light ON

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Unit 2		Rev. 0000	
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Date _____

6.4.1 CRDM Cooler 2A-A (continued)

NOTE

The following step will simulate a Loss of Offsite Power.

[5] MOMENTARILY PLACE a handheld jumper between Terminal Point 7 (wire A17BTP) and Point 8 (wire A17BT1) of Relay 2A1X1, [480V SHUTDOWN BOARD 2A1-A, Compartment 6A]. (Drawing 618F938 AC)

1st

- CV
- [6] **VERIFY** on Handswitch 2-HS-30-83A, CRDM CLR A-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

NOTE

The following step will simulate a restoration of bus voltage.

- [7] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2A1X1. (Drawing 618F938 AC)
- 1st

 [8]
 VERIFY that CRDM Cooler 2A-A remains OFF after approximately 1 minute, as indicated on Handswitch 2-HS-30-83A, CRDM CLR A-A:

 •
 Green Light ON (Acc Crit)

 •
 Red Light OFF (Acc Crit)

 [9]
 PLACE Transfer Switch 2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2, in AUX.

Data Package: Page ____ of ____ Date _____ 6.4.1 **CRDM Cooler 2A-A (continued)** PLACE Handswitch 2-HS-30-83C, CRDM CLR 2A-A [10] FAN 1 & 2, to CLOSE, AND **VERIFY** on Handswitch 2-HS-30-83C: Green Light OFF • **Red Light ON** • NOTE The following step will simulate a Loss of Offsite Power. **MOMENTARILY PLACE** a handheld jumper between Terminal [11] Point 7 (wire A17BTP) and Point 8 (wire A17BT1) of Relay 2A1X1. (Drawing 618F938 AC) 1st CV VERIFY on Handswitch 2-HS-30-83C, CRDM CLR 2A-A [12] FAN 1 & 2: Green Light ON (Acc Crit) • Red Light OFF (Acc Crit) •

NOTE

The following step will simulate a restoration of bus voltage.

[13] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2A1X1. (Drawing 618F938 AC)

1st

CV

Data Package: Page ____ of ____ Date _____

6.4.1 CRDM Cooler 2A-A (continued)

- [14] VERIFY that CRDM Cooler 2A-A STARTS after approximately 1 minute, as indicated on Handswitch 2-HS-30-83C, CRDM CLR 2A-A FAN 1 & 2:
 - Green Light OFF (Acc Crit)
 - Red Light ON (Acc Crit)
- [15] **PLACE** Transfer Switch 2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2, in NORMAL.
- [16] **PLACE** Handswitch 2-HS-30-83, CRDM CLR A-A, in STOP PULL TO LOCK.

6.4.2 CRDM Cooler 2B-B

NOTE

Subsection 6.4.2 will be starting a stopping CRDM Cooler 2B-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.4 have been completed.
- [2] **ENSURE** Subsection 6.2.2 has been completed
- [3] **ENSURE** Handswitch 2-HS-30-75A, LWR CNTMT CLR B-B, is in STOP PULL TO LOCK.
- [4] **PLACE** Handswitch 2-HS-30-92A, CRDM CLR B-B, to START, **AND**

VERIFY on Handswitch 2-HS-30-92A:

- Green Light OFF
- Red Light ON

NOTE

The following step will simulate a Loss of Offsite Power.

[5] MOMENTARILY PLACE a handheld jumper between Terminal Point 7 (wire B17CTP) and Point 8 (wire B17CT1) of Relay 2B1X1, [480V SHUTDOWN BOARD 2B1-B, Compartment 6A]. (Drawing 618F941 AC)

1st

CV

- [6] **VERIFY** on Handswitch 2-HS-30-92A, CRDM CLR B-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

Date _____

6.4.2 CRDM Cooler 2B-B (continued)

NOTE

The following step will simulate a restoration of bus voltage.

[7] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2B1X1. (Drawing 618F941 AC)

CV [8] VERIFY that CRDM Cooler 2B-B remains OFF after approximately 1 minute, as indicated on Handswitch 2-HS-30-92A, CRDM CLR B-B: Green Light ON (Acc Crit) Red Light OFF (Acc Crit) Red Light OFF (Acc Crit) [9] PLACE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, in AUX.			1st
 approximately 1 minute, as indicated on Handswitch 2-HS-30-92A, CRDM CLR B-B: Green Light ON (Acc Crit) Red Light OFF (Acc Crit) [9] PLACE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, in AUX. [10] PLACE Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2, to CLOSE, AND VERIFY on Handswitch 2-HS-30-92C: Green Light OFF 			CV
Red Light OFF (Acc Crit) PLACE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, in AUX. PLACE Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2, to CLOSE, AND VERIFY on Handswitch 2-HS-30-92C: Green Light OFF	[8]	approximately 1 minute, as indicated on Handswitch	
 [9] PLACE Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, in AUX. [10] PLACE Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2, to CLOSE, AND VERIFY on Handswitch 2-HS-30-92C: Green Light OFF 		Green Light ON (Acc Crit)	
 FAN 1 & 2, in AUX. [10] PLACE Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2, to CLOSE, AND VERIFY on Handswitch 2-HS-30-92C: Green Light OFF 		• Red Light OFF (Acc Crit)	
 FAN 1 & 2, to CLOSE, AND VERIFY on Handswitch 2-HS-30-92C: Green Light OFF	[9]		
Green Light OFF	[10]		
		VERIFY on Handswitch 2-HS-30-92C:	
Red Light ON		Green Light OFF	
		Red Light ON	

NOTE

The following step will simulate a Loss of Offsite Power.

[11] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 7 (wire B17CTP) and Point 8 (wire B17CT1) of Relay 2B1X1. (Drawing 618F941 AC)

1st

Data Package: Page ____ of ____ Date _____ 6.4.2 **CRDM Cooler 2B-B (continued)** VERIFY on Handswitch 2-HS-30-92C, CRDM CLR 2B-B [12] FAN 1 & 2: Green Light ON (Acc Crit) • • Red Light OFF (Acc Crit) NOTE The following step will simulate a restoration of bus voltage. **MOMENTARILY PLACE** a handheld jumper between Terminal [13] Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2B1X1. (Drawing 618F941 AC) 1st CV **VERIFY** that CRDM Cooler 2B-B STARTS after approximately [14] 1 minute, as indicated on Handswitch 2-HS-30-92C, CRDM CLR 2B-B FAN 1 & 2: Green Light OFF (Acc Crit) •

- Red Light ON (Acc Crit)
- [15] **PLACE** Transfer Switch 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2, in NORMAL.
- [16] **PLACE** Handswitch 2-HS-30-92, CRDM CLR B-B, in STOP PULL TO LOCK.

6.4.3 CRDM Cooler 2C-A

NOTE

Subsection 6.4.3 will be starting a stopping CRDM Cooler 2C-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.4 have been completed.
- [2] **ENSURE** Subsection 6.2.3 has been completed
- [3] **ENSURE** Handswitch 2-HS-30-77A, LWR CNTMT CLR C-A, is in STOP PULL TO LOCK.
- [4] **PLACE** Handswitch 2-HS-30-88A, CRDM CLR C-A, to START, **AND**

VERIFY on Handswitch 2-HS-30-88A:

- Green Light OFF
- Red Light ON

NOTE

The following step will simulate a Loss of Offsite Power.

[5] MOMENTARILY PLACE a handheld jumper between Terminal Point 7 (wire A27ATP) and Point 8 (wire A27AT1) of Relay 2A2X1, [480V SHUTDOWN BOARD 2A2-A, Compartment 6A]. (Drawing 6947D67 AC)

1st

CV

- [6] **VERIFY** on Handswitch 2-HS-30-88A, CRDM CLR C-A:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

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Date _____

6.4.3 **CRDM Cooler 2C-A (continued)**

NOTE

The following step will simulate a restoration of bus voltage.

MOMENTARILY PLACE a handheld jumper between Terminal [7] Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2A2X1. (Drawing 6947D67 AC)

	/	1st
		CV
[8]	VERIFY that CRDM Cooler 2C-A remains OFF after approximately 1 minute, as indicated on Handswitch 2-HS-30-88A, CRDM CLR C-A:	
	Green Light ON (Acc Crit)	
	Red Light OFF (Acc Crit)	
[9]	PLACE Transfer Switch 2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2, in AUX.	
[10]	PLACE Handswitch 2-HS-30-88C, CRDM CLR 2C-A FAN 1 & 2, to CLOSE, AND	
	VERIFY on Handswitch 2-HS-30-88C:	
	Green Light OFF	
	Red Light ON	

NOTE

The following step will simulate a Loss of Offsite Power.

[11] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 7 (wire A27ATP) and Point 8 (wire A27AT1) of Relay 2A2X1. (Drawing 6947D67 AC)

1st

Date _____

1st

CV

Data Package: Page ____ of ____ CRDM Cooler 2C-A (continued)

6.4.3

- [12] VERIFY on Handswitch 2-HS-30-88C, CRDM CLR 2C-A FAN 1 & 2:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

NOTE

The following step will simulate a restoration of bus voltage.

[13] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2A2X1. (Drawing 6947D67 AC)

[14]	VERIFY that CRDM Cooler 2C-A STARTS after approximately
	1 minute, as indicated on Handswitch 2-HS-30-88C, CRDM
	CLR 2C-A FAN 1 & 2:

- Green Light OFF (Acc Crit)
- Red Light ON (Acc Crit)
- [15] **PLACE** Transfer Switch 2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2, in NORMAL.
- [16] **PLACE** Handswitch 2-HS-30-88, CRDM CLR C-A, in STOP PULL TO LOCK.

6.4.4 CRDM Cooler 2D-B

NOTE

Subsection 6.4.4 will be starting a stopping CRDM Cooler 2D-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.4 have been completed.
- [2] **ENSURE** Subsection 6.2.4 has been completed
- [3] **ENSURE** Handswitch 2-HS-30-78A, LWR CNTMT CLR D-B, is in STOP PULL TO LOCK.
- [4] **PLACE** Handswitch 2-HS-30-80A, CRDM CLR D-B, to START, **AND**

VERIFY on Handswitch 2-HS-30-80A:

- Green Light OFF
- Red Light ON

NOTE

The following step will simulate a Loss of Offsite Power.

[5] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 7 (wire B27BTP) and Point 8 (wire B27BT1) of Relay 2B2X1, [480V SHUTDOWN BOARD 2B2-B, Compartment 6A]. (Drawing 6947D85 AC)

1st

CV

- [6] **VERIFY** on Handswitch 2-HS-30-80A, CRDM CLR D-B:
 - Green Light ON (Acc Crit)
 - Red Light OFF (Acc Crit)

Date _____

6.4.4 CRDM Cooler 2D-B (continued)

NOTE

The following step will simulate a restoration of bus voltage.

[7] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2B2X1. (Drawing 6947D85 AC)

			1st
			CV
[8	3]	VERIFY that CRDM Cooler 2D-B remains OFF after approximately 1 minute, as indicated on Handswitch 2-HS-30-80A, CRDM CLR D-B:	
		Green Light ON (Acc Crit)	
		Red Light OFF (Acc Crit)	
[6	9]	PLACE Transfer Switch 2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2, in AUX.	
[^	10]	PLACE Handswitch 2-HS-30-80C, CRDM CLR 2D-B FAN 1 & 2, to CLOSE, AND	
		VERIFY on Handswitch 2-HS-30-80C:	
		Green Light OFF	
		Red Light ON	

NOTE

The following step will simulate a Loss of Offsite Power.

[11] **MOMENTARILY PLACE** a handheld jumper between Terminal Point 7 (wire B27BTP) and Point 8 (wire B27BT1) of Relay 2B2X1. (Drawing 6947D85 AC)

1st

Data Package: Page ____ of ____ Date _____ 6.4.4 CRDM Cooler 2D-B (continued) [12] VERIFY on Handswitch 2-HS-30-80C, CRDM CLR 2D-B FAN 1 & 2: Green Light ON (Acc Crit) • • Red Light OFF (Acc Crit) NOTE The following step will simulate a restoration of bus voltage. **MOMENTARILY PLACE** a handheld jumper between Terminal [13] Point 3 (wire DCE4) and Point 4 (wire DCE5) of Relay 2B2X1. (Drawing 6947D85 AC) 1st CV

- [14] **VERIFY** that CRDM Cooler 2D-B STARTS after approximately 1 minute, as indicated on Handswitch 2-HS-30-80C, CRDM CLR 2D-B FAN 1 & 2:
 - Green Light OFF (Acc Crit)
 - Red Light ON (Acc Crit)
- [15] **PLACE** Transfer Switch 2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2, in NORMAL.
- [16] **PLACE** Handswitch 2-HS-30-80, CRDM CLR D-B, in STOP PULL TO LOCK.

WBN							
Unit 2							

Date _____

6.5 CRDM Coolers Auto-Start on Low Air Flow

NOTE

Subsections 6.5.1 and 6.5.2 may be performed in any order, provided their applicable predecessor Subsections are completed. Unless otherwise noted, the steps within each Subsection shall be performed in the order written. The diagram at the beginning of Section 6.0 may be used as a placekeeping tool throughout the performance of this Section.

6.5.1 CRDM Coolers 2A-A and 2D-B

NOTE

Subsection 6.5.1 will be starting a stopping CRDM Cooler 2A-A and 2D-B. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.5 have been completed.
- [2] **ENSURE** Subsections 6.3.1, 6.3.2, 6.4.1, and 6.4.4 have been completed.

Date _____

1st

CV

1st

CV

6.5.1 CRDM Coolers 2A-A and 2D-B (continued)

NOTE

The following step will enable the CRDM Cooler A-A and D-B Auto-start on Low Flow function.

- [3] LAND the following wires that were lifted in Steps 4.3[14]A and 4.3[14]D:
 A. Wire A17BC3: Point 1 on Terminal Block TA in 2-JB-293-494 [Lwr Cntmt/703 AZ 50°]
 - B. Wire B27BC3: Point 2 on Terminal Block TA in 2-JB-293-521 [Lwr Cntmt/703 AZ 315°] (Drawing 45W2748-4)
- [4] **PLACE** Handswitch 2-HS-30-80A, CRDM CLR D-B, to START, **AND**

VERIFY on Handswitch 2-HS-30-80A:

• Green Light OFF

(Drawing 45W2748-1)

- Red Light ON
- [5] **PLACE** Handswitch 2-HS-30-83A, CRDM CLR A-A, to A AUTO, **AND**

VERIFY on Handswitch 2-HS-30-83A:

- Green Light ON
- Red Light OFF

	WBN Unit 2		Control Rod Driv	ve Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 146 of 164
	Data	Pacl	age: Page	of	Date
6.5.1	CRD	M Co	olers 2A-A and 2	D-B (continued)	
	[6]	PL	CE the following	Transfer Switches in AUX	:
		A.	2-XS-30-83, CRE	0M CLR 2A-A FAN 1 & 2	
		В.	2-XS-30-80, CRE	DM CLR 2D-B FAN 1 & 2	
	[7]		CE and HOLD Ha 2D-B FAN 1 & 2	andswitch 2-HS-30-80C,(, to TRIP, AND	CRDM
		VE	IFY on Handswite	ch 2-HS-30-80C:	
			Green Light	ON	
			Red Light O	FF	
	[8] VERIFY that CRDM Cooler 2A-A STARTS as indicated on Handswitch 2-HS-30-83C, CRDM CLR 2A-A FAN 1 & 2:				
			Green Light	OFF (Acc Crit)	
			Red Light O	N (Acc Crit)	
	[9]		EASE Handswitc 1 & 2.	h 2-HS-30-80C, CRDM C	LR 2D-B
	[10]		CE and HOLD Ha 2A-A FAN 1 & 2,	andswitch 2-HS-30-83C, (to TRIP, AND	CRDM
		VE	IFY on Handswite	ch 2-HS-30-83C:	
			Green Light	ON	
			Red Light O	FF	
	[11]			Cooler 2D-B STARTS as in 80C, CRDM CLR 2D-B F/	
			Green Light	OFF (Acc Crit)	
			Red Light O	N (Acc Crit)	
	[12]		EASE Handswitc 1 & 2.	h 2-HS-30-83C, CRDM C	LR 2A-A

WBN Unit 2			Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 147 of 164	
	Data	Pacl	kage: Page of		Date
6.5.1 CRDM C			oolers 2A-A and 2D-B (continued)		
	[13] PL		ACE the following Transfer Switches in NOF	RMAL:	
	A.		2-XS-30-83, CRDM CLR 2A-A FAN 1 & 2		
	В.		2-XS-30-80, CRDM CLR 2D-B FAN 1 & 2		
	[14] PL		ACE the following Handswitches in STOP P	ULL TO LOCK	:
	A.		2-HS-30-83A, CRDM CLR A-A		
		В.	2-HS-30-80A, CRDM CLR D-B		

Date _____

6.5.2 CRDM Coolers 2B-B and 2C-A

NOTE

Subsection 6.5.2 will be starting a stopping CRDM Cooler 2B-B and 2C-A. Ensure personnel and loose equipment are clear of fan discharge and that personnel in the area are cognizant of expected fan start prior to starting a CRDM Cooler.

- [1] **ENSURE** all prerequisites listed in Section 4.0 for Section 6.5 have been completed.
- [2] **ENSURE** Subsections 6.3.1, 6.3.2, 6.4.2, and 6.4.3 have been completed.

NOTE

The following step will enable the CRDM Cooler B-B and C-A Auto-start on Low Flow function.

- [3] **LAND** the following wires that were lifted in Steps 4.3[14]B and 4.3[14]C:
 - A. Wire B17CC3: Point 2 on Terminal Block TA in 2-JB-293-517 [Lwr Cntmt/703 AZ 135°] (Drawing 45W2748-3)

		(=	
			1st
			CV
	В.	 Wire A27AC3: Point 2 on Terminal Block TA in 2-JB-293-519 [Lwr Cntmt/703 AZ 221°] (Drawing 45W2748-2) 	
			1st
			CV
[4]		ACE Handswitch 2-HS-30-88A, CRDM CLR C-A, START, AND	
	VE	RIFY on Handswitch 2-HS-30-88A:	
		Green Light OFF	
		Red Light ON	

WBN Unit 2			Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 149 of 164
	Data	Pack	cage: Page of	Date
6.5.2	CRD	M Co	olers 2B-B and 2C-A (continued)	
	[5]		ACE Handswitch 2-HS-30-92A, CRDM CLR A AUTO, AND	В-В,
		VEI	RIFY on Handswitch 2-HS-30-92A:	
			Green Light ON	
			Red Light OFF	
	[6]	PL/	ACE the following Transfer Switches in AUX	:
		Α.	2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2	
		В.	2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2	
	[7]		ACE and HOLD Handswitch 2-HS-30-88C, 0 R 2C-A FAN 1 & 2, to TRIP, AND	CRDM
		VEI	RIFY on Handswitch 2-HS-30-88C:	
			Green Light ON	
			Red Light OFF	
	[8]		RIFY that CRDM Cooler 2B-B STARTS as ir ndswitch 2-HS-30-92C, CRDM CLR 2B-B FA	
			• Green Light OFF (Acc Crit)	
			• Red Light ON (Acc Crit)	
	[9]		LEASE Handswitch 2-HS-30-88C, CRDM C N 1 & 2.	LR 2C-A

WBN Unit 2		Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 150 of 164		
	Data	Package: Page of	Date		
6.5.2	CRD	I Coolers 2B-B and 2C-A (continued)			
	[10]	PLACE and HOLD Handswitch 2-HS-30-92C, CLR 2B-B FAN 1 & 2, to TRIP, AND	CRDM		
		VERIFY on Handswitch 2-HS-30-92C:			
		Green Light ON			
		Red Light OFF			
	[11]	VERIFY that CRDM Cooler 2C-A STARTS as Handswitch 2-HS-30-88C, CRDM CLR 2C-A F			
		• Green Light OFF (Acc Crit)			
		• Red Light ON (Acc Crit)			
	[12]	RELEASE Handswitch 2-HS-30-92C, CRDM 0 FAN 1 & 2.	CLR 2B-B		
	[13]	PLACE the following Transfer Switches in NO	RMAL:		
		A. 2-XS-30-92, CRDM CLR 2B-B FAN 1 & 2			

- B. 2-XS-30-88, CRDM CLR 2C-A FAN 1 & 2
- [14] **PLACE** the following Handswitches in STOP PULL TO LOCK:
 - A. 2-HS-30-92A, CRDM CLR B-B
 - B. 2-HS-30-88A, CRDM CLR C-A

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6.6 CRDM Coolers Air Flow

- [1] ENSURE all prerequisites listed in Section 4.0 for Section 6.6 have been completed
 [2] ENSURE air flow measurements for the CRDM Coolers have
- [2] **ENSURE** air flow measurements for the CRDM Coolers have been performed using GTM-05, HVAC Air Balance:

	Α.	2-CLR-30-83, CRDM COOLER 2A-A	
	B.	2-CLR-30-92, CRDM COOLER 2B-B	
	C.	2-CLR-30-88, CRDM COOLER 2C-A	
	D.	2-CLR-30-80, CRDM COOLER 2D-B	
[3]	EN inst		

Date _____

6.6 CRDM Coolers Air Flow (continued)

NOTE

The remaining steps in Section 6.6 record and verify data from the completed GTM-05, HVAC Air Balance Package for system 30I and may be completed in any order unless otherwise specified.

[4] **RECORD** the air flow measurement for Cooler 2-CLR-30-83, CRDM COOLER 2A-A, aligned to Shroud Suction below, **AND**

VERIFY it meets acceptance criteria.

CFM

Acc Crit: 21,500 CFM minimum

[5] **RECORD** the air flow measurement for Cooler 2-CLR-30-92, CRDM COOLER 2B-B, aligned to Shroud Suction below, **AND**

VERIFY it meets acceptance criteria.

CFM

Acc Crit: 21,500 CFM minimum

[6] **RECORD** the air flow measurement for Cooler 2-CLR-30-88, CRDM COOLER 2C-A, aligned to Shroud Suction below, **AND**

VERIFY it meets acceptance criteria.

CFM

Acc Crit: 21,500 CFM minimum

[7] **RECORD** the air flow measurement for Cooler 2-CLR-30-80, CRDM COOLER 2D-B, aligned to Shroud Suction below, **AND**

VERIFY it meets acceptance criteria.

CFM

Acc Crit: 21,500 CFM minimum

	WBN Unit 2		Control Rod Drive Mechanism Coolers	2-PTI-030I-01 Rev. 0000 Page 153 of 164
	Data	a Pacl	kage: Page of	Date
7.0	POS	ST PE	RFORMANCE ACTIVITY	
	[1]	EN	SURE Sections 6.1 through 6.6 have been	completed.
	[2]		MOVE the switched jumpers installed in ste following locations:	p 4.3[13] from
	[2.1]	Labeled TS-1: In SSPS Train-A Output Cabinet 2-R-48, between Pt. 11 (Wire 2340VL) and Pt. 12 (Drawing 45N2676-4)	
				1st
				CV
	[2.2]	Labeled TS-2: In SSPS Train-B Output Cabinet 2-R-51, between Pt. 11 (Wire 2435VL) and Pt. 12 (Drawing 45N2677-4)	-
			(Drawing 45142077-4)	1st
				CV
	[3]	Ter	SURE any temporary conditions recorded in mporary Condition Log, are addressed for ne toration as applicable (N/A if no conditions r	ecessary
	[4]		TIFY the Unit 2 US/SRO/SM of the test con tem alignment.	npletion and
	[5]		TIFY the Unit 1 US/SRO/SM of the test con tem alignment.	npletion and
8.0	REC	CORD	S	
	A.	QA R	ecords	
		Comp	bleted Test Package.	
	В.	Non-(QA Records	
		None		

Appendix A (Page 1 of 1)

TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Data Package: Page ____ of ____

Date _____

NOTES

1) Additional copies of this table may be made as necessary.

2) Initial and date indicates review has been completed for impact.

PROCEDURE/ INSTRUCTION	REVISION/CHANGES	IMPACT Yes/No	INITIAL AND DATE. (N/A for no change)
GTM-05			
FSAR			
Section 9.2.1			
Section 9.4.7			
Table 14.2-1, Sh 4 & 5			
Table 14.2-1, Sh 38 & 39			
WBN2-30RB-4002			
G-37			
2-TSD-30I-1			
2-PTI-030L-01			
2-PTI-067-02-A			
2-PTI-067-02-B			
2-PTI-067-03			
MI-57.002			
SSD-2-LPT-67-85			
SSD-2-LPT-67-101			
SSD-2-LPT-67-93			
SSD-2-LPT-67-109			
VM-F180-3066			

Appendix B (Page 1 of 1)

TEMPORARY CONDITION LOG

Data Package: Page _____ of _____

Date _____

NOTES

1) Additional copies of this table may be made as necessary.

2) These steps will be N/A'd if no temporary condition existed.

ITEM	TEMPORARY CONDITION		PERFORMED	RETURNED TO NORMAL		
No.	DESCRIPTION	Step No.	Performed By/Date CV By/Date	Step No.	Returned By/Date CV By/Date	
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

			ST TION BLE ²	ATE	N/A	N/A	N/A	N/A						
			POST-TEST CALIBRATION ACCEPTABLE ²	INITIAL/DATE										
2-PTI-030I-01 Rev. 0000 Page 156 of 164	N LOG	Date	POST-TEST CAL DATE ²		N/A	N/A	N/A	N/A						
	INTATIO		ATIVE	ON	N	ON	N	ON	N	ON	ON	ON	ON	N
ianism Co	Appendix C (Page 1 of 2) ANT INSTRUME		USED FOR QUANTITATIVE ACC CRIT	YES										
Control Rod Drive Mechanism Coolers	Appendix C (Page 1 of 2) PERMANENT PLANT INSTRUMENTATION LOG	eof	PLACED IN SERVICE ¹	INIT/DATE										
	PERMA	Data Package: Page	FILLED AND VENTED ¹	INIT/DATE	N/A	N/A	N/A	N/A						
WBN Unit 2		Data	CAL DUE DATE	1										
			INSTRUMENT OR INSTRUMENT	L00P #	2-TE-30-211A	2-TE-30-211B	2-TE-30-211C	2-TE-30-211D	2-TE-30-211E	2-TE-30-211F	2-FS-30-80A/B	2-FS-30-83A/B	2-FS-30-88A/B	2-FS-30-92A/B

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Appendix C (Page 2 of 2)

PERMANENT PLANT INSTRUMENTATION LOG

Data Package: Page ____ of

Date ____

LOOD # INIT/DATE INIT/DATE 2-LPT-67-85 N/A N/A 2-LPT-67-93 N/A N/A 2-LPT-67-101 N/A N/A	CAL DUE FILI DATE VEN	FILLED AND VENTED ¹	PLACED IN SERVICE ¹	USED FOR QUANTITATIVE ACC CRIT	ATIVE	POST-TEST CAL DATE ²	POST-TEST CALIBRATION ACCEPTABLE ²
	LINI	'/DATE	INIT/DATE	YES	NO		INITIAL/DATE
		N/A			NO	V/N	N/A
		N/A			NO	V/N	N/A
		N/A			NO	V/N	N/A
		N/A			NO	N/A	N/A

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

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Date _____

Appendix D (Page 1 of 3)

SWITCH LINEUP

Data Package: Page ____ of ____

· · · · · · · · · · · · · · · · · · ·								
IDENTIFICATION	LOCATION	NOMENCLATURE	POSITION	VERIFIED BY: INITIAL				
		Main Control Room						
2-HS-30-83A	2-M-9	CRDM CLR A-A	STOP PULL TO LOCK					
2-HS-30-92A	2-M-9	CRDM CLR B-B	STOP PULL TO LOCK					
2-HS-30-88A	2-M-9	CRDM CLR C-A	STOP PULL TO LOCK					
2-HS-30-80A	2-M-9	CRDM CLR D-B	STOP PULL TO LOCK					
2-HS-67-85A	0-M-27A	CRDM CLR A OUTLET TCV	P AUTO					
2-HS-67-93A	0-M-27A	CRDM CLR C OUTLET TCV	P AUTO					
2-HS-67-101A	0-M-27A	CRDM CLR B OUTLET TCV	P AUTO					
2-HS-67-109A	0-M-27A	CRDM CLR D OUTLET TCV	P AUTO					
		Auxiliary Control Room						
2-HS-30-84C	2-L-10	CRDM CLR A-A SHROUD SUCTION	CLOSE					
2-HS-30-85C	2-L-10	CRDM CLR A-A LWR CNTMT SUCT	OPEN					
2-HS-30-93C	2-L-10	CRDM CLR B-B SHROUD SUCTION	CLOSE					
2-HS-30-94C	2-L-10	CRDM CLR B-B LWR CNTMT SUCT	OPEN					
2-HS-30-89C	2-L-10	CRDM CLR C-A SHROUD SUCTION	CLOSE					
2-HS-30-90C	2-L-10	CRDM CLR C-A LWR CNTMT SUCT	OPEN					
2-HS-30-81C	2-L-10	CRDM CLR D-B SHROUD SUCTION	CLOSE					
2-HS-30-82C	2-L-10	CRDM CLR B-B LWR CNTMT SUCT	OPEN					
2-HS-67-85C	2-L-10	CRDM COOLER A-A ERCW OUTLET TCV	P AUTO					
2-HS-67-93C	2-L-10	CRDM COOLER C-A ERCW OUTLET TCV	P AUTO					
2-HS-67-101C	2-L-10	CRDM COOLER B-B ERCW OUTLET TCV	P AUTO					
2-HS-67-109C	2-L-10	CRDM COOLER D-B ERCW OUTLET TCV	P AUTO					

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SWITCH LINEUP

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		2-L-11A					
2-XS-30-90	2-L-11A	CRDM COOLER C-A LWR CNTMT SUCT DMPR	NOR				
2-XS-30-84	2-L-11A	CRDM COOLER A-A SHROUD SUCT DMPR	NOR				
2-XS-30-85	2-L-11A	CRDM COOLER A-A LWR CNTMT SUCT DMPR	NOR				
2-XS-30-89	2-L-11A	CRDM COOLER C-A SHROUD SUCT DMPR	NOR				
2-XS-67-85	2-L-11A	CRDM CLR A-A ERCW OUTLET TCV	NOR				
2-XS-67-93	2-L-11A	CRDM CLR C-A OUTLET TCV	NOR				
	2-L-11B						
2-XS-30-81	2-L-11B	CRDM CLR D-B SHROUD SUCT DMPR	NOR				
2-XS-30-82	2-L-11B	CRDM CLR D-B LWR CNTMT SUCT DMPR	NOR				
2-XS-30-93	2-L-11B	CRDM CLR B-B SHROUD SUCT DMPR	NOR				
2-XS-30-94	2-L-11B	CRDM CLR B-B LWR CNTMT SUCT DMPR	NOR				
2-XS-67-101	2-L-11B	CRDM CLR B-B ERCW OUTLET TCV	NOR				
2-XS-67-109	2-L-11B	CRDM CLR D-B ERCW OUTLET TCV	NOR				

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SWITCH LINEUP

Data Package: Page ____ of ____

IDENTIFICATION	LOCATION	NOMENCLATURE	POSITION	VERIFIED BY: INITIAL
	480	V Shutdown Board Room 2A		
2-HS-30-83C	480V SHUTDOWN BOARD 2A1-A, Compartment 5A	CRDM CLR 2A-A FAN 1 & 2	AUTO	
2-XS-30-83	480V SHUTDOWN BOARD 2A1-A, Compartment 5A	CRDM CLR 2A-A FAN 1 & 2	NORMAL	
2-HS-30-88C	480V SHUTDOWN BOARD 2A2-A, Compartment 5A	CRDM CLR 2C-A FAN 1 & 2	AUTO	
2-XS-30-88	480V SHUTDOWN BOARD 2A2-A, Compartment 5A	CRDM CLR 2C-A FAN 1 & 2	NORMAL	
	480	V Shutdown Board Room 2B		
2-HS-30-92C	480V SHUTDOWN BOARD 2B1-B, Compartment 5A	CRDM CLR 2B-B FAN 1 & 2	AUTO	
2-XS-30-92	480V SHUTDOWN BOARD 2B1-B, Compartment 5A	CRDM CLR 2B-B FAN 1 & 2	NORMAL	
2-HS-30-80C	480V SHUTDOWN BOARD 2B2-B, Compartment 5A	CRDM CLR 2D-B FAN 1 & 2	AUTO	
2-XS-30-80	480V SHUTDOWN BOARD 2B2-B, Compartment 5A	CRDM CLR 2D-B FAN 1 & 2	NORMAL	

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Date _____

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POWER LINEUP

Data Package: Page ____ of ____

IDENTIFICATION	LOCATION	NOMENCLATURE	POSITION	VERIFIED BY: INITIAL
	480)V Shutdown Board Room 2A		
2-BKR-30-83	480V SHUTDOWN BOARD 2A1-A, Compartment 7B	CRDM CLR 2A-A (2-CLR-30-83)	DISCONNECTED	
2-BKR-30-88	480V SHUTDOWN BOARD 2A2-A, Compartment 7A	CRDM CLR 2C-A (2-CLR-30-88)	DISCONNECTED	
	480	OV Shutdown Board Room 2B		
2-BKR-30-92	480V SHUTDOWN BOARD 2B1-B, Compartment 7C	CRDM CLR 2B-B (2-CLR-30-92)	DISCONNECTED	
2-BKR-30-80	480V SHUTDOWN BOARD 2B2-B, Compartment 7B	CRDM CLR 2D-B (2-CLR-30-80)	DISCONNECTED	

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POWER LINEUP

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IDENTIFICATION	LOCATION	NOMENCLATURE	POSITION	VERIFIED BY
		Vital Battery Board Room I		<u>.</u>
2-BKR-235-1/7	120V AC VITAL INSTR POWR BOARD 2-I BKR 7	AUX RELAY RACK 2-R-76 BUS A	ON	
2-BKR-235-1/8	120V AC VITAL INSTR POWR BOARD 2-I BKR 8	AUX RELAY RACK C BUS TO PNL 2-R-76	ON	
2-BKR-235-1/11	120V AC VITAL INSTR POWR BOARD 2-I BKR 11	AUX RELAY RACK A BUS TO PNL 2-R-75	ON	
		Vital Battery Board Room III		
0-FU-236-3/A42	125V DC BATT BD III CKT A42	CRD COOLING UNIT 2A-A SUCTION DMP	INSTALLED*	
0-FU-236-3/A43	125V DC BATT BD III CKT A43	CRD COOLING UNIT 2A-A RM DIVERSION DMP	INSTALLED*	
0-FU-236-3/A44	125V DC BATT BD III CKT A44	CRD COOLING UNIT 2C-A SUCTION DMP	INSTALLED*	
0-FU-236-3/A45	125V DC BATT BD III CKT A45	CRD COOLING UNIT 2C-A RM DIVERSION DMP	INSTALLED*	
0-FU-236-3/B42	125V DC BATT BD III CKT B42	CRD COOLING UNIT 2A-A SUCTION DMP	INSTALLED*	
0-FU-236-3/B43	125V DC BATT BD III CKT B43	CRD COOLING UNIT 2A-A RM DIVERSION DMP	INSTALLED*	
0-FU-236-3/B44	125V DC BATT BD III CKT B44	CRD COOLING UNIT 2C-A SUCTION DMP	INSTALLED*	
0-FU-236-3/B45	125V DC BATT BD III CKT B45	CRD COOLING UNIT 2C-A RM DIVERSION DMP	INSTALLED*	
0-FU-236-3/A22	125V DC BATT BD III CKT A22	CONTROL ROD DRIVE VENT CLR A SUPPLY VALVE	INSTALLED*	
0-FU-236-3/A24	125V DC BATT BD III CKT A24	CONTROL ROD DRIVE VENT CLR C SUPPLY VALVE	INSTALLED*	
2-BKR-235-3/26	120V AC VITAL INSTR POWR BOARD 2-III BKR 26	BOP INST RACK 1-R-141 1-R-144/146/147 BUS C	ON	
2-BKR-235-3/40	120V AC VITAL INSTR POWR BOARD 2-III BKR 40	AUX RELAY RACK SSPS AUX RELAYS	ON	

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POWER LINEUP

Data Package: Page ____ of ____

IDENTIFICATION	LOCATION	CATION NOMENCLATURE		VERIFIED BY: INITIAL
		Vital Battery Board Room II		
2-BKR-235-2/6	120V AC VITAL INSTR POWR BOARD 2-II BKR 6	AUX RELAY RACK 2-R-76 BUS B	ON	
2-BKR-235-2/9	120V AC VITAL INSTR POWR BOARD 2-II BKR 9	AUX RELAY RACK B BUS TO PNL 2-R-75	ON	
		Vital Battery Board Room IV		-
0-FU-236-4/A13	125V DC BATT BD IV CKT A13	CRD COOLING UNIT 2D-B SUCTION DMP	INSTALLED*	
0-FU-236-4/A14	125V DC BATT BD IV CKT A14	CRD COOLING UNIT 2D-B RM DIVERSION DMP	INSTALLED*	
0-FU-236-4/A15	125V DC BATT BD IV CKT A15	CRD COOLING UNIT 2B-B SUCTION DMP	INSTALLED*	
0-FU-236-4/A16	125V DC BATT BD IV CKT A16	CRD COOLING UNIT 2B-B RM DIVERSION DMP	INSTALLED*	
0-FU-236-4/B13	125V DC BATT BD IV CKT B13	CRD COOLING UNIT 2D-B SUCTION DMP	INSTALLED*	
0-FU-236-4/B14	125V DC BATT BD IV CKT B14	CRD COOLING UNIT 2D-B RM DIVERSION DMP	INSTALLED*	
0-FU-236-4/B15	125V DC BATT BD IV CKT B15	CRD COOLING UNIT 2B-B SUCTION DMP	INSTALLED*	
0-FU-236-4/B16	125V DC BATT BD IV CKT B16	CRD COOLING UNIT 2B-B RM DIVERSION DMP	INSTALLED*	
0-FU-236-4/A10	125V DC BATT BD IV CKT A10	CONTROL ROD DRIVE VENT CLR B SUPPLY VALVE	INSTALLED*	
0-FU-236-4/A12	125V DC BATT BD IV CKT A12	CONTROL ROD DRIVE VENT CLR D SUPPLY VALVE	INSTALLED*	
2-BKR-235-4/26	120V AC VITAL INSTR POWR BOARD 2-IV BKR 26	AUX BLD INSTR BUS B TO PNL 2-L-26	ON	
2-BKR-235-4/35	120V AC VITAL INSTR POWR BOARD 2-IV BKR 35	AUX RELAY RACK SSPS AUX RELAYS	ON	

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POWER LINEUP

Data Package: Page ____ of ____

IDENTIFICATION	LOCATION	NOMENCLATURE	POSITION	VERIFIED BY: INITIAL
	Uni	t 2 Auxiliary Instrument Room	·	
2-FU-275-R75/K1 2-FU-275-R75/K2	2-R-75 Row K, Fuse 1 & 2	CRDM CLR UNIT 2B-B ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/K19 2-FU-275-R75/K20	2-R-75 Row K, Fuse 19 & 20	CRDM CLR UNIT 2A-A ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/K21 2-FU-275-R75/K22	2-R-75 Row K, Fuse 21 & 22	CRDM CLR UNIT 2C-A ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/L3 2-FU-275-R75/L4	2-R-75 Row L, Fuse 3 & 4	CRDM CLR UNIT 2C-A ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/L5 2-FU-275-R75/L6	2-R-75 Row L, Fuse 5 & 6	CRDM CLR UNIT 2A-A ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/L11 2-FU-275-R75/L12	2-R-75 Row L, Fuse 11 & 12	CRDM CLR UNIT 2D-B ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/L15 2-FU-275-R75/L16	2-R-75 Row L, Fuse 15 & 16	CRDM CLR UNIT 2B-B ANN SEP RELAY	INSTALLED*	
2-FU-275-R75/L17 2-FU-275-R75/L18	2-R-75 Row L, Fuse 17 & 18	CRDM CLR UNIT 2D-B ANN SEP RELAY	INSTALLED*	
2-FU-275-R76/I9 2-FU-275-R76/I10	2-R-76 Row I, Fuse 9 & 10	PANEL 2-M-9 MOTOR TRIPOUT ANNUNCIATION SEPARATION RELAY	INSTALLED*	
2-FU-275-R76/l13 2-FU-275-R76/l14	2-R-76 Row I, Fuse 13 & 14	PANEL 2-M-9 MOTOR TRIPOUT ANNUNCIATION SEPARATION RELAY	INSTALLED*	
2-FU-275-R76/N1 2-FU-275-R76/N2	2-R-76 Row N, Fuse 1 & 2	MOTOR TRIPOUT BUZZER FOR PANELS M-1 THROUGH M-6 AND M-9	INSTALLED*	

* When installing fuses with actuators, ensure that the actuating rod is oriented correctly to provide for proper alarm initiation and visual indication.