

Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

August 30, 2010

ATTN: Document Control Desk U.S. Nuclear Regulatory Commission 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 Watts Bar Unit 2 Pre-op Test Instruction is enclosed:

PTI NUMBER	Rev.	TITLE
2-PTI-030A-01	0	Unit 2 Auxiliary Building ESF Coolers

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

Sincerely,

Masoud Bajestani Watts Bar/Unit 2 Vice President

U.S. Nuclear Regulatory Commission Page 2 August 30, 2010

cc (Enclosures):

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

WATTS BAR NUC	CLEAR PLANT	
UNIT 2 ST	ARTUP	
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TITLE: Unit 2 Auxiliary Bui	Iding ESE Coolers	
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Instruction No: <u>2-PTI-030A-</u>	01	
Revision No: 0000	<u></u>	
PREPARED BY: Keith Jones Kink Jon PRINT NAME/ SIGNA		_DATE _7-29-10
REVIEWED BY: Bethany Merriman	Ami	DATE 7-29-10
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APPROVED BY: PREOPERATIONAL STARTUP MANAGER		
TEST RESULTS APPROVAL		
JTG MEETING NO:		
JTG CHAIRMAN:	DATE	
APPROVED BY:	DATE	
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SMP-8.0, R3, Administration of Preoperational Test Instru		

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# **Revision Log**

Revision or Change Number	Effective Date	Affected Page Numbers	Description of Revision/Change
0000	8/20/10	ALL	This procedure is written using the Unit 1 PTI-030C-01 Rev 0 as a guide. Turbine Driven Auxiliary Feedwater Pump Room Exhaust Fan tests moved to new instruction 2-PTI-030D-01.
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## 1.0 INTRODUCTION

## 1.1 Test Objectives

- A. Demonstrate the proper operation of the Unit 2 Auxiliary Building Engineered Safety Features (ESF) Room/Area Coolers.
- B. Demonstrate the proper operation of the Essential Raw Cooling Water (ERCW) Flow Control Valves associated with their respective ESF Room/Area Coolers.
- C. Demonstrate the proper operation of the High Energy Line Break (HELB) detection equipment and alarms.

## 1.2 Scope

- A. This test demonstrates the operability of the Unit 2 Auxiliary Building ESF Room/Area Coolers and Fans to ensure the following:
  - 1. The required ESF coolers start upon receipt of their associated room/area Hi-Temperature signal.
  - 2. The required Unit 2 ESF coolers start upon receipt of a simulated Auxiliary Building Isolation (ABI) signal and stop upon reset of ABI signal. (See also 1.2D)
  - 3. The ESF coolers can be controlled manually by local handswitch.
  - 4. The ESF room/area coolers maintain desired air flows.
  - 5. The required Unit 2 Auxiliary Building ESF cooler ERCW supply valves open in a maximum of 10 seconds upon start of their associated cooler.

## NOTE

ERCW flowrates are verified during performance of 2-PTI-067-02, ERCW System Flow Balance.

B. The required HELB indications and annunciations respond appropriately upon reciept of their associated room/area Hi-Temperature signal.

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# 1.2 Scope (continued)

C. ESF pump room cooler start upon associated Pump Start signal logic is verified when each associated ESF pump is tested as shown below:

Pump Room Cooler	Instruction Testing Cooler Auto Start upon Pump Start		
RHR Pump 2A-A Room Cooler	2-PTI-074-01 RESIDUAL HEAT REMOVAL SYSTEM		
RHR Pump 2B-B Room Cooler			
SIS Pump 2A-A Room Cooler	2-PTI-063-5A SAFETY INJECTION SYSTEM PUMP/VALVE LOGIC TEST		
SIS Pump 2B-B Room Cooler	2-PTI-063-5B SAFETY INJECTION SYSTEM PUMP/VALVE LOGIC TEST		
CCP 2A-A Room Cooler	2-PTI-062-01 CHARGING AND LETDOWN LOGIC TEST		
CCP 2B-B Room Cooler			
CS Pump 2A-A Room Cooler	2-PTI-072-01 CONTAINMENT SPRAY PUMP/VALVE LOGIC		
CS Pump 2B-B Room Cooler	TEST		

D. To ensure sufficient test overlap, ESF cooler start upon Auxiliary Building Isolation signal is performed in the Integrated Safeguards Tests as shown below:

Room Cooler	Instruction Testing Cooler Auto Start upon ABI
692 Penetration Room Cooler 2A-A	
713 Penetration Room Cooler 2A-A	2-PTI-262-01 INTEGRATED SAFEGUARDS TEST
Pipe Chase Cooler 2A-A	
692 Penetration Room Cooler 2B-B	
713 Penetration Room Cooler 2B-B	2-PTI-262-02 INTEGRATED SAFEGUARDS TEST
Pipe Chase Cooler 2B-B	

Date \_\_\_\_\_

# 2.0 REFERENCES

# 2.1 Performance References

- A. SMP-9.0, Rev 0, Conduct of Test
- B. GTM-05, HVAC Air Balance (Draft)
- C. 0-SOI-67.01, Essential Raw Cooling Water System (Draft)

# 2.2 Developmental References

- A. Final Safety Analysis Report, Amendment 99
  - 1. FSAR Section 9.2.1, Essential Raw Cooling Water (ERCW)
  - 2. FSAR Section 9.4.5.3, Auxiliary Building Safety Features (ESF) Equipment Coolers
  - 3. FSAR Table 14.2-1, Sheets 4 & 5, Essential Raw Cooling Water System Test Summary
  - 4. FSAR Table 14.2-1, Sheets 36 & 37, Auxiliary Building Ventilation System
- B. Drawings
  - 1. Flow Diagrams
    - a. 2-47W866-8, Rev 0, HEATING, COOLING & VENTILATING AIR FLOW DRA 54923-070, Rev 0 DRA 54923-071, Rev 0
    - b. 1-47W845-7, Rev 14, FLOW DIAGRAM ESSENTIAL RAW COOLING WATER SYSTEM
    - c. 2-47W845-7, Rev 0, FLOW DIAGRAM ESSENTIAL RAW COOLING WATER SYSTEM

Date \_\_\_\_\_

# 2.2 Developmental References (continued)

- 2. Electrical
  - a. 1-45W600-30-4, Rev 26, VENTILATING SYSTEM SCHEMATIC DIAGRAM
  - b. 2-45W600-57-37, SEPERATION & MISC AUX RELAYS SCHEMATIC DIAGRAM, [Later]
    DRA 54172-177, Rev 0
    DRA 54172-178, Rev 0
    DRA 54172-179, Rev 0
    DRA 54172-464, Rev 0
    DRA 54172-465, Rev 0
    DRA 54172-466, Rev 0
    FCR 55967-A, Rev 0
  - c. 2-45W756-1, Rev 0, 480V CONT & AUX BLDG VT BD 2A1-A SINGLE LINE
  - d. 2-45W756-5, Rev 0, 480V CONT & AUX BLDG VT BD 2B1-A SINGLE LINE
  - e. 2-45W760-30-17, Rev 0, VENTILATION SYSTEM SCHEMATIC DIAGRAM
  - f. 2-45W760-30-18, Rev 0, VENTILATION SYSTEM SCHEMATIC DIAGRAM DRA 53290-049, Rev 0 DRA 53290-066, Rev 0
  - g. 2-45W760-30-19, Rev 0, VENTILATION SYSTEM SCHEMATIC DIAGRAM
  - h. 2-45W760-30-20, Rev 0, VENTILATION SYSTEM SCHEMATIC DIAGRAM DRA 53290-051, Rev 0 DRA 53290-067, Rev 0
  - i. 45N1688-1 (AC), Rev MM, SEPERATION AUX RELAY PNL 1-R-73 CONNECTION DIAGRAM
  - j. 45N1688-4 (AC), Rev AAD, SEPERATION AUX RELAY PNL 1-R-73 CONNECTION DIAGRAM
  - k. 45N1693-1 (AC), Rev SS, SEPERATION AUX RELAY PNL 1-R-78 CONNECITON DIAGRAM

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# 2.2 Developmental References (continued)

- I. 45N1693-4 (AC), Rev, AAB, SEPERATION AUX RELAY PNL 1-R-78 CONNECTION DIAGRAM
- m. 45W2770-1, Rev 18, 480V CONT. & AUX BLDG VENT BD 2A1-A CONNECTION DIAGRAM
- n. 45W2770-2, Rev 6, 480V CONT. & AUX BLDG VENT BD 2A1-A CONNECTION DIAGRAM
- o. 45W2772-2, Rev 13, 480V CONT. & AUX BLDG VENT BD 2B1-B CONNECTION DIAGRAM
- p. 45W2772-3, Rev 14, 480V CONT. & AUX BLDG VENT BD 2B1-B CONNECTION DIAGRAM
- 3. Mechanical
  - a. 2-47W600-188, Rev 0, INSTRUMENTS AND CONTROLS DRA 53788-041, Rev 0 DRA 53788-042, Rev 0 DRA 53788-043, Rev 0 DRA 53788-044, Rev 0 DRA 53788-045, Rev 0 DRA 53788-046, Rev 0 DRA 53788-047, Rev 0
  - b. 47W920-1 (AC), Rev Y, HEATING, VENTILATING AND AIR CONDITIONING
  - c. 47W920-2 (AC), Rev R, HEATING, VENTILATING AND AIR CONDITIONING
  - d. 47W920-4 (AC), Rev S, HEATING VENTILATING AND AIR CONDITIONING
- 4. Logic/Control
  - a. 2-47W611-65-1, Rev 2, ELECTRICAL LOGIG DIAGRAM EMERGENCY GAS TREATMENT SYSTEM

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## 2.2 Developmental References (continued)

- 5. Other
  - a. 47B601-55-25 (AC), Rev D, ELECTRICAL INSTRUMENT TABULATION
  - b. 2-45B655-6A, Rev 0, MAIN CONTROL ROOM ANNUNCIATOR INPUTS WINDOW BOX XA-55-6A
  - c. 2-45B655-E6A, Rev 0, ANNUNCIATOR WINDOW BOX XA-55-6A ENGRAVING

## C. Documents

- a. SMP-4.0, Rev 2, System Completion and Turnover
- b. SMP-8.0, Rev 3, Administration of Preoperational Test Procedures
- c. GTM-03, HVAC Gravity Dampers, Fire Dampers, and Fire Doors, (Draft)
- d. WBN2-30AB-4001, Rev 1, Auxiliary Building Heating, Ventilation, Air Conditioning System (30, 31, 44)
- e. WBN2-67-4002, Rev 1, Essential Raw Cooling Water System, System 67
- f. G-37, Rev 4, Testing and Balancing of HVAC Systems During Installation, Modification, and Maintenance
- g. 2-TSD-030A-01, Rev 1, Select Auxiliary Building ESF Coolers and HELB Detection
- h. 0-PI-OPS-1.1, Rev 3, Jumper Control Process
- i. 2-PTI-067-02, ERCW System Flow Balance (Draft)
- j. 2-PTI-074-01, Residual Heat Removal System (Draft)
- k. 2-PTI-063-5A, Safety Injection System Pump/Valve Logic Test (Draft)
- I. 2-PTI-063-5B, Safety Injection System Pump/Valve Logic Test (Draft)
- m. 2-PTI-062-01, Charging and Letdown Logic Test (Draft)
- n. 2-PTI-072-01, Containment Spray Pump/Valve Logic Test (Draft)

Date \_\_\_\_\_

## 2.2 Developmental References (continued)

- o. 2-PTI-262-01, Integrated Safeguards Test (Draft)
- p. 2-PTI-262-02, Integrated Safeguards Test (Draft)
- q. Scaling and Setpoint Documents
  - (1) SSD-2-TS-30-175, RHR Pump Room Cooler Fan A-A, [Later]
  - (2) SSD-2-TS-30-176, RHR Pump Room Cooler Fan B-B, [Later]
  - (3) SSD-2-TS-30-177, CS Pump Room Cooler Fan A-A, [Later]
  - (4) SSD-2-TS-30-178, CS Pump Room Cooler Fan B-B, [Later]
  - (5) SSD-2-TS-30-179, SIS Pump Room Cooler Fan B-B, [Later]
  - (6) SSD-2-TS-30-180, SIS Pump Room Cooler Fan A-A, [Later]
  - (7) SSD-2-TS-30-182, Charging Pump Room Cooler Fan B-B, [Later]
  - (8) SSD-2-TS-30-183, Charging Pump Room Cooler Fan A-A, [Later]
  - (9) SSD-2-TS-30-186A, Penetration Room Cooler, El 692, Fan A-A, [Later]
  - (10) SSD-2-TS-30-186B, Penetration Room Cooler, El 692, Fan A-A, [Later]
  - (11) SSD-2-TS-30-187A, Penetration Room Cooler, El 692, Fan B-B, [Later]
  - (12) SSD-2-TS-30-187B, Penetration Room Cooler, El 692, Fan B-B, [Later]
  - (13) SSD-2-TS-30-196A, Penetration Room Cooler, El 713, Fan A-A, [Later]
  - (14) SSD-2-TS-30-196B, Penetration Room Cooler, El 713, Fan A-A, [Later]
  - (15) SSD-2-TS-30-197A, Penetration Room Cooler, El 713, Fan B-B, [Later]
  - (16) SSD-2-TS-30-197B, Penetration Room Cooler, El 713, Fan B-B, [Later]

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# 2.2 Developmental References (continued)

- (17) SSD-2-TS-30-201A, Pipe Chase Coolers Fan 2A-A, [Later]
- (18) SSD-2-TS-30-201B, Pipe Chase Coolers Fan 2A-A, [Later]
- (19) SSD-2-TS-30-202A, Pipe Chase Coolers Fan 2B-B, [Later]
- (20) SSD-2-TS-30-202B, Pipe Chase Coolers Fan 2B-B, [Later]
- (21) SSD-2-TS-30-5235A, CVCS Letdown Heat Exchanger Room Hi Temperature, [Later]
- (22) SSD-2-TS-30-5235B, CVCS Letdown Heat Exchanger Room Hi Temperature, [Later]
- (23) SSD-2-TS-30-5236A, RHR Pump Room A Hi Temperature, [Later]
- (24) SSD-2-TS-30-5236B, RHR Pump Room A Hi Temperature, [Later]
- (25) SSD-2-TS-30-5237A, RHR Pump Room B Hi Temperature, [Later]
- (26) SSD-2-TS-30-5237B, RHR Pump Room B Hi Temperature, [Later]
- (27) SSD-2-TS-30-5238A, RHR Heat Exchanger Room A Hi Temperature, [Later]
- (28) SSD-2-TS-30-5238B, RHR Heat Exchanger Room A Hi Temperature, [Later]
- (29) SSD-2-TS-30-5239A, RHR Heat Exchanger Room B Hi Temperature, [Later]
- (30) SSD-2-TS-30-5239B, RHR Heat Exchanger Room B Hi Temperature, [Later]

Date \_\_\_\_\_

# 3.0 PRECAUTIONS AND LIMITATIONS

- A. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Manual Procedure 1021.
- B. Steps may be repeated if all components cannot be tested in a step. However, if the test has been exited, prerequisite steps must be re-verified and a Chronological Test Log (CTL) entry made.
- C. Component tags and labels may differ slightly (abbreviations, punctuation, letter case, etc.) from the description given in this test. If this situation occurs, it shall NOT be considered a test deficiency or procedure deviation. It shall be documented in the CTL and reconciled by way of a plant labeling request or drawing discrepancy or single-line date typo change in the procedure as appropriate.
- D. All wires removed/lifted from a terminal shall be identified and taped or covered with an insulator to prevent personnel or equipment hazard and possible spurious initiations. The wires should be grouped together and labeled with the work implementing document number that required them to be lifted if left unattended.
- E. All open problems are to be tracked by a corrective action document and entered on the appropriate system punchlist.
- F. Problems identified during the test shall be annotated on the Chronological Test Log (CTL) from SMP-9.0 including a description of the problem, the procedure step when/where the problem was identified, corrective action steps taken to resolve the problem, and the number of the corrective action document, if one was required.
- G. Observe all Radiation Protection (RP) requirements when working in or near contaminated areas.
- H. All terminal points and connections are to be considered energized. Instrumentation must be used to determine if the circuits are de-energized.
- I. Retermination of lifted leads requires that their restored bend radius is equal to or greater than the as found condition.
- J. Vibration testing will be performed during performance of GTM-05, HVAC Air Balance.
- K. Backdraft damper testing will be performed during performance of GTM-03, HVAC Gravity Dampers, Fire Dampers, and Fire Doors.

Date \_\_\_\_\_

## 3.0 PRECAUTIONS AND LIMITATIONS (continued)

- L. During the performance of this procedure visual observation of air handlers and ductwork is required. This includes steady-state and transient operations with visual confirmation that vibration and motor temperatures are not excessive.
- M. Transients include fan starts and stops, water hammers or other fluid transients. Verification that transient conditions are not causing excessive vibration may be accomplished by observation during the transient or verification subsequent to the transient that resultant damage has not occurred.
- N. If the vibration is determined to be excessive the Test Engineer shall initiate a Test Deficiency Notice (TDN) and notify Nuclear Engineering (NE).
- O. Portions of this test will simulate a high ambient room temperature using an electric heatgun. This activity shall be performed slowly to prevent damage to the temperature switch sensing bulb.
- P. Test personnel should exercise caution to prevent damage to the cooling coil fins.
- Q. Portions of this test will require valve stroke timing locally at the valve. Local stroke valve timing begins with the initiating signal and is concluded with the completion of valve stem movement.

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## 4.0 PREREQUISITE ACTIONS

## 4.1 **Preliminary Actions**

NOTE Prerequisite action steps may be performed in any order with Test Director approval. **VERIFY** the test/performance copy of this Preoperational Test [1] 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 "Test Procedures/Instructions Reference Review," 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 current drawing revision numbers and change paper that were reviewed to the data package.

Date \_\_\_\_\_

# 4.1 **Preliminary Actions (continued)**

[5] **EVALUATE** open punch list items on Watts Bar Integrated Task Equipment List (WITEL), **AND** 

**ENSURE** that they will NOT adversely affect the test performance.

SubSection	6.1		
SubSection	6.2	_	
SubSection	6.3	_	
SubSection	6.4	_	
SubSection	6.5	_	
SubSection	6.6	_	
SubSection	6.7	_	
SubSection	6.8	_	
SubSection	6.9	_	
SubSection	6.10	_	
SubSection	6.11	_	
SubSection	6.12	_	
SubSection	6.13	_	
SubSection	6.14	_	
SubSection	6.15	_	
SubSection	6.16	_	
SubSection	6.17	_	
SubSection	6.18	_	
SubSection	6.19	_	
SubSection	6.20	_	
SubSection	6.21	_	
SubSection	6.22	_	
SubSection	6.23	—	
SubSection	6.24	_	
SubSection	6.25	_	
SubSection	6.26	_	
SubSection	6.27	_	
SubSection	6.28	_	
SubSection	6.29	_	
		_	

Date \_\_\_\_\_

#### **Preliminary Actions (continued)** 4.1

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

SubSection	6.1	
SubSection	6.2	
SubSection	6.3	
SubSection	6.4	
SubSection	6.5	
SubSection	6.6	
SubSection	6.7	
SubSection	6.8	
SubSection	6.9	
SubSection	6.10	
SubSection	6.11	
SubSection	6.12	
SubSection	6.13	
SubSection	6.14	
SubSection	6.15	
SubSection	6.16	
SubSection	6.17	
SubSection	6.18	
SubSection	6.19	
SubSection	6.20	
SubSection	6.21	
SubSection	6.22	
SubSection	6.23	
SubSection	6.24	
SubSection	6.25	
SubSection	6.26	
SubSection	6.27	
SubSection	6.28	
SubSection	6.29	

Date \_\_\_\_\_

# 4.1 **Preliminary Actions (continued)**

[7] **ENSURE** outstanding Design Change Notices (DCNs), Engineering Document Construction Releases (EDCRs) or Temporary Alterations (TAs) do NOT adversely impact testing.

SubSection	6.1	
SubSection	6.2	
SubSection	6.3	
SubSection	6.4	
SubSection	6.5	
SubSection	6.6	
SubSection	6.7	
SubSection	6.8	
SubSection	6.9	
SubSection	6.10	
SubSection	6.11	
SubSection	6.12	
SubSection	6.13	
SubSection	6.14	
SubSection	6.15	
SubSection	6.16	
SubSection	6.17	
SubSection	6.18	
SubSection	6.19	
SubSection	6.20	
SubSection	6.21	
SubSection	6.22	
SubSection	6.23	
SubSection	6.24	
SubSection	6.25	
SubSection	6.26	
SubSection	6.27	
SubSection	6.28	
SubSection	6.29	

	WBN Unit 2	Ur	nit 2 Aux	ciliary Building ESF Coolers	2-PTI-030A-01 Rev. 0000 Page 20 of 144	
	Data	Package	e: Page	of	Date	)
4.1	Prelir	ninary A	Actions (	continued)		
	[8]	coordin		ew of outstanding Clearances h n Operations for impact to the te <b>ND</b>		
		<b>RECOF</b> required		pendix B, Temporary Condition	Log, if	
	[9]	the JTG	G for con	05, HVAC Air Balance, has bee currence that it adequately satis this instruction.		
		JTG Me	eeting: _			
	[10]	ATTAC system	•	eted GTM-05 HVAC Air Balanc	e package for	
	[11]	listed o	n Appen een place	instruments required for test pe dix C, Permanent Plant Instrum ed in service and are within thei	entation Log,	
		Sub	bSection	6.1		
		Sub	bSection	6.2		
		Sub	bSection	6.3		
		Sub	bSection	6.4		
		Sub	bSection	6.5		
		Sub	bSection	6.6		
		Sub	bSection	6.7		
		Sub	bSection	6.8		
		Sub	bSection	6.9		
		Sub	bSection	6.10		
		Sub	bSection	6.11		
		Sub	bSection	6.12		
		Sub	bSection	6.13		
		Sub	bSection	6.14		
			bSection	6.29		

[12] **ENSURE** components contained within the boundaries of this test are under the jurisdictional control of Preoperational Startup Engineering (PSE) in accordance with SMP-4.0.

Date \_\_\_\_\_

# 4.1 Preliminary Actions (continued)

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

SubSection	6.1		
SubSection	6.2		
SubSection	6.3		
SubSection	6.4		
SubSection	6.5		
SubSection	6.6		
SubSection	6.7		
SubSection	6.8		
SubSection	6.9		
SubSection	6.10		
SubSection	6.11		
SubSection	6.12		
SubSection	6.13		
SubSection	6.14		
SubSection	6.15		
SubSection	6.16		
SubSection	6.17		
SubSection	6.18		
SubSection	6.19		
SubSection	6.20		
SubSection	6.21		
SubSection	6.22		
SubSection	6.23		
SubSection	6.24		
SubSection	6.25		
SubSection	6.26		
SubSection	6.27		
SubSection	6.28		
SubSection	6.29		

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

Date \_\_\_\_\_

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

[1] **OBTAIN** the following M&TE or equivalent, **AND** 

<b>COMPLETE</b> the following table:
--------------------------------------

DESCRIPTION	MINIMUM RANGE	ACTUAL RANGE	REQUIRED ACCURACY	M&TE ID NUMBER	CALIBRATION DUE DATE
Digital Thermometer with surface Temperature Probe	0-200°F		±3°F		
Stopwatch	N/A		$\pm 0.5$ seconds		

# [2] **ENSURE** the following are available:

- A. Handheld Jumper
- B. Clean cloth soaked in cool water (to cool temperature elements)
- C. Electric heat gun (to heat temperature elements)

Data Package: Page \_\_\_\_ of \_\_\_\_ Date \_\_\_\_\_ Special Tools, Measuring and Test Equipment, Parts, and 4.2 Supplies (continued) **ENSURE** M&TE calibration due dates will support the [3] completion of this test performance. SubSection 6.1 SubSection 6.2 SubSection 6.3 SubSection 6.4 SubSection 6.5 SubSection 6.6 SubSection 6.7 SubSection 6.8 SubSection 6.9 SubSection 6.10 SubSection 6.11 SubSection 6.12 SubSection 6.13 SubSection 6.14 SubSection 6.15 SubSection 6.16 SubSection 6.17 SubSection 6.18 SubSection 6.19 SubSection 6.20 SubSection 6.21 SubSection 6.22 SubSection 6.23 SubSection 6.24 SubSection 6.25 SubSection 6.26 SubSection 6.27 SubSection 6.28

SubSection 6.29

Date \_\_\_\_\_

# 4.3 Field Preparations

[1] **ENSURE** applicable portions of Appendix D, Electrical Lineup, have been performed.

SubSection         6.1           SubSection         6.3           SubSection         6.4           SubSection         6.5           SubSection         6.6           SubSection         6.7           SubSection         6.8           SubSection         6.10           SubSection         6.11           SubSection         6.12           SubSection         6.13           SubSection         6.14           SubSection         6.15           SubSection         6.16           SubSection         6.17           SubSection         6.18           SubSection         6.19           SubSection         6.21           SubSection         6.22           SubSection         6.23           SubSection         6.24           SubSection         6.25           SubSection         6.26           SubSection         6.27           SubSection         6.28	-				
SubSection       6.3         SubSection       6.4         SubSection       6.5         SubSection       6.6         SubSection       6.7         SubSection       6.8         SubSection       6.9         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26	SubSection	6.1			
SubSection       6.4         SubSection       6.5         SubSection       6.6         SubSection       6.7         SubSection       6.8         SubSection       6.9         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.12         SubSection       6.13         SubSection       6.16         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.2			
SubSection       6.5         SubSection       6.7         SubSection       6.8         SubSection       6.9         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.3			
SubSection       6.6         SubSection       6.7         SubSection       6.8         SubSection       6.9         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.16         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.4			
SubSection       6.7         SubSection       6.8         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.5			
SubSection       6.8         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.6			
SubSection       6.9         SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.23         SubSection       6.23         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.7			
SubSection       6.10         SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.23         SubSection       6.23         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.8			
SubSection       6.11         SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26	SubSection	6.9			
SubSection       6.12         SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.26         SubSection       6.26	SubSection	6.10			
SubSection       6.13         SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.11			
SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.12			
SubSection       6.14         SubSection       6.15         SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.13			
SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.14			
SubSection       6.16         SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27	SubSection	6.15			
SubSection       6.17         SubSection       6.18         SubSection       6.19         SubSection       6.20         SubSection       6.21         SubSection       6.22         SubSection       6.23         SubSection       6.24         SubSection       6.25         SubSection       6.26         SubSection       6.27		6.16			
SubSection6.18SubSection6.19SubSection6.20SubSection6.21SubSection6.22SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.19SubSection6.20SubSection6.21SubSection6.22SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.20SubSection6.21SubSection6.22SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.21SubSection6.22SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.22SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.23SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.24SubSection6.25SubSection6.26SubSection6.27					
SubSection6.25SubSection6.26SubSection6.27					
SubSection 6.26					
SubSection 6.27					
SubSection 6.29					

Date \_\_\_\_\_

\_\_\_\_

# 4.3 Field Preparations (continued)

- [2] **ENSURE** applicable portions of Appendix E, Switch Lineup, have been performed:
  - SubSection6.1SubSection6.2SubSection6.3SubSection6.4SubSection6.5SubSection6.6SubSection6.7SubSection6.8SubSection6.9SubSection6.10SubSection6.11SubSection6.12SubSection6.13SubSection6.14

SubSection 6.14

Date \_\_\_\_\_

# 4.3 Field Preparations (continued)

- [3] **VERIFY** there is no Auxiliary Building Isolation (ABI) or High Radiation in Refuel Area Signals present by:
  - A. The ABI window **NOT** lit on either the TR-A or TR-B Master Isolation Signal Status Panels (Window 5 on 1-XX-55-6C and 1-XX-55-6D) on 1-M-6.

		,	
	SubSection	6.9	
	SubSection	6.10	
	SubSection	6.11	
	SubSection	6.12	
	SubSection	6.13	
	SubSection	6.14	
В.	•	d alarm for 0-RM-90-102 and -103, annunciator 4B on 0-M-12.	
В.	window 18	4B on 0-M-12.	
B.	window 18		
B.	window 18	4B on 0-M-12.	
B.	window 18 SubSection	4B on 0-M-12. 6.9	
В.	window 18 SubSection SubSection	4B on 0-M-12. 6.9 6.10	

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.
  - [4] **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-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK (SubSection 6.29)
  - [5] **VERIFY** the following systems are operational and have been placed in service to the extent necessary to perform this test:
    - A. System 214, C & A Bldg Vent Boards (480V AC).
    - B. System 032, Control Air
    - C. System 235, 120V AC Vital Instrument Power Boards
    - D. System 55, Annunciator and Sequential Events Recording System

Date \_\_\_\_\_

# 4.3 Field Preparations (continued)

## NOTE

The following ERCW valves are electrically disconnected and locked open:

- 2-FCV-67-188, RHRP ROOM COOLER 2A-A ERCW SUP FLOW CNTL
- 2-FCV-67-190, RHRP ROOM COOLER 2B-B ERCW SUP FLOW CNTL
- 2-FCV-67-168, CCP ROOM COOLER 2A-A ERCW SUP FLOW CNTL
- 2-FCV-67-170, CCP ROOM COOLER 2B-B ERCW SUP FLOW CNTL

# [6] **VERIFY** the following system 67 ERCW valves are available to support test activities: 2-FCV-67-188, RHRP ROOM COOLER 2A-A ERCW SUP FLOW CNTL (SubSection 6.1) 2-FCV-67-190, RHRP ROOM COOLER 2B-B ERCW SUP FLOW CNTL (SubSection 6.2) 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.3) 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTRL (SubSection 6.4) 2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.5) 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTRL (SubSection 6.6) 2-FCV-67-168, CCP ROOM COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.7) 2-FCV-67-170, CCP ROOM COOLER 2B-B ERCW SUP FLOW CNTRL (SubSection 6.8) 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.9) 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTRL (SubSection 6.10) 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.11) 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW

CNTRL (SubSection 6.12) 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTRL (SubSection 6.13)

2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTRL (SubSection 6.14)

	Data	Package: Page	of	Date
4.3	Field	Preparations (c	continued)	
	[7]		<i>N</i> system is aligned per 0-SOI-67.01 as pport test performance.	
	[8]		er work or test activities are in progress on or os which could cause unexpected pump room	
		SubSection	6.1	
		SubSection	6.2	
		SubSection	6.3	
		SubSection	6.4	
		SubSection	6.5	
		SubSection	6.6	
		SubSection	6.7	
		SubSection	6.8	
		SubSection	6.9	
		SubSection	6.10	
		SubSection	6.11	
		SubSection	6.12	
		SubSection	6.13	
		SubSection	6.14	

Date \_\_\_\_\_

# 4.4 Approvals and Notifications

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

		Preoperational Startup Manager Signature	Date
[2]	<b>OBTAIN</b> the Ur authorization.	iit 2 Supervisor's (US/SRO) or Shift Manager's (SM)	
		U-2 US/SRO/SM Signature	Date
			Duic
[3]		Operations that performace of the following sections Unit 1 R-panels for placement of handheld jumpers.	requres
	SubSection	6.9	
	SubSection	6.10	
	SubSection	6.11	
	SubSection	6.12	
	SubSection	6.13	
	SubSection	6.14	

Date \_\_\_\_\_

# 5.0 ACCEPTANCE CRITERIA

- A. Auxiliary Building Engineered Safety Features (ESF) Room/Area Coolers function in accordance with design requirements.
- [1] The controls and interlocks for the ESF Coolers function properly.
  - [1.1] Each ESF Cooler STARTS automatically upon receipt of an associated room Hi-Temperature signal.

2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER (Step 6.1[8])

2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER (Step 6.2[8])

2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER (Step 6.3[8])

2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER (Step 6.4[8])

2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER (Step 6.5[8])

2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER (Step 6.6[8])

2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER (Step 6.7[8])

2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER (Step 6.8[8])

2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A (Step 6.9[8], 6.9[14])

2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B (Step 6.10[8], 6.10[14])

2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A (Step 6.11[8], 6.11[14])

2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B (Step 6.12[8], 6.12[14])

2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A (Step 6.13[8], 6.13[14])

2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B (Step 6.14[8], 6.14[14])

Date \_\_\_\_\_

## 5.0 ACCEPTANCE CRITERIA (continued)

[1.2] The following ESF Coolers START automatically upon receipt of a simulated Auxiliary Building Isolation (ABI) signal AND stop when the ABI signal is reset.

2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A (Step 6.9[20], 6.9[22])

2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B (Step 6.10[20], 6.10[22])

2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A (Step 6.11[20], 6.11[22])

2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B (Step 6.12[20], 6.12[22])

2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A (Step 6.13[20], 6.13[22])

2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B (Step 6.14[20], 6.14[22])

Date \_\_\_\_\_

## 5.0 ACCEPTANCE CRITERIA (continued)

[1.3] Each ESF Cooler can be controlled manually by local handswitch.

2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER (Step 6.1[4]A, 6.1[5]A,V6.1[10.1])

2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER (Step 6.2[4]A, 6.2[5]A,V6.2[10.1])

2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER (Step 6.3[4]A, 6.3[5]A, 6.3[10.1])

2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER (Step 6.4[4]A, 6.4[5]A, 6.4[10.1])

2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER (Step 6.5[4]A, 6.5[5]A, 6.5[10.1])

2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER (Step 6.6[4]A 6.6[5]A, 6.6[10.1])

2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER (Step 6.7[4]A, 6.7[5]A, 6.7[10.1])

2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER (Step 6.8[4]A, 6.8[5]A, 6.8[10.1])

2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A (Step 6.9[4]A, 6.9[5]A, 6.9[10.1], 6.9[16.1])

2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B (Step 6.10[4]A, 6.10[5]A, 6.10[10.1], 6.10[16.1])

2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A (Step 6.11[4]A, 6.11[5]A, 6.11[10.1], 6.11[16.1])

2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B (Step 6.12[4]A, 6.12[5]A, 6.12[10.1], 6.12[16.1])

2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A (Step 6.13[4]A, 6.13[5]A, 6.13[10.1], 6.13[16.1])

2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B (Step 6.14[4]A, 6.14[5]A, 6.14[10.1], 6.14[16.1])

Date \_\_\_\_\_

## 5.0 ACCEPTANCE CRITERIA (continued)

## NOTE

The Acceptance Criteria in the following steps have been adjusted to account for  $\pm 10\%$  of design/rated flow for nontducted, freestanding air coolers as delineated in G-37.

[2] Each ESF Room Cooler maintains design air flow:

2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER (Step 6.15[5]) 6,925 CFM (6,233 - 7,617) 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER (Step 6.16[5]) 6,925 CFM (6,233 - 7,617) 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER (Step 6.17[7]) 12,200 CFM (10,980 - 13,420) 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER (Step 6.18[7]) 12,200 CFM (10,980 - 13,420) 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER (Step 6.19[7]) 7,850 CFM (7,065 - 8,635) 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER (Step 6.20[7]) 7,850 CFM (7,065 - 8,635) 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER (Step 6.21[5]) 9,200 CFM (8,280 - 10,120) 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER (Step 6.22[5]) 9,200 CFM (8,280 - 10,120) 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A (Step 6.23[7]) 4,250 CFM (3,825 - 4,675) 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B (Step 6.24[7]) 4,250 CFM (3,825 - 4,675) 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A (Step 6.25[7]) 3,950 CFM (3,555 - 4,345) 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B (Step 6.26[7]) 3,950 CFM (3,555 - 4,345) 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A (Step 6.27[7]) 5,400 CFM (4,860 - 5,940) 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B (Step 6.28[7]) 5,400 CFM (4,860 - 5,940)

Date \_\_\_\_\_

### 5.0 ACCEPTANCE CRITERIA (continued)

- [3] Essential Raw Cooling Water System Valves.
  - [3.1] The following ERCW valves OPEN upon start of their associated ESF Cooler:

2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.3[4]C)

2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.4[4]C)

2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.5[4]C)

2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.6[4]C)

2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.9[4]C)

2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.10[4]C)

2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.11[4]C)

2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.12[4]C)

2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.13[4]C)

2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.14[4]C)

Date \_\_\_\_\_

#### 5.0 ACCEPTANCE CRITERIA (continued)

[3.2] The following ERCW values OPEN in  $\leq$  10 seconds:

2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.17[4])

2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.18[4])

2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.19[4])

2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.20[4])

2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.23[4])

2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.24[4])

2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.25[4])

2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.26[4])

2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL (Step 6.27[4])

2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL (Step 6.28[4])

Date \_\_\_\_\_

# 5.0 ACCEPTANCE CRITERIA (continued)

- [4] High Energy Line Break (HELB) Detection
  - [4.1] The following HELB Indicator Lights come ON upon receipt of an associated room Hi-Temperature signal.

2-XI-30-5235A, LETDOWN HX PIPE BREAK (Step 6.29.2[3]C)
2-XI-30-5235B, LETDOWN HX PIPE BREAK (Step 6.29.2[7]C)
2-XI-30-5236A, RHR PMP RM A PIPE BREAK (Step 6.29.3[3]C)
2-XI-30-5236B, RHR PMP RM A PIPE BREAK (Step 6.29.3[7]C)
2-XI-30-5237A, RHR PMP RM B PIPE BREAK (Step 6.29.4[3]C)
2-XI-30-5237B, RHR PMP RM B PIPE BREAK (Step 6.29.4[3]C)
2-XI-30-5238A, RHR HX A ROOM PIPE BREAK (Step 6.29.5[3]C)
2-XI-30-5239B, RHR HX B ROOM PIPE BREAK (Step 6.29.5[7]C)
2-XI-30-5239B, RHR HX B ROOM PIPE BREAK (Step 6.29.6[3]C)

Date \_\_\_\_\_

#### 5.0 ACCEPTANCE CRITERIA (continued)

[4.2] Annunciator window 2-XA-55-6A-113B, RHR/CVCS PIPE BREAK, ALARMS upon reciept of any HELB room Hi-Temperature signal.

2-TS-30-5235A, CVCS LETDOWN HT EXCH RM HI TEMP SW (Step 6.29.2[3]A)

2-TS-30-5235B, CVCS LETDOWN HT EXCH RM HI TEMP SW (Step 6.29.2[7]A)

2-TS-30-5236A, RHR PUMP RM A HI TEMP SW (Step 6.29.3[3]A)

2-TS-30-5236B, RHR PUMP RM A HI TEMP SW (Step 6.29.3[7]A)

2-TS-30-5237A, RHR PUMP RM B HI TEMP SW (Step 6.29.4[3]A)

2-TS-30-5237B, RHR PUMP RM B HI TEMP SW (Step 6.29.4[7]A)

2-TS-30-5238A, RHR HT EXCH A ROOM HI TEMP SW (Step 6.29.5[3]A)

2-TS-30-5238B, RHR HT EXCH A ROOM HI TEMP SW (Step 6.29.5[7]A)

2-TS-30-5239A, RHR HT EXCH B ROOM HI TEMP SW (Step 6.29.6[3]A)

2-TS-30-5239B, RHR HT EXCH B ROOM HI TEMP SW (Step 6.29.6[7]A)

[4.3] Unit 2 Alarm Events Display Screen indicates the correct alarm upon reciept of each HELB room Hi-Temperature signal.

2-TS-30-5235A, CVCS LETDOWN HT EXCH RM HI TEMP SW (Step 6.29.2[3]B)

2-TS-30-5235B, CVCS LETDOWN HT EXCH RM HI TEMP SW (Step 6.29.2[7]B)

2-TS-30-5236A, RHR PUMP RM A HI TEMP SW (Step 6.29.3[3]B)

2-TS-30-5236B, RHR PUMP RM A HI TEMP SW (Step 6.29.3[7]B)

2-TS-30-5237A, RHR PUMP RM B HI TEMP SW (Step 6.29.4[3]B)

2-TS-30-5237B, RHR PUMP RM B HI TEMP SW (Step 6.29.4[7]B)

2-TS-30-5238A, RHR HT EXCH A ROOM HI TEMP SW (Step 6.29.5[3]B)

2-TS-30-5238B, RHR HT EXCH A ROOM HI TEMP SW (Step 6.29.5[7]B)

2-TS-30-5239A, RHR HT EXCH B ROOM HI TEMP SW (Step 6.29.6[3]B)

2-TS-30-5239B, RHR HT EXCH B ROOM HI TEMP SW (Step 6.29.6[7]B)

Date \_\_\_\_\_

#### 6.0 PERFORMANCE

#### NOTES

- 1) SubSections 6.1 through 6.29 may be performed in any order or in parallel provided the steps within are performed in the order written unless otherwise noted.
- 2) All verifications (fan starts, fan stops, valve position, etc) are to be done by local observation unless otherwise noted.
- 3) IF/THEN steps may be marked N/A if stated condition does not exist.

# 6.1 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.1 have been completed.
- [2] **ENSURE** Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM COOLER, at 2-JB-292-2506-A, [A11W/676], is in AUTO, **AND**

**ENSURE** Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-175, 480V C&A BUILDING VENT BD 2A1-A, Compartment 9A, Red Light is OFF.
  - B. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 13, FCV-67-188 RHR PMP 2A-A ROOM CLR OPEN, is ON.

	Data	Pac	kage: Page of	Date
6.1	2-PM (cont			
	[4]		<b>ACE</b> Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM OLER, to START, <b>AND</b>	
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, STARTS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-175-A, 480V C&A BUILDING VENT BD 2A1-A, Compartment 9A, Red Light is ON.	
	[5]		<b>ACE</b> Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM OLER, to STOP, <b>AND</b>	
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-175, 480V C&A BUILDING VENT BD 2A1-A, Compartment 9A, Red Light is OFF.	
	[6]		<b>ACE</b> Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM OLER, to AUTO, <b>AND</b>	
			<b>RIFY</b> Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM OLER 2A-A, remains OFF.	

Date \_\_\_\_\_

6.1 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER LOGIC (continued)

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

[7]	<b>HEAT</b> Temperature Switch 2-TS-30-175, RHR PUMP 2A-A ROOM COOLER TEMP, [A11W/676], sensing bulb to a temperature greater than 95°F.					
[8]	VERIFY Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, STARTS. (Acc Crit)					
[9]	IF te	mperature of the sensing bulb reaches 115°F, <b>THEN</b>				
	STO	P applying heat to the sensing bulb.				
[10]	[10] MAINTAIN Temperature Switch 2-TS-30-175, RHR PUMP 2A-A ROOM COOLER TEMP, sensing bulb at a temperature greater than 95°F.					
[10.1]		<b>PLACE</b> Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM COOLER, to STOP, <b>AND</b> '				
		VERIFY Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, STOPS. (Acc Crit)				
[10.2]		PLACE Handswitch 2-HS-30-175, RHR PUMP 2A-A ROOM COOLER, to AUTO, AND				
		<b>VERIFY</b> Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, STARTS.				
[11] COOL Temperature Switch 2-TS-30-175, RHR PUMP 2A-A ROOM COOLER TEMP, sensing bulb to a temperature less than 90°F.						
[12]	2] VERIFY Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM					

COOLER, STOPS.

Date \_\_\_\_\_

# 6.1 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER LOGIC (continued)

[13] **IF** no further testing is to be performed on Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER, **THEN** 

**SECURE** Cooler 2-PMCL-30-175, RHR PUMP 2A-A ROOM COOLER.

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	Data	Pac	kage: Page of	Date
6.2	2-PN	ICL-:	30-176, RHR PUMP 2B-B ROOM COOL	ER LOGIC
	[1]		<b>ISURE</b> prerequisites listed in Section 4.0 ve been completed.	for SubSection 6.2
	[2]		<b>ISURE</b> Handswitch 2-HS-30-176, RHR P OOLER, at 2-JB-292-2505-B, [A11V/676],	
			<b>ISURE</b> Cooler 2-PMCL-30-176, RHR PU DOLER, is OFF.	MP 2B-B ROOM
	[3]	VE	<b>RIFY</b> the following:	
		A.	Breaker 2-BKR-30-176, 480V C&A BUI VENT BD 2B1-B, Compartment 9A, Re	
		В.	On Panel 0-M-27A, CLRS ERCW SUP Window 18, FCV-67-190 RHR PMP 2B OPEN, is ON.	· ·
	[4]		ACE Handswitch 2-HS-30-176, RHR PU DOLER, to START, <b>AND</b>	MP 2B-B ROOM
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-176, RHR PUMP 2I COOLER, STARTS. ( <b>Acc Crit</b> )	B-B ROOM
		В.	Breaker 2-BKR-30-176, 480V C&A BUI VENT BD 2B1-B, Compartment 9A, Re	

Date \_\_\_\_\_

# 6.2 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER LOGIC (continued)

[5] **PLACE** Handswitch 2-HS-30-176, RHR PUMP 2B-B ROOM COOLER, to STOP, **AND** 

**VERIFY** the following:

- A. Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, STOPS. (Acc Crit)
- B. Breaker 2-BKR-30-176, 480V C&A BUILDING VENT BD 2B1-B, Compartment 9A, Red Light is OFF.
- [6] **PLACE** Handswitch 2-HS-30-176, RHR PUMP 2B-B ROOM COOLER, to AUTO, **AND**

**VERIFY** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-176, RHR PUMP 2B-B ROOM COOLER TEMP [A11V/676], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

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	Data	Package: Page of	Date			
6.2	2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER LOGIC (continued)					
	[10] MAINTAIN Temperature Switch 2-TS-30-176, RHR PUMP 2B-B ROOM COOLER TEMP, sensing bulb at a temperature greater than 95°F.					
	[10	0.1] <b>PLACE</b> Handswitch 2-HS-30-176, RHR ROOM COOLER, to STOP, <b>AND</b>	PUMP 2B-B			
		VERIFY Cooler 2-PMCL-30-176, RHR F	PUMP 2B-B			

**VERIFY** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, STOPS. (Acc Crit)

[10.2] **PLACE** Handswitch 2-HS-30-176, RHR PUMP 2B-B ROOM COOLER, to AUTO, **AND** 

**VERIFY** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, STARTS.

- [11] **COOL** Temperature Switch 2-TS-30-176, RHR PUMP 2B-B ROOM COOLER TEMP, sensing bulb to a temperature less than 90°F.
- [12] **VERIFY** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER STOPS.
- [13] **IF** no further testing is to be performed on Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER, **THEN**

**SECURE** Cooler 2-PMCL-30-176, RHR PUMP 2B-B ROOM COOLER.

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	Data	n Pac	kage: Page of	Date
6.3	2-PN	/ICL-3	30-177, CS PUMP 2A-A ROOM COOLER L	.OGIC
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for ve been completed.	SubSection 6.3
	[2]		<b>SURE</b> Handswitch 2-HS-30-177, CS PUMF OLER, at 2-JB-292-2502-A, [A10U/676], is	
			<b>SURE</b> Cooler 2-PMCL-30-177, CS PUMP 2 OLER, is OFF.	2A-A ROOM
	[3]	VE	<b>RIFY</b> the following:	
		A.	Breaker 2-BKR-30-177, 480V C&A BUILD VENT BD 2A1-A, Compartment 3C, Red L	
		В.	Valve 2-FCV-67-184, CSP ROOM COOLE SUP FLOW CNTL, [A10U/676], is CLOSE	
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 12, FCV-67-184 CS PMP 2A-A R OPEN, is OFF.	-
	[4]		<b>ACE</b> Handswitch 2-HS-30-177, CS PUMP 2 OLER, to START, <b>AND</b>	2A-A ROOM
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-177, CS PUMP 2A-A F COOLER, STARTS. ( <b>Acc Crit</b> )	ROOM
		В.	Breaker 2-BKR-30-177, 480V C&A BUIILE VENT BD 2A1-A, Compartment 3C, Red L	
		C.	Valve 2-FCV-67-184, CSP ROOM COOLE SUP FLOW CNTL, is OPEN. ( <b>Acc Crit</b> )	ER 2A-A ERCW
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 12, FCV-67-184 CS PMP 2A-A R OPEN, is ON.	

	Data I	Pack	age: Page of	Date		
6.3	2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER LOGIC (continued)					
	[5]	[5] PLACE Handswitch 2-HS-30-177, CS PUMP 2A-A ROOM COOLER, to STOP, AND				
	VERIFY the following:					
		A.	Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, STOPS. ( <b>Acc Crit</b> )			
		B.	Breaker 2-BKR-30-177, 480V C&A BUILDING VENT BD 2A1-A, Compartment 3C, Red Light is OFF.			
		C.	Valve 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.			
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 12, FCV-67-184 CS PMP 2A-A ROOM CLR OPEN, is OFF.			
	[6]		<b>CE</b> Handswitch 2-HS-30-177, CS PUMP 2A-A ROOM DLER, to AUTO, <b>AND</b>			
		VEF	RIFY Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM			

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-177, CS PUMP 2A-A ROOM COOLER TEMP, [A11U/676], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

**STOP** applying heat to the sensing bulb.

COOLER, remains OFF.

COOLER.

Page 48 of 144 Data Package: Page \_\_\_\_\_ of \_\_\_\_\_ Date \_\_\_\_\_ 6.3 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER LOGIC (continued) [10] MAINTAIN Temperature Switch 2-TS-30-177, CS PUMP 2A-A ROOM COOLER TEMP, sensing bulb at a temperature greater than 95°F. [10.1] PLACE Handswitch 2-HS-30-177, CS PUMP 2A-A ROOM COOLER, to STOP, AND VERIFY Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, STOPS. (Acc Crit) PLACE Handswitch 2-HS-30-177, CS PUMP 2A-A [10.2] ROOM COOLER, to AUTO, AND VERIFY Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, STARTS. COOL Temperature Switch 2-TS-30-177, CS PUMP 2A-A [11] ROOM COOLER TEMP, sensing bulb to a temperature less than 90°F. VERIFY Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM [12] COOLER, STOPS. **IF** no further testing is to be performed on Cooler [13] 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, THEN SECURE Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM

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	Data	I Pac	kage: Page of	Date
6.4	2-PN	ICL-:	80-178, CS PUMP 2B-B ROOM COOLER I	OGIC
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for ve been completed.	SubSection 6.4
	[2]		<b>SURE</b> Handswitch 2-HS-30-178, CS PUMF OLER, at 2-JB-292-2501-B, [A11U/676], is	
			<b>SURE</b> Cooler 2-PMCL-30-178, CS PUMP 2 OLER, is OFF.	2B-B ROOM
	[3]	VE	<b>RIFY</b> the following:	
		A.	Breaker 2-BKR-30-178, 480V C&A BUILD VENT BD 2B1-B, Compartment 3C, Red I	
		В.	Valve 2-FCV-67-186, CSP ROOM COOLE SUP FLOW CNTL, [A10U/676], is CLOSE	
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 19, FCV-67-186 CS PMP 2B-B R OPEN, is OFF.	
	[4]		ACE Handswitch 2-HS-30-178, CS PUMP 2 OOLER, to START, <b>AND</b>	2B-B ROOM
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-17B, CS PUMP 2B-B COOLER, STARTS. (Acc Crit)	ROOM
		В.	Breaker 2-BKR-30-178, 480V C&A BUILD VENT BD 2B1-B, Compartment 3C, Red I	
		C.	Valve 2-FCV-67-186, CSP ROOM COOLE SUP FLOW CNTL, is OPEN. ( <b>Acc Crit</b> )	ER 2B-B ERCW
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 19, FCV-67-186 CS PMP 2B-B R OPEN, is ON.	

	Data	Pack	cage: Page of	Date			
6.4	2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER LOGIC (continued)						
	[5]	5] <b>PLACE</b> Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM COOLER, to STOP, <b>AND</b>					
		VEI	RIFY the following:				
		A.	Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, STOPS. ( <b>Acc Crit</b> )				
		В.	Breaker 2-BKR-30-178, 480V C&A BUILDING VENT BD 2B1-B, Compartment 3C, Red Light is OFF.				
		C.	Valve 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.	J			
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 19, FCV-67-186 CS PMP 2B-B ROOM CLR OPEN, is OFF.				
	[6]		ACE Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM OLER to AUTO, AND				
		VEI	RIFY Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM				

#### CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-178, CS PUMP 2B-B ROOM COOLER TEMP, [A11T/676], to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

**STOP** applying heat to the sensing bulb.

COOLER remains OFF.

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6.4		2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER LOGIC (continued)						
	[10]	ROC	NTAIN Temperature Switch 2-TS-30-178, CS PUMP 2B-E DM COOLER TEMP, sensing bulb at a temperature greate 95°F.					
	[10.1]		<b>PLACE</b> Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM COOLER, to STOP, <b>AND</b>					
			VERIFY Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, STOPS. (Acc Crit)					
	[10.2]		<b>PLACE</b> Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM COOLER, to AUTO, <b>AND</b>					
			<b>VERIFY</b> Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, STARTS.					
	[11]	ROC	<b>DL</b> Temperature Switch 2-TS-30-178, CS PUMP 2B-B DM COOLER TEMP, sensing bulb to a temperature less 90°F.					
	[12]		RIFY Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM DLER, STOPS.					
	[13]		o further testing is to be performed on Cooler MCL-30-178, CS PUMP 2B-B ROOM COOLER, <b>THEN</b>					
			URE Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM DLER.					

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	Data	Pac	kage: Page of	Date
6.5	2-PN	ICL-:	30-180, SIS PUMP 2A-A ROOM COOLER I	_OGIC
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for ve been completed.	SubSection 6.5
	[2]		<b>SURE</b> Handswitch 2-HS-30-180, SIS PUMF OOLER, at 2-JB-292-1197-A, [A10V/692], is	
			SURE Cooler 2-PMCL-30-180, SIS PUMP 2 OOLER, is OFF.	2A-A ROOM
	[3]	VE	<b>RIFY</b> the following:	
		A.	Breaker 2-BKR-30-180, 480V C&A BUILD VENT BD 2A1-A, Compartment 8A, Red L	
		В.	Valve 2-FCV-67-176, SIP ROOM COOLEI SUP FLOW CNTL, [A9V/692], is CLOSED	
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 1, FCV-67-176 SIP 2A-A ROOM ( OFF.	•
	[4]		ACE Handswitch 2-HS-30-180, SIS PUMP 2 OOLER, to START, AND	2A-A ROOM
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-180, SIS PUMP 2A-A I COOLER, STARTS. ( <b>Acc Crit</b> )	ROOM
		В.	Breaker 2-BKR-30-180, 480V C&A BUILD VENT BD 2A1-A, Compartment 8A, Red L	
		C.	Valve 2-FCV-67-176, SIP ROOM COOLEI SUP FLOW CNTL, is OPEN. ( <b>Acc Crit</b> )	R 2A-A ERCW
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0- Window 1, FCV-67-176 SIP 2A-A ROOM ( ON.	•

	Data	Pacl	kage: Page of	Date
6.5	2-PM (cont			
	[5]	PL/ CO		
		VE	RIFY the following:	
		A.	Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-180, 480V C&A BUILDING VENT BD 2A1-A, Compartment 8A, Red Light is OFF.	
		C.	Valve 2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 1, FCV-67-176 SIP 2A-A ROOM CLR OPEN, is OFF.	
	[6]		<b>ACE</b> Handswitch 2-HS-30-180, SIS PUMP 2A-A ROOM OLER, to AUTO, <b>AND</b>	

**VERIFY** Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-180, SIS PUMP 2A-A ROOM COOLER TEMP, [A10V/692], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

					U	
	Data	Pack	age: Page _	of		Date
6.5		ICL-30 tinuec	•	UMP 2A-A ROO	M COOLER LOGIC	
	[10]	ROC			-TS-30-180, SIS PUMP bulb at a temperature g	
	ROC than [12] <b>VER</b>			ndswitch 2-HS-3 OLER, to STOP	0-180, SIS PUMP 2A-A , <b>AND</b>	
				ooler 2-PMCL-30 OLER, STOPS.	-180, SIS PUMP 2A-A ( <b>Acc Crit</b> )	
				ndswitch 2-HS-3 OLER, to AUTO	0-180, SIS PUMP 2A-A , <b>AND</b>	
				ooler 2-PMCL-30 OLER, STARTS	-180, SIS PUMP 2A-A	
					30-180, SIS PUMP 2A-, bulb to a temperature le	
			RIFY Cooler 2- DLER, STOPS		SIS PUMP 2A-A ROOM	l
	[13]			ng is to be perfo SIS PUMP 2A-A	rmed on Cooler ROOM COOLER, <b>THE</b>	N
			URE Cooler : DLER.	2-PMCL-30-180	, SIS PUMP 2A-A ROO	M

	Data	Pac	kage: Page of	Date	
6.6	2-PMCL-30-179-B, SIS PUMP 2B-B ROOM COOLER LOGIC				
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for SubSection 6 ve been completed.	.6	
	[2]		I <b>SURE</b> Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM OOLER, at 2-JB-292-1198-B, [A10U/692], is in AUTO, <b>ANE</b>		
			<b>ISURE</b> Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM OLER, is OFF.		
	[3]	VE	<b>RIFY</b> the following:		
		A.	Breaker 2-BKR-30-179, 480V C&A BUILDING VENT BD 2B1-B, Compartment 8A, Red Light is OFF.		
		В.	Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A9V/692], is CLOSED.		
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 10, FCV-67-182 SIP 2B-B ROOM CLR OPEN, i OFF.	s	
	[4]		ACE Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM OLER, to START, AND		
		VE	<b>RIFY</b> the following:		
		A.	Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, STARTS. ( <b>Acc Crit</b> )		
		В.	Breaker 2-BKR-30-179, 480V C&A BUILDING VENT BD 2B1-B, Compartment 8A, Red Light is ON.		
		C.	Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is OPEN. ( <b>Acc Crit</b> )		
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 10, FCV-67-182 SIP 2B-B ROOM CLR OPEN, i ON.	s	

	Data	Pacl	kage: Page of	Date
6.6	2-PM (cont			
	[5]		ACE Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM OLER, to STOP, <b>AND</b>	
		VE	RIFY the following:	
		A.	Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-179, 480V C&A BUILDING VENT BD 2B1-B, Compartment 8A, Red Light is OFF.	
		C.	Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTRL, is CLOSED.	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 10, FCV-67-182 SIP 2B-B ROOM CLR OPEN, is OFF.	5
	[6]		ACE Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM OLER, to AUTO, <b>AND</b>	
		VE	RIFY Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM	

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-179, SIS PUMP 2B-B ROOM COOLER TEMP, [A9U/692], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

**STOP** applying heat to the sensing bulb.

COOLER, remains OFF.

Date

#### 6.6 2-PMCL-30-179-B, SIS PUMP 2B-B ROOM COOLER LOGIC (continued)

- [10] MAINTAIN Temperature Switch 2-TS-30-179, SIS PUMP 2B-B ROOM COOLER TEMP, sensing bulb at a temperature greater than 95°F.
  - [10.1] PLACE Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM COOLER, to STOP, AND

VERIFY Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, STOPS. (Acc Crit)

PLACE Handswitch 2-HS-30-179, SIS PUMP 2B-B [10.2] ROOM COOLER, to AUTO, AND

> VERIFY Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, STARTS.

- COOL Temperature Switch 2-TS-30-179, SIS PUMP 2B-B [11] ROOM COOLER TEMP, sensing bulb to a temperature less than 90°F.
- VERIFY Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM [12] COOLER, STOPS.
- **IF** no further testing is to be performed on Cooler [13] 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, THEN

SECURE Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER.

Date \_\_\_\_\_

# 6.7 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.7 have been completed.
- [2] ENSURE Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, at 2-JB-292-1191-A, [A12T/692], is in AUTO, AND

**ENSURE** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-183, 480V C&A BUILDLING VENT BD 2A1-A, Compartment 10A, Red Light is OFF.
  - B. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 3, FCV-67-168 CCP 2A-A ROOM CLR OPEN, is ON.
- [4] **PLACE** Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, to START, **AND**

**VERIFY** the following:

- A. Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STARTS. (Acc Crit)
- B. Breaker 2-BKR-30-183, 480V C&A BUILDLING VENT BD 2A1-A, Compartment 10A, Red Light is ON.

Date \_\_\_\_\_

#### 6.7 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER LOGIC (continued)

[5] **PLACE** Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, to STOP **AND** 

# VERIFY:

- A. Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STOPS. (**Acc Crit**)
- B. Breaker 2-BKR-30-183, 480V C&A BUILDLING VENT BD 2A1-A, Compartment 10A, Red Light is OFF.
- [6] **PLACE** Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, to AUTO, **AND**

**VERIFY** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] **HEAT** Temperature Switch 2-TS-30-183, CENT CHARGING PUMP 2A-A RM COOLER TEMP, [A12T/692], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

Page 60 of 144 Data Package: Page \_\_\_\_\_ of \_\_\_\_ Date 6.7 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER LOGIC (continued) [10] **MAINTAIN** Temperature Switch 2-TS-30-183, CENT CHARGING PUMP 2A-A RM COOLER TEMP, sensing bulb at a temperature greater than 95°F. PLACE Handswitch 2-HS-30-183. CENT CHARGING [10.1] PUMP 2A-A ROOM COOLER, to STOP, AND VERIFY Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STOPS. (Acc Crit) PLACE Handswitch 2-HS-30-183, CENT CHARGING [10.2] PUMP 2A-A ROOM COOLER, to AUTO, AND VERIFY Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STARTS. **COOL** Temperature Switch 2-TS-30-183, CENT CHARGING [11] PUMP 2A-A RM COOLER TEMP, sensing bulb to a temperature less than 90°F. VERIFY Cooler 2-PMCL-30-183, CENT CHARGING [12] PUMP 2A-A ROOM COOLER, STOPS. **IF** no further testing is to be performed on Cooler [13] 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, THEN SECURE Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER.

Date \_\_\_\_\_

#### 6.8 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.8 have been completed.
- [2] ENSURE Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, at 2-JB-292-1192-B, [A11U/692], is in AUTO, AND

**ENSURE** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-182, 480V C&A BUILDING VENT BD 2B1-B, Compartment 10A, Red Light is OFF.
  - B. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 8, FCV-67-170 CCP 2B-B ROOM CLR OPEN, is ON.
- [4] **PLACE** Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to START, **AND**

**VERIFY** the following:

- A. Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STARTS. (Acc Crit)
- B. Breaker 2-BKR-30-182, 480V C&A BUILDING VENT BD 2B1-B, Compartment 10A, Red Light is ON.

Date \_\_\_\_\_

#### 6.8 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER LOGIC (continued)

[5] **PLACE** Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to STOP, **AND** 

**VERIFY** the following:

- A. Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STOPS. (Acc Crit)
- B. Breaker 2-BKR-30-182, 480V C&A BUILDING VENT BD 2B1-B, Compartment 10A, Red Light is OFF.
- [6] **PLACE** Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to AUTO, **AND**

**VERIFY** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER TEMP, [A11U/692], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 115°F, **THEN**

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6.8		2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER LOGIC (continued)							
	[10]	<b>MAINTAIN</b> Temperature Switch 2-TS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER TEMP, sensing bulb at a temperature greater than 95°F.							
	[1	0.1] <b>PLACE</b> Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to STOP, <b>AND</b>	i						
		<b>VERIFY</b> Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STOPS. ( <b>Acc Crit</b> )							
	[1	0.2] <b>PLACE</b> Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to AUTO, <b>AND</b>	i						
		<b>VERIFY</b> Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STARTS.							
	[11]	<b>COOL</b> Temperature Switch 2-TS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER TEMP, sensing bulb to a temperature less than 90°F.	G						
	[12]	<b>VERIFY</b> Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STOPS.							
	[13]	IF no further testing is to be performed on Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, THEN							
		<b>SECURE</b> Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER.							

Date \_\_\_\_\_

# 6.9 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.9 have been completed.
- [2] ENSURE Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, at 2-JB-292-1553-A, [A12U/693], is in AUTO, AND

**ENSURE** Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-186, 480V C&A BUILDING VENT BD 2A1-A, Compartment 2C, Red Light is OFF.
  - B. Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A12U/692], is CLOSED.
  - C. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 23, FCV-67-346 PENT ROOM CLR 2 A1 OPEN, is OFF.
- [4] **PLACE** Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, to START, **AND**

#### **VERIFY** the following:

- A. Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS. (Acc Crit)
- B. Breaker 2-BKR-30-186, 480V C&A BUILDING VENT BD 2A1-A, Red Light is ON.
- C. Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is OPEN. (Acc Crit)
- D. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 23, FCV-67-346 PENT ROOM CLR 2 A1 OPEN, is ON.

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6.9	2-CLF LOGI			
	[5]		<b>CE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL COOLER 2A-A, to STOP, <b>AND</b>	-
		VEF	RIFY the following:	
		A.	Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-186, 480V C&A BUILDING VENT BD 2A1-A, Red Light is OFF.	
		C.	Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 23, FCV-67-346 PENT ROOM CLR 2 A1 OPEN, is OFF.	
	[6]		<b>CE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL COOLER 2A-A, to AUTO, <b>AND</b>	-

**VERIFY** Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-186A, PENETRATION ROOM EL 692 COOLER 2A-A TEMP, [A12U/692], sensing bulb to a temperature greater than 85°F.
- [8] **VERIFY** Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 105°F, **THEN**

	Data	Packa	ge: Page of	Date
6.9	2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A LOGIC (continued)			
	[10]	PENE	<b>TAIN</b> Temperature Switch 2-TS-30-186A ETRATION ROOM EL 692 COOLER 2A-A TEMP, ng bulb at a temperature greater than 85°F.	
	[10.1] [10.2]		<b>PLACE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, to STOP, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STOPS. (Acc Crit)	
			<b>PLACE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, to AUTO, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-186-A, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS.	
	[11]	ROOI	L Temperature Switch 2-TS-30-186A, PENETRATION M EL 692 COOLER 2A-A TEMP, sensing bulb, until it s, AND	
			<b>FY</b> Cooler 2-CLR-30-186, PENETRATION ROOM 22 COOLER 2A-A, STOPS.	
	[12]		<b>CE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL COOLER 2A-A, to STANDBY, <b>AND</b>	-
			<b>FY</b> Cooler 2-CLR-30-186, PENETRATION ROOM 02 COOLER 2A-A, remains OFF.	

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [13] HEAT Temperature Switch 2-TS-30-186B, PENETRATION ROOM EL 692 COOLER 2A-A TEMP, [A12U/692], sensing bulb to a temperature greater than 90°F.
- [14] **VERIFY** Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS. (Acc Crit)

	Data I	Packa	ge: Page of	Date			
6.9		2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A LOGIC (continued)					
	[15]	IF ter					
		STO	P applying heat to the sensing bulb.				
	[16]	PEN	ITAIN Temperature Switch 2-TS-30-186B, ETRATION ROOM EL 692 COOLER 2A-A TEMP, ing bulb at a temperature greater than 90°F.				
	[16	6.1]	<b>PLACE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A to STOP, <b>AND</b>				
			VERIFY Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STOPS. (Acc Crit)				
	[16	6.2]	<b>PLACE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, to STANDBY, <b>AND</b>				
			<b>VERIFY</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS.				
	[17]	ROO	L Temperature Switch 2-TS-30-186B, PENETRATION M EL 692 COOLER 2A-A TEMP, sensing bulb until it s, <b>AND</b>				
			IFY Cooler 2-CLR-30-186, PENETRATION ROOM 92 COOLER 2A-A, STOPS.				
	[18]		<b>CE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL COOLER 2A-A, to AUTO, <b>AND</b>	-			
			IFY Cooler 2-CLR-30-186, PENETRATION ROOM 92 COOLER 2A-A, remains OFF.				

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# 6.9 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A LOGIC (continued)

	NOTE					
The following step will simulate an Auxiliary Building Isolation (ABI) Signal by placing a jumper across terminal points in Auxiliary Relay panel 1-R-73.						
<ul><li>[19] PLACE and HOLD a handheld jumper at TB 339, between Pt.</li><li>10 and Pt. 11 in Auxiliary Relay Panel 1-R-73.</li></ul>						
		1st				
		CV				
[20]	<b>VERIFY</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STARTS. ( <b>Acc Crit</b> )					
[21]	<b>REMOVE</b> handheld jumper at TB 339 between Pt. 10 and Pt. 11 in Auxiliary Relay Panel 1-R-73.					
		1st				
		CV				
[22]	<b>VERIFY</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )					
[23]	<b>IF</b> no further testing is to be performed on Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, <b>THEN</b>					
	<b>SECURE</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A.					

Date \_\_\_\_\_

# 6.10 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.10 have been completed.
- [2] ENSURE Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B at, 2-JB-292-1554-B, [A12V/692], is in AUTO, AND

**ENSURE** Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-187, 480V C&A BUILDING VENT BD 2B1-B, Compartment 8B, Red Light is OFF.
  - B. Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A12V/692], is CLOSED.
  - C. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 26, FCV-67-348 PENT ROOM CLR 2 B1 OPEN, is OFF.
- [4] **PLACE** Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, to START, **AND**

# **VERIFY** the following:

- A. Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS. (Acc Crit)
- B. Breaker 2-BKR-30-187, 480V C&A BUILDING VENT BD 2B1-B, Compartment 8B, Red Light is ON.
- C. Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is OPEN. (Acc Crit)
- D. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 26, FCV-67-348 PENT ROOM CLR 2 B1 OPEN,is ON.

	Data I	Pack	age: Page of	Date	
6.10		CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B IGIC (continued)			
	[5]		ACE Handswitch 2-HS-30-187, PENETRATION ROOM 692 COOLER 2B-B, to STOP, <b>AND</b>		
		VEF	RIFY the following:		
		A.	Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STOPS. ( <b>Acc Crit</b> )		
		В.	Breaker 2-BKR-30-187, 480V C&A BUILDING VENT BD 2B1-B, Red Light is OFF.		
		C.	Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.		
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 26, FCV-67-348 PENT ROOM CLR 2 B1 OPEN is OFF.		
	[6]		ACE Handswitch 2-HS-30-187, PENETRATION ROOM 692 COOLER 2B-B, to AUTO, AND		

**VERIFY** Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-187A, PENETRATION ROOM EL 692 COOLER 2B-B TEMP, [A12V/692], sensing bulb to a temperature greater than 85°F.
- [8] **VERIFY** Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 105°F, **THEN**

	Data I	Packa	ge: Page of	Date
6.10			87, PENETRATION ROOM EL 692 COOLER 2B-B ntinued)	
	[10]	PENE	ITAIN Temperature Switch 2-TS-30-187A, ETRATION ROOM EL 692 COOLER 2B-B TEMP, ng bulb at a temperature greater than 85°F.	
	[10	D.1]	<b>PLACE</b> Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B to STOP, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STOPS. (Acc Crit)	
	[10.2]		<b>PLACE</b> Handswitch 2-HS-30-187-B, PENETRATION ROOM EL 692 COOLER 2B-B, to AUTO, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS.	
	[11]	ROO	<b>L</b> Temperature Switch 2-TS-30-187A, PENETRATION M EL 692 COOLER 2B-B TEMP, sensing bulb until it s, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-187, PENETRATION ROOM 92 COOLER 2B-B, STOPS.	
	[12]		<b>CE</b> Handswitch 2-HS-30-187, PENETRATION ROOM 92 COOLER 2B-B, to STANDBY, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-187, PENETRATION ROOM 92 COOLER 2B-B, remains OFF.	

- [13] HEAT Temperature Switch 2-TS-30-187B, PENETRATION ROOM EL 692 COOLER 2B-B TEMP, [A12V/692], sensing bulb to a temperature greater than 90°F.
- [14] **VERIFY** Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS. (Acc Crit)

	Data I	Packa	ge: Page of	Date
6.10			87, PENETRATION ROOM EL 692 COOLER 2B-B ntinued)	
	[15]	IF ter	nperature of the sensing bulb reaches 110°F, <b>THEN</b>	
		STOP	P applying heat to the sensing bulb.	
	[16]	PENE	ITAIN Temperature Switch 2-TS-30-187B, ETRATION ROOM EL 692 COOLER 2B-B TEMP, ng bulb at a temperature greater than 90°F.	
	[16	6.1]	<b>PLACE</b> Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, to STOP, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STOPS. (Acc Crit)	
	[16	6.2]	<b>PLACE</b> Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, to STANDBY, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS.	
	[17]	ROO	<b>L</b> Temperature Switch 2-TS-30-187B, PENETRATION M EL 692 COOLER 2B-B TEMP, sensing bulb until it s, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-187, PENETRATION ROOM 92 COOLER 2B-B, STOPS.	
	[18]		<b>CE</b> Handswitch 2-HS-30-187, PENETRATION ROOM 92 COOLER 2B-B, to AUTO, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-187, PENETRATION ROOM 92 COOLER 2B-B, remains OFF.	

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# 6.10 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B LOGIC (continued)

	NOTE	
	step will simulate an Auxiliary Building Isolation (ABI) Signal by places terminal points in Auxiliary Relay panel 1-R-78.	ing a
[19]	<b>PLACE</b> and <b>HOLD</b> a handheld jumper at TB 838, between Pt. 1 and Pt. 2 in Auxiliary Relay Panel 1-R-78.	
		1st
		CV
[20]	VERIFY Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STARTS. (Acc Crit)	
[21]	<b>REMOVE</b> handheld jumper at TB 838 between Pt. 1 and Pt. 2 in Auxiliary Relay Panel 1-R-78.	
		1st
		CV
[22]	VERIFY Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STOPS. (Acc Crit)	
[23]	IF no further testing is to be performed on Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, THEN	
	<b>SECURE</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B.	

Date \_\_\_\_\_

# 6.11 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.11 have been completed.
- [2] ENSURE Handswitch 2-HS-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, at 2-JB-292-1503-A, [A14V/713], is in AUTO, AND

**ENSURE** Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-196, 480V C&A BUILDING VENT BD 2A1-A, Compartment 10B, Red Light is OFF.
  - B. Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A14V/713], is CLOSED.
  - C. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 24, FCV-67-350 PENT ROOM CLR 2 A2 OPEN, is OFF.
- [4] **PLACE** Handswitch 2-HS-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, to START, **AND**

# **VERIFY** the following:

- A. Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 2A-A, STARTS. (**Acc Crit**)
- B. Breaker 2-BKR-30-196, 480V C&A BUILDING VENT BD 2A1-A, Compartment 10B, Red Light is ON.
- C. Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is OPEN. (Acc Crit)
- D. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 24, FCV-67-350 PENT ROOM CLR 2 A2 OPEN, is ON.

	Data	Pack	age: Page of	Date
6.11			196, PENETRATION ROOM EL 713 COOLER 2A-A ontinued)	
	[5]		<b>ACE</b> Handswitch 2-HS-30-196, PENETRATION ROOM 713 COOLER 2A-A, to STOP, <b>AND</b>	
		VEF	RIFY the following:	
		A.	Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-196, 480V C&A BUILDING VENT BD 2A1-A, Compartment 10B, Red Light is OFF.	
		C.	Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 24, FCV-67-350 PENT ROOM CLR 2 A2 OPEN, is OFF.	
	[6]		<b>ACE</b> Handswitch 2-HS-30-19A, PENETRATION ROOM 713 COOLER 2A-A, to AUTO <b>AND</b>	

**VERIFY** Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-196A, PENETRATION ROOM EL 713 COOLER 2A-A TEMP SWITCH, [A14V/713], sensing bulb to a temperature greater than 90°F.
- [8] **VERIFY** Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 110°F, **THEN**

**STOP** applying heat to the sensing bulb.

	Data I	Package:	Page of	·			Date	
6.11		2-30-196, P C (continue		N ROOM EL	713 COOLER	2A-A		
	[10]	PENETRA	TION ROOM		-30-196A, LER 2A-A TEI ure greater tha			
	[10	-			96, PENETRA to STOP, <b>AN</b>			
				-CLR-30-196, 2A-A, STOPS	PENETRATIO 5. ( <b>Acc Crit</b> )	ON ROOM		
	[10				96, PENETRA to AUTO, <b>AN</b>			
				-CLR-30-196, 2A-A, STAR1	PENETRATIO	ON ROOM		
	[11]		713 COOLEI		196A, PENET ? SWITCH, ser			
			ooler 2-CLR-3 DOLER 2A-A,	,	TRATION RC	MOO		
	[12]			IS-30-196, PE to STANDBY	ENETRATION (, <b>AND</b>	ROOM		
				30-196, PENE remains OFF	TRATION RC	DOM		

- [13] HEAT Temperature Switch 2-TS-30-196B, PENETRATION ROOM EL 713 COOLER 2A-A TEMP SWITCH, [A14V/713], sensing bulb to a temperature greater than 95°F.
- [14] **VERIFY** Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STARTS. (Acc Crit)

	Data I	Packa	ge: Page of	Date
6.11			96, PENETRATION ROOM EL 713 COOLER 2A-A atinued)	
	[15]	IF ter	nperature of the sensing bulb reaches 115°F, <b>THEN</b>	
		STOP	• applying heat to the sensing bulb.	
	[16]	PENE	ITAIN Temperature Switch 2-TS-30-196B, ETRATION ROOM EL 713 COOLER 2A-A TEMP CH, sensing bulb at a temperature greater than 95°F.	
	[16	6.1]	<b>PLACE</b> Handswitch 2-HS-30-196, EL 713 PENT ROOM COOLER 2A-A, to STOP, <b>AND</b>	Л
	ROO		<b>VERIFY</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STOPS. (Acc Crit)	
			<b>PLACE</b> Handswitch 2-HS-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, to STANDBY, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STARTS.	
			L Temperature Switch 2-TS-30-196B, PENETRATION M EL 713 COOLER 2A-A TEMP SWITCH, sensing bulb t resets, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-196, PENETRATION ROOM I3 COOLER 2A-A, STOPS.	
	[18]		<b>CE</b> Handswitch 2-HS-30-196, PENETRATION ROOM 13 COOLER 2A-A, to AUTO, <b>AND</b>	
			FY Cooler 2-CLR-30-196, PENETRATION ROOM	

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# 6.11 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A LOGIC (continued)

	NOTE	
-	step will simulate an Auxiliary Building Isolation (ABI) Signal by places terminal points in Auxiliary Relay panel 1-R-73.	cing a
[19]	<b>PLACE</b> and <b>HOLD</b> a handheld jumper at TB 340, between Pt. 11 and Pt. 12 in Auxiliary Relay Panel 1-R-73.	
		1st
		CV
[20]	<b>VERIFY</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STARTS. ( <b>Acc Crit</b> )	
[21]	<b>REMOVE</b> handheld jumper at TB 340 between Pt. 11 and Pt. 12 in Auxiliary Relay Panel 1-R-73.	
		1st
		CV
[22]	<b>VERIFY</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
[23]	<b>IF</b> no further testing is to be performed on Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, <b>THEN</b>	
	<b>SECURE</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A.	

Date \_\_\_\_\_

#### 6.12 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B LOGIC

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.12 have been completed.
- [2] ENSURE Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, at 2-JB-292-1505-B, [A14V/713], is in AUTO, AND

**ENSURE** Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, is OFF.

- [3] **VERIFY** the following:
  - A. Breaker 2-BKR-30-197, 480V C&A BUILDING VENT BD 2B1-B, Compartment 2C, Red Light is OFF.
  - B. Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A14V/713], is CLOSED.
  - C. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 27, FCV-67-352 PENT ROOM CLR 2 B2 OPEN, is OFF.
- [4] **PLACE** Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, to START, **AND**

# **VERIFY** the following:

- A. Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS. (Acc Crit)
- B. Breaker 2-BKR-30-197, 480V C&A BUILDING VENT BD 2B1-B Compartment 2C, Red Light is ON.
- C. Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is OPEN. (Acc Crit)
- D. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 27, FCV-67-352 PENT ROOM CLR 2 B2 OPEN, is ON.

	Data I	Pack	age: Page of	Date
6.12			197, PENETRATION ROOM EL 713 COOLER 2B-B ontinued)	
	[5]		<b>ACE</b> Handswitch 2-HS-30-197, PENETRATION ROOM 713 COOLER 2B-B, to STOP, <b>AND</b>	
		VEF	RIFY the following:	
		A.	Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STOPS. ( <b>Acc Crit</b> )	
		В.	Breaker 2-BKR-30-197, 480V C&A BUILDING VENT BD 2B1-B, Compartment 2C, Red Light is OFF.	
		C.	Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, Window 27, FCV-67-352 PENT ROOM CLR 2 B2 OPEN, is OFF.	
	[6]		ACE Handswitch 2-HS-30-197, PENETRATION ROOM 713 COOLER 2B-B, to AUTO, AND	

**VERIFY** Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [7] HEAT Temperature Switch 2-TS-30-197A, PENETRATION ROOM EL 713 COOLER 2B-B TEMP SWITCH, [A14V/713], sensing bulb to a temperature greater than 90°F.
- [8] **VERIFY** Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS. (Acc Crit)
- [9] **IF** temperature of the sensing bulb reaches 110°F, **THEN**

**STOP** applying heat to the sensing bulb.

	Data I	Packa	ge: Page of	Date
6.12	2-CLR-30-1 LOGIC (co		97, PENETRATION ROOM EL 713 COOLER 2B-B atinued)	
	[10]	PENE	ITAIN Temperature Switch 2-TS-30-197A, ETRATION ROOM EL 713 COOLER 2B-B TEMP CH, sensing bulb at a temperature greater than 90°F.	
	[10.1] [10.2]		<b>PLACE</b> Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, to STOP, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STOPS. (Acc Crit)	
			<b>PLACE</b> Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, to AUTO, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS.	
	[11]	ROO	L Temperature Switch 2-TS-30-197A, PENETRATION M EL 713 COOLER 2B-B TEMP SWITCH, sensing bulb t resets, AND	
			<b>FY</b> Cooler 2-CLR-30-197, PENETRATION ROOM 13 COOLER 2B-B, STOPS.	
	[12]		<b>CE</b> Handswitch 2-HS-30-197, PENETRATION ROOM 13 COOLER 2B-B, to STANDBY, <b>AND</b>	
			FY Cooler 2-CLR-30-197, PENETRATION ROOM I3 COOLER 2B-B, remains OFF.	

- [13] HEAT Temperature Switch 2-TS-30-197B, PENETRATION ROOM EL 713 COOLER 2B-B TEMP SWITCH, [A14V/713], sensing bulb to a temperature greater than 95°F.
- [14] **VERIFY** Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS. (Acc Crit)

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6.12			97, PENETRATION ROOM EL 713 COOLER 2B-B ntinued)	
	[15]	IF ter	mperature of the sensing bulb reaches 115°F, <b>THEN</b>	
		STO	P applying heat to the sensing bulb.	
	[16]	PEN	ITAIN Temperature Switch 2-TS-30-197B, ETRATION ROOM EL 713 COOLER 2B-B TEMP CH, sensing bulb at a temperature greater than 95°F.	
	[16	5.1]	<b>PLACE</b> Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, to STOP, <b>AND</b>	
			VERIFY Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STOPS. (Acc Crit)	
	[16	6.2]	<b>PLACE</b> Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, to STANDBY, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS.	
	[17]	ROO	<b>L</b> Temperature Switch 2-TS-30-197B, PENETRATION M EL 713 COOLER 2B-B TEMP SWITCH, sensing bulb it resets, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-197, PENETRATION ROOM 13 COOLER 2B-B, STOPS.	
	[18]		<b>CE</b> Handswitch 2-HS-30-197, PENETRATION ROOM 13 COOLER 2B-B, to AUTO, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-197, PENETRATION ROOM 13 COOLER 2B-B, remains OFF.	

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# 6.12 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B LOGIC (continued)

NOTE						
	The following step will simulate an Auxiliary Building Isolation (ABI) Signal by placing a jumper across terminal points in Auxiliary Relay panel 1-R-78.					
[19]	<b>PLACE</b> and <b>HOLD</b> a handheld jumper at TB 838, between Pt. 3 and Pt. 4 in Auxiliary Relay Panel 1-R-78.					
		1st				
		CV				
[20]	VERIFY Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STARTS. (Acc Crit)					
[21]	<b>REMOVE</b> handheld jumper at TB 838 between Pt. 3 and Pt. 4 in Auxiliary Relay Panel 1-R-78.					
		1st				
		CV				
[22]	VERIFY Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, STOPS. (Acc Crit)					
[23]	IF no further testing is to be performed on Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, THEN					
	<b>SECURE</b> Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B.					

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	Data	Pack	kage: Page of	Date
6.13	2-CL	R-30	-201, AB EL 692 PIPE CHASE COOLER 2/	A-A LOGIC
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for Section 6.13 have been completed.	
	[2]		<b>SURE</b> Handswitch 2-HS-30-201, AB EL 692 OLER 2A-A at 2-JB-292-1555-A, [A15U/692 <b>D</b>	
			<b>SURE</b> Cooler 2-CLR-30-201, AB EL 692 PIF OLER 2A-A, is OFF.	PE CHASE
	[3]	VE	<b>RIFY</b> the following:	
		A.	Breaker 2-BKR-30-201, 480V C&A BUILDI VENT BD 2A1-A, Compartment 10C, Red	
		В.	Valve 2-FCV-67-342, PIPE CHASE COOL ERCW SUP FLOW CNTL, [A15U/692], is (	
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0-> Window 22, FCV-67-342 PIPE CHASE CL OFF.	
	[4]		<b>ACE</b> Handswitch 2-HS-30-201, AB EL 692 F OLER 2A-A, to START, <b>AND</b>	PIPE CHASE
		VEI	<b>RIFY</b> the following:	
		A.	Cooler 2-CLR-30-201, AB EL 692 PIPE CH 2A-A, STARTS. ( <b>Acc Crit</b> )	HASE COOLER
		В.	Breaker 2-BKR-30-201, 480V C&A BUILDI VENT BD 2A1-A, Compartment 10C, Red	
		C.	Valve 2-FCV-67-342, PIPE CHASE COOL ERCW SUP FLOW CNTL, is OPEN. ( <b>Acc</b>	
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-> Window 22, FCV-67-342 PIPE CHASE CL ON.	

Data Package: Page \_\_\_\_\_ of \_\_\_\_\_ Date 6.13 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A LOGIC (continued) [5] PLACE Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to STOP, AND **VERIFY** the following: A. Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STOPS. (Acc Crit) B. Breaker 2-BKR-30-201, 480V C&A BUILDING VENT BD 2A1-A, Compartment 10C, Red Light is OFF. C. Valve 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED. On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27A, D. Window 22, FCV-67-342 PIPE CHASE CLR 2 A OPEN, is

OFF. **PLACE** Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE [6] COOLER 2A-A, to AUTO, AND

VERIFY Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- **HEAT** Temperature Switch 2-TS-30-201A, AB EL 692 PIPE [7] CHASE COOLER 2A-A TEMP, [A12U/692], sensing bulb to a temperature greater than 95°F.
- [8] VERIFY Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STARTS. (Acc Crit)
- [9] IF temperature of the sensing bulb reaches 115°F, THEN

**STOP** applying heat to the sensing bulb.

	Data I	Packa	ge: Page of I	Date
6.13	2-CLF (conti			
	PIPI		ITAIN Temperature Switch 2-TS-30-201A, AB EL 692 CHASE COOLER 2A-A TEMP, sensing bulb at a erature greater than 95°F.	
	[10.1] [10.2]		<b>PLACE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to STOP, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
			<b>PLACE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to AUTO, <b>AND</b>	
			<b>VERIFY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STARTS.	
	CHA AND VER		<b>L</b> Temperature Switch 2-TS-30-201A, AB EL 692 PIPE SE COOLER 2A-A TEMP, sensing bulb until it resets,	
			<b>FY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE LER 2A-A, STOPS.	
	[12]		<b>CE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE LER 2A-A, to STANDBY, <b>AND</b>	
			<b>FY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE LER 2A-A, remains OFF.	

- [13] **HEAT** Temperature Switch 2-TS-30-201B, AB EL 692 PIPE CHASE COOLER 2A-A TEMP, [A12U/692], sensing bulb to a temperature greater than 100°F.
- [14] **VERIFY** Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STARTS. (Acc Crit)

	Data I	Packa	ge: Page of	Date	
6.13	2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A LOGIC (continued)				
	[15]	IF ter	nperature of the sensing bulb reaches 120°F, <b>THEN</b>		
		STO	P applying heat to the sensing bulb.		
	[16]	PIPE	ITAIN Temperature Switch 2-TS-30-201B, AB EL 692 CHASE COOLER 2A-A TEMP, sensing bulb at a erature greater than 100°F.		
	[16.1] [16.2]		<b>PLACE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to STOP, <b>AND</b>		
			VERIFY Cooler 2-CLR-30-201, AB EL 692 PIPE CHAS COOLER 2A-A, STOPS. (Acc Crit)	E	
			<b>PLACE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to STANDBY, <b>AND</b>		
			<b>VERIFY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHAS COOLER 2A-A, STARTS.	E	
	[17]		L Temperature Switch 2-TS-30-201B, AB EL 692 PIPE SE COOLER 2A-A TEMP, sensing bulb until it resets,		
			<b>FY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE LER 2A-A, STOPS.		
	[18]		<b>CE</b> Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE LER 2A-A, to AUTO, <b>AND</b>		
			<b>FY</b> Cooler 2-CLR-30-201-A, AB EL 692 PIPE CHASE LER 2A-A, remains OFF.		

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6.13 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A LOGIC (continued)						
	NOTE					
The following step will simulate an Auxiliary Building Isolation (ABI) Signal by placing a jumper across terminal points in Auxiliary Relay panel 1-R-73.						

<sup>[19]</sup> **PLACE** and **HOLD** a handheld jumper at TB 340, between Pt. 9 and Pt. 10 in Auxiliary Relay Panel 1-R-73.

		1st
		CV
[20]	<b>VERIFY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STARTS. ( <b>Acc Crit</b> )	
[21]	<b>REMOVE</b> handheld jumper at TB 340 between Pt. 9 and Pt. 10 in Auxiliary Relay Panel 1-R-73.	
		1st
		CV
[22]	<b>VERIFY</b> Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STOPS. ( <b>Acc Crit</b> )	
[23]	IF no further testing is to be performed on Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, THEN	
	SECURE Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A	

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6.1	4 2-CL	2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B LOGIC			
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for Section 6.14 have been completed.		
	[2]		<b>SURE</b> Handswitch 2-HS-30-202, AB EL 692 OLER 2B-B, at 2-JB-292-1556-B, [A14U/692 <b>D</b>		
			<b>SURE</b> cooler 2-CLR-30-202, AB EL 692 PIP OLER 2B-B, is OFF.	PE CHASE	
	[3]	VE	<b>RIFY</b> the following:		
		A.	Breaker 2-BKR-30-202, 480V C&A BUILDI VENT BD 2B1-B, Compartment 3B, Red Li		
		В.	Valve 2-FCV-67-344, PIPE CHASE COOL ERCW SUP FLOW CNTL, [A14U/692], is 0		
		C.	On Panel 0-M-27A, CLRS ERCW SUP, 0-> Window 29, FCV-67-344 PIPE CHASE CLI OFF.	•	
	[4]		<b>ACE</b> Handswitch 2-HS-30-202, AB EL 692 F OLER 2B-B, to START, <b>AND</b>	PIPE CHASE	
		VE	<b>RIFY</b> the following:		
		A.	2-CLR-30-202, AB EL 692 PIPE CHASE C STARTS. ( <b>Acc Crit</b> )	OOLER 2B-B,	
		В.	Breaker 2-BKR-30-202, 480V C&A BUILDI VENT BD 2B1-B, Compartment 3B, Red Li		
		C.	Valve 2-FCV-67-344, PIPE CHASE COOL ERCW SUP FLOW CNTL, is OPEN. (Acc		
		D.	On Panel 0-M-27A, CLRS ERCW SUP, 0-> Window 29, FCV-67-344 PIPE CHASE CLI ON.		

#### Date

#### 6.14 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B LOGIC (continued)

[5] PLACE Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, to STOP, AND

**VERIFY** the following:

- A. Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STOPS. (Acc Crit)
- Breaker 2-BKR-30-202, 480V C&A BUILDING B. VENT BD 2B1-B, Compartment 3B, Red Light is OFF.
- C. Valve 2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.
- On Panel 0-M-27A, CLRS ERCW SUP, 0-XX-55-27B, D. Window 29, FCV-67-344 PIPE CHASE CLR 2 B OPEN, is OFF.
- PLACE Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE [6] COOLER 2B-B, to AUTO, AND

VERIFY Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, remains OFF.

# CAUTION

The following steps will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- **HEAT** Temperature Switch 2-TS-30-202A, AB EL 692 PIPE [7] CHASE COOLER 2B-B TEMP, [A12U/692], sensing bulb to a temperature greater than 95°F.
- [8] **VERIFY** Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STARTS. (Acc Crit)
- [9] IF temperature of the sensing bulb reaches 115°F, THEN

**STOP** applying heat to the sensing bulb.

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6.14		R-30-2 inued	202, AB EL 692 PIPE CHASE COOLER 2B-B LOO I)	SIC
	PIPE		<b>NTIAN</b> Temperature Switch 2-TS-30-202A, AB EL E CHASE COOLER 2B-B TEMP, sensing bulb at a perature greater than 95°F.	692
	[10.1]		<b>PLACE</b> Handswitch 2-HS-30-20B, AB EL 692 PI CHASE COOLER 2B-B, to STOP, <b>AND</b>	PE
			VERIFY Cooler 2-CLR-30-202, AB EL 692 PIPE COOLER 2B-B, STOPS. (Acc Crit)	CHASE
	[10	0.2]	<b>PLACE</b> Handswitch 2-HS-30-202, AB EL 692 PIF CHASE COOLER 2B-B, to AUTO, <b>AND</b>	ΡE
			<b>VERIFY</b> Cooler 2-CLR-30-202, AB EL 692 PIPE COOLER 2B-B, STARTS.	CHASE
	[11]		<b>DL</b> Temperature Switch 2-TS-30-202A, AB EL 692 SE COOLER 2B-B TEMP, sensing bulb until it rese D	
			<b>IFY</b> Cooler 2-CLR-30-202, AB EL 692 PIPE CHAS DLER 2B-B, STOPS.	E
	[12]		<b>CE</b> Handswitch 2-HS-30-202, AB EL 692 PIPE CH DLER 2B-B, to STANDBY, <b>AND</b>	ASE
			<b>IFY</b> Cooler 2-CLR-30-202, AB EL 692 PIPE CHAS DLER 2B-B, remains OFF.	E

- [13] HEAT Temperature Switch 2-TS-30-202B, AB EL 692 PIPE CHASE COOLER 2B-B TEMP, [A12U/692], sensing bulb to a temperature greater than 100°F.
- [14] **VERIFY** Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STARTS. (Acc Crit)

	Data	Packa	age: Page of	Date	
6.14	2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B LOGIC (continued)				
	[15]	IF ter	mperature of the sensing bulb reaches 120°F, <b>THEN</b>		
		STO	<b>P</b> applying heat to the sensing bulb.		
	[16]	PIPE	NTAIN Temperature Switch 2-TS-30-202B, AB EL 692 E CHASE COOLER 2B-B TEMP, sensing bulb at a perature greater than 100°F.		
	[10	6.1]	<b>PLACE</b> Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, to STOP, <b>AND</b>		
			VERIFY Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STOPS. (Acc Crit)	E	
	[16.2]		<b>PLACE</b> Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, to STANDBY, <b>AND</b>		
			<b>VERIFY</b> Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STARTS.	Ξ	
	[17]		L Temperature Switch 2-TS-30-202B, AB EL 692 PIPE SE COOLER 2B-B TEMP, sensing bulb until it resets,		
			IFY Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE DLER 2B-B, STOPS.		
	[18]		<b>CE</b> Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE DLER 2B-B, to AUTO, <b>AND</b>		
			IFY Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE DLER 2B-B, remains OFF.		

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6.14 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B LOGIC (continued)				
	NOTE			
	ep will simulate an Auxiliary Building Isolation erminal points in Auxiliary Relay panel 1-R-78			
	PLACE and HOLD a handheld jumper at TB 8 and Pt. 10 in Auxiliary Relay Panel 1-R-78.	37, between Pt.		
	, ,	1st		

		CV
[20]	<b>VERIFY</b> Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STARTS. ( <b>Acc Crit</b> )	
[21]	<b>REMOVE</b> handheld jumper at TB 837 between Pt. 9 and Pt. 10 in Auxiliary Relay Panel 1-R-78.	
		1st
		CV
[22]	VERIFY Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STOPS. (Acc Crit)	
[23]	IF no further testing is to be performed on Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, THEN	
	<b>SECURE</b> Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B.	

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6.15	2-PM	ICL-3	0-175, RHR PUMP 2A-A ROOM COOLER	AIR FLOW
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for Section 6.15 have been completed.	
	[2]		<b>SURE</b> Handswitch 2-HS-30-175, RHR PUM OLER, at 2-JB-292-2506-A [A11W/676], is i	
			<b>SURE</b> Cooler 2-PMCL-30-175, RHR PUMP OLER, is ON.	2A-A ROOM
	[3]		<b>SERVE</b> operation of Cooler 2-PMCL-30-175 MP 2A-A ROOM COOLER, <b>AND</b>	5, RHR
		VEI	<b>RIFY</b> that it is in a steady state condition.	
	[4]	CO	<b>SURE</b> Cooler 2-PMCL-30-175, RHR PUMP OLER, air flow measurement has been perf M-05, <b>AND</b>	
		EN	SURE completed GTM-05 data sheets are a	attached.
	[5]	RE	CORD the air flow measurement below, AN	D
		VE	<b>RIFY</b> it meets acceptance criteria.	
			CFM Acc Crit: 6,925 CFM (6,233 - 7,617)	
	[6]		ACE Handswitch 2-HS-30-175, RHR PUMP OLER to STOP, <b>AND</b>	2A-A ROOM
			<b>RIFY</b> that Cooler 2-PMCL-30-175, RHR PUN OM COOLER STOPS.	MP 2A-A
	[7]		no further testing is to be performed on Cool MCL-30-175, RHR PUMP 2A-A ROOM CO	
			<b>CURE</b> Cooler 2-PMCL-30-175, RHR PUMP OLER.	2A-A ROOM

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6.16	2-PM(	CL-30-176, RHR PUMP 2B-B ROOM COOLER	R AIR FLOW
	[1]	<b>ENSURE</b> prerequisites listed in Section 4.0 for SubSection 6.16 have been completed.	r
	[2]	ENSURE Handswitch 2-HS-30-176, RHR PUN COOLER, at 2-JB-292-2505-B, [A11V/676], is	
		<b>ENSURE</b> Cooler 2-PMCL-30-176, RHR PUMF COOLER, is ON.	Р 2В-В ROOM
	[3]	<b>OBSERVE</b> operation of Cooler 2-PMCL-30-17 PUMP 2B-B ROOM COOLER, <b>AND</b>	'6, RHR
		VERIFY that it is in a steady state condition.	
	[4]	<b>ENSURE</b> Cooler 2-PMCL-30-176, RHR PUMF COOLER, air flow measurement has been per GTM-05, <b>AND</b>	
		ENSURE completed GTM-05 data sheets are	attached.
	[5]	<b>RECORD</b> the air flow measurement below, <b>AN</b>	1D
		VERIFY it meets acceptance criteria.	
		CFM Acc Crit: 6,925 CFM (6,233 - 7,617)	
	[6]	<b>PLACE</b> Handswitch 2-HS-30-176, RHR PUMF COOLER, to STOP, <b>AND</b>	Р 2В-В ROOM
		<b>VERIFY</b> that Cooler 2-PMCL-30-176, RHR PU ROOM COOLER, STOPS.	IMP 2B-B
	[7]	<b>IF</b> no further testing is to be performed on Coc 2-PMCL-30-176, RHR PUMP 2B-B ROOM CC	
		SECURE Cooler 2-PMCL-30-176, RHR PUMF COOLER.	P 2B-B ROOM

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Date \_\_\_\_\_

#### 6.17 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.17 have been completed.
- [2] **ENSURE** Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A10U/676], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-177, CS PUMP 2A-A ROOM COOLER, at 2-JB-292-2502-A, [A10U/676], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

L			
	Data	Package: Page of	Date
6.17	2-PN (con		
	[6]	<b>ENSURE</b> Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, air flow measurement has been performed using GTM-05, <b>AND</b>	
		<b>ENSURE</b> completed GTM-05 data sheets are attached.	
	[7]	RECORD the air flow measurement below, AND	
		VERIFY it meets acceptance criteria.	
		CFM Acc Crit: 12,200 CFM (10,980 - 13,420)	
	[8]	<b>PLACE</b> Handswitch 2-HS-30-177, CS PUMP 2A-A ROOM COOLER, to STOP, <b>AND</b>	
		VERIFY the following:	
		A. Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, STOPS.	
		B. Valve 2-FCV-67-184, CSP ROOM COOLER 2A-A ERCV SUP FLOW CNTL, is CLOSED.	V
	[9]	IF no further testing is to be performed on Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER, THEN	
		SECURE Cooler 2-PMCL-30-177, CS PUMP 2A-A ROOM COOLER.	

Date \_\_\_\_\_

#### 6.18 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.18 have been completed.
- [2] **ENSURE** Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A10U/676], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM COOLER, at 2-JB-292-2501-B, [A11U/676], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

[6] **ENSURE** Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, air flow measurement has been performed using GTM-05, **AND** 

**ENSURE** completed GTM-05 data sheets are attached.

# 6.18 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER AIR FLOW (continued)

[7] **RECORD** the air flow measurement below, **AND** 

**VERIFY** it meets acceptance criteria.

CFM

Acc Crit: 12,200 CFM (10,980 - 13,420)

[8] **PLACE** Handswitch 2-HS-30-178, CS PUMP 2B-B ROOM COOLER, to STOP, **AND** 

**VERIFY** the following:

- A. Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, STOPS.
- B. Valve 2-FCV-67-186, CSP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED
- [9] **IF** no further testing is to be performed on Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER, **THEN**

**SECURE** Cooler 2-PMCL-30-178, CS PUMP 2B-B ROOM COOLER.

Date \_\_\_\_\_

#### 6.19 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.19 have been completed.
- [2] **ENSURE** Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A9V/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-180, SIS PUMP 2A-A ROOM COOLER, at 2-JB-292-1197-A, [A10V/692], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-176, SIP ROOM COOLER 2A-A ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

[6] **ENSURE** Cooler 2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, air flow measurement has been performed using GTM-05, **AND** 

**ENSURE** completed GTM-05 data sheets are attached.

	WBN Unit 2		Unit 2 Auxiliary Building ESF Coolers	2-PTI-030A-01 Rev. 0000 Page 101 of 144	
	Data	Pacl	kage: Page of	Date	
6.19		2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER AIR FLOW (continued)			
	[7]	[7] <b>RECORD</b> the air flow measurement below, <b>AND</b>			
		VE	<b>RIFY</b> it meets acceptance criteria.		
			CFM Acc Crit: 7,850 CFM (7,065 - 8,635)		
	[8]		ACE Handswitch 2-HS-30-180, SIS PUMP 2 OLER, to STOP, <b>AND</b>	2A-A ROOM	
		VE	<b>RIFY</b> the following:		
		Α.	Cooler 2-PMCL-30-180, SIS PUMP 2A-A F COOLER, STOPS.	ROOM	
		В.	Valve 2-FCV-67-176, SIP ROOM COOLEF SUP FLOW CNTL, is CLOSED.	R 2A-A ERCW	
	[9]	<ul> <li>[9] IF no further testing is to be performed on Cooler</li> <li>2-PMCL-30-180, SIS PUMP 2A-A ROOM COOLER, THEN</li> </ul>			
			<b>CURE</b> Cooler 2-PMCL-30-180, SIS PUMP 2 OLER.	2A-A ROOM	

Date \_\_\_\_\_

#### 6.20 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.20 have been completed.
- [2] **ENSURE** Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A9V/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-179, SIS PUMP 2B-B ROOM COOLER, at 2-JB-292-1198-B, [A10U/692], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-182, SIP ROOM COOLER 2B-B ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

[6] **ENSURE** Cooler 2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER, air flow measurement has been performed using GTM-05, **AND** 

**ENSURE** completed GTM-05 data sheets are attached.

	WBN Unit 2		Unit 2 Auxiliary Building ESF Coolers	2-PTI-030A-01 Rev. 0000 Page 103 of 144
	Data	Pack	kage: Page of	Date
6.20	2-PMCL-30-179, SIS PUMP 2B-B ROOM COOLER AIR FLOW (continued)			
	[7]	[7] <b>RECORD</b> the air flow measurement below, <b>AND</b>		
		VE	<b>RIFY</b> it meets acceptance criteria.	
			CFM Acc Crit: 7,850 CFM (7,065 - 8,635)	
	[8]		<b>ACE</b> Handswitch 2-HS-30-179, SIS PUMP 2 OLER, to STOP, <b>AND</b>	2B-B ROOM
		VE	<b>RIFY</b> the following:	
		A.	Cooler 2-PMCL-30-179, SIS PUMP 2B-B F COOLER STOPS.	ROOM
		В.	Valve 2-FCV-67-182, SIP ROOM COOLEF SUP FLOW CNTL, is CLOSED.	R 2B-B ERCW
	[9]		no further testing is to be performed on Cool MCL-30-179, SIS PUMP 2B-B ROOM COC	
			<b>CURE</b> Cooler 2-PMCL-30-179, SIS PUMP 2 OLER.	2B-B ROOM

Date \_\_\_\_\_

#### 6.21 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.21 have been completed.
- [2] ENSURE Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, at 2-JB-292-1191-A, [A12T/692], is in START, AND

**ENSURE** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, is ON.

[3] **OBSERVE** operation of Cooler 2-PMCL-30-183-A, CENT CHARGING PUMP 2A-A ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

[4] **ENSURE** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, air flow measurement has been performed using GTM-05, **AND** 

**ENSURE** completed GTM-05 data sheets are attached.

[5] **RECORD** the air flow measurement below, **AND** 

**VERIFY** it meets acceptance criteria.

CFM Acc Crit: 9,200 CFM (8,280 - 10,120)

[6] **PLACE** Handswitch 2-HS-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, to STOP, **AND** 

**VERIFY** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, STOPS.

Date \_\_\_\_\_

#### 6.21 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER AIR FLOW (continued)

[7] **IF** no further testing is to be performed on Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER, **THEN** 

**SECURE** Cooler 2-PMCL-30-183, CENT CHARGING PUMP 2A-A ROOM COOLER.

Date

#### 6.22 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER AIR FLOW

- [1] **VERIFY** prerequisites listed in Section 4.0 for SubSection 6.22 have been completed.
- [2] **ENSURE** Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, at 2-JB-292-1192-B, [A11U/692], is in START, **AND**

**ENSURE** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, is ON.

[3] **OBSERVE** operation of Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, **AND** 

**VERIFY** that it is in a steady state condition.

[4] **ENSURE** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, air flow measurement has been performed using GTM-05, **AND** 

**ENSURE** completed GTM-05 data sheets are attached.

[5] **RECORD** the air flow measurement below, **AND** 

**VERIFY** it meets acceptance criteria.

CFM Acc Crit: 9,200 CFM (8,280 - 10,120)

[6] **PLACE** Handswitch 2-HS-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, to STOP, **AND** 

**VERIFY** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, STOPS.

Date \_\_\_\_\_

#### 6.22 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER AIR FLOW (continued)

[7] **IF** no further testing is to be performed on Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER, **THEN** 

**SECURE** Cooler 2-PMCL-30-182, CENT CHARGING PUMP 2B-B ROOM COOLER.

Date \_\_\_\_\_

#### 6.23 2-PMCL-30-186, PENETRATION ROOM EL 692 COOLER 2A-A AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.23 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A is OFF, **AND**

**ENSURE** Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A12U/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] PLACE Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, at 2-JB-292-1553-A, [A12U/692], to START, AND

> **MEASURE** the stroke OPEN time of Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

	Data	Package: Page of	Date
6.23		CL-30-186, PENETRATION ROOM EL 692 COOLER 2A-A LOW (continued)	
	[5]	<b>OBSERVE</b> operation of Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, <b>AND</b>	
		VERIFY that it is in a steady state condition.	
	[6]	<b>ENSURE</b> Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, air flow measurement has been performed using GTM-05, <b>AND</b>	
		ENSURE completed GTM-05 data sheets are attached.	
	[7]	RECORD the air flow measurement below, AND	
		VERIFY it meets acceptance criteria.	
		CFM Acc Crit: 4,250 CFM (3,825 - 4,675)	
	[8]	<b>PLACE</b> Handswitch 2-HS-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, to STOP, <b>AND</b>	
		VERIFY the following:	
		A. Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, STOPS.	
		B. Valve 2-FCV-67-346, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.	
	[9]	IF no further testing is to be performed on Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A, THEN	
		SECURE Cooler 2-CLR-30-186, PENETRATION ROOM EL 692 COOLER 2A-A.	

Date \_\_\_\_\_

#### 6.24 2-PMCL-30-187, PENETRATION ROOM EL 692 COOLER 2B-B AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.24 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B is OFF, **AND**

**ENSURE** Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A12V/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, at 2-JB-292-1554-B, [A12V/692], to START, **AND** 

> **MEASURE** the stroke OPEN time of Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, **AND** 

**VERIFY** that it is in a steady state condition.

	Data	Package: Page of	Date
6.24		ICL-30-187, PENETRATION ROOM EL 692 COOLER 2B-B FLOW (continued)	
	[6]	<b>ENSURE</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, air flow measurement has been performed using GTM-05, <b>AND</b>	
		ENSURE completed GTM-05 data sheets are attached.	
	[7]	RECORD the air flow measurement below, AND	
		VERIFY it meets acceptance criteria.	
		CFM Acc Crit: 4,250 CFM (3,825 - 4,675)	
	[8]	<b>PLACE</b> Handswitch 2-HS-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, to STOP, <b>AND</b>	
		VERIFY the following	
		A. Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, STOPS.	
		B. Valve 2-FCV-67-348, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.	
	[9]	IF no further testing is to be performed on Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B, THEN	
		<b>SECURE</b> Cooler 2-CLR-30-187, PENETRATION ROOM EL 692 COOLER 2B-B.	

Date \_\_\_\_\_

#### 6.25 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.25 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, [A14V/713], is CLOSED.

### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, at 2-JB-292-1503-A, [A14V/713], to START, **AND** 

> **MEASURE** the stroke OPEN time of Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, **AND** 

**VERIFY** that it is in a steady state condition.

J			
	Data	Package: Page of	Date
6.25		R-30-196, PENETRATION ROOM EL 713 COOLER 2A-A AIF W (continued)	R
	[6]	<b>ENSURE</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, air flow measurement has been performed using GTM-05, <b>AND</b>	
		<b>ENSURE</b> completed GTM-05 data sheets are attached.	
	[7]	<b>RECORD</b> the air flow measurement below, <b>AND</b>	
		VERIFY it meets acceptance criteria.	
		CFM Acc Crit: 3,950 CFM (3,555 - 4,345)	
	[8]	<b>PLACE</b> Handswitch 2-HS-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, to STOP, <b>AND</b>	
		VERIFY the following:	
		A. Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, STOPS.	
		B. Valve 2-FCV-67-350, PENT ROOM COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.	
	[9]	IF no further testing is to be performed on Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A, THEN	
		<b>SECURE</b> Cooler 2-CLR-30-196, PENETRATION ROOM EL 713 COOLER 2A-A.	

Date \_\_\_\_\_

#### 6.26 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.26 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, [A14V/713], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] PLACE Handswitch 2-HS-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, at 2-JB-292-1505-B, [A14V/713], to START, AND

> **MEASURE** the stroke OPEN time of Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-352, PENT ROOM COOLER 2B-B ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-CLR-30-197, PENETRATION ROOM EL 713 COOLER 2B-B, **AND** 

**VERIFY** that it is in a steady state condition.

				Page 115 of 1	44
	Data	a Pac	kage: Page of		Date
6.26			0-197, PENETRATION ROOM EL 713 CO ontinued)	OLER 2B-B AIR	
	[6]	EL	<b>ISURE</b> Cooler 2-CLR-30-197, PENETRAT 713 COOLER 2B-B, air flow measuremer rformed using GTM-05, <b>AND</b>		
		EN	ISURE completed GTM-05 data sheets are	e attached.	
	[7]	RE	CORD the air flow measurement below, A	ND	
		VE	<b>RIFY</b> it meets acceptance criteria.		
			CFM Acc Crit: 3,950 CFM (3,555 - 4,345)		
	[8]		ACE Handswitch 2-HS-30-197, PENETRA 713 COOLER 2B-B, to STOP, AND	ATION ROOM	
		VE	<b>RIFY</b> the following:		
		A.	Cooler 2-CLR-30-197, PENETRATION F COOLER 2B-B, STOPS.	ROOM EL 713	
		В.	Valve 2-FCV-67-352, PENT ROOM COO ERCW SUP FLOW CNTL, is CLOSED.	OLER 2B-B	
	[9]	2-0	no further testing is to be performed on Co CLR-30-197, PENETRATION ROOM EL 7 -B, <b>THEN</b>		
		SE	CURE Cooler 2-CLR-30-197, PENETRAT	ION ROOM	

EL 713 COOLER 2B-B.

Date \_\_\_\_\_

## 6.27 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.27 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL, [A15U/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, at 2-JB-292-1555-A, [A15U/692], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, **AND** 

**VERIFY** that it is in a steady state condition.

[6] ENSURE Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, air flow measurement has been performed using GTM-05, AND

**ENSURE** completed GTM-05 data sheets are attached.

# 6.27 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A AIR FLOW (continued)

[7] **RECORD** the air flow measurement below, **AND** 

**VERIFY** it meets acceptance criteria.

CFM

Acc Crit: 5,400 CFM (4,860 - 5,940)

[8] **PLACE** Handswitch 2-HS-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, to STOP, **AND** 

**VERIFY** the following:

- A. Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, STOPS.
- B. Valve 2-FCV-67-342, PIPE CHASE COOLER 2A-A ERCW SUP FLOW CNTL, is CLOSED.
- [9] **IF** no further testing is to be performed on Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A, **THEN**

**SECURE** Cooler 2-CLR-30-201, AB EL 692 PIPE CHASE COOLER 2A-A.

Date \_\_\_\_\_

## 6.28 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B AIR FLOW

- [1] **ENSURE** prerequisites listed in Section 4.0 for SubSection 6.28 have been completed.
- [2] **ENSURE** Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, is OFF, **AND**

**ENSURE** Valve 2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL, [A14U/692], is CLOSED.

#### NOTE

The following steps require valve stroke timing locally at the valve. Local valve stroke timing begins with the initiating signal and is concluded with the completion of valve stem movement.

[3] **PLACE** Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, at 2-JB-292-1556-B, [A14U/692], to START, **AND** 

**MEASURE** the stroke OPEN time of Valve 2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL.

[4] **RECORD** stroke OPEN time of Valve 2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL, **AND** 

**VERIFY** it meets acceptance criteria.

seconds

M&TE:

Acc Crit: 10 seconds maximum

[5] **OBSERVE** operation of Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, **AND** 

**VERIFY** it is in a steady state condition.

[6] ENSURE Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, air flow measurement has been performed using GTM-05, AND

**ENSURE** completed GTM-05 data sheets are attached.

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Date

#### 6.28 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B AIR FLOW (continued)

[7] **RECORD** the air flow measurement below, **AND** 

**VERIFY** it meets acceptance criteria.

CFM

Acc Crit: 5,400 CFM (4,860 - 5,940)

[8] PLACE Handswitch 2-HS-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, to STOP, AND

**VERIFY** the following:

- A. Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, STOPS.
- B. Valve 2-FCV-67-344, PIPE CHASE COOLER 2B-B ERCW SUP FLOW CNTL, is CLOSED.
- **IF** no further testing is to be performed on Cooler [9] 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B, THEN

SECURE Cooler 2-CLR-30-202, AB EL 692 PIPE CHASE COOLER 2B-B.

	WBN Unit 2		Unit 2 Auxiliary Building ESF Coolers	2-PTI-030A-01 Rev. 0000 Page 120 of 144
	Data	Pacl	kage: Page of	Date
6.29	HIGH	IENE	ERGY LINE BREAK (HELB) DETECTION.	
	[1]		<b>SURE</b> prerequisites listed in Section 4.0 for Section 6.29 have been completed.	
	[2]		<b>RIFY</b> 2-XA-55-6A-113B, RHR/CVCS HI TEI EAK, is CLEAR ( <b>NOT</b> LIT).	MP PIPE
	[3]	Par	<b>RIFY</b> the Unit 2 Alarm Events Display Screened nel 2-M-16A indicates the following inputs an RMAL (Green):	
		Α.	113-B CVC LTDN HX RM HI TEMP PIPE (TS-30-5235 A/B)	BREAK
		В.	113-B RHR PUMP RM A HI TEMP PIPE E (TS-30-5236 A/B)	BREAK
		C.	113-B RHR PUMP RM B HI TEMP PIPE E (TS-30-5237 A/B)	BREAK
		D.	113-B RHR HX RM A HI TEMP PIPE BRE (TS-30-5238 A/B)	AK
		E.	113-B RHR HX RM B HI TEMP PIPE BRE (TS-30-5239 A/B)	AK

## 6.29 HIGH ENERGY LINE BREAK (HELB) DETECTION. (continued)

[4] **VERIFY** The following Indicating Lights on Panel 2-M-6, are OFF:

A.	2-XI-30-5235A, LETDOWN HX PIPE BREAK	
В.	2-XI-30-5235B, LETDOWN HX PIPE BREAK	
C.	2-XI-30-5236A, RHR PMP RM A PIPE BREAK	
D.	2-XI-30-5236B, RHR PMP RM A PIPE BREAK	
E.	2-XI-30-5237A, RHR PMP RM B PIPE BREAK	
F.	2-XI-30-5237B, RHR PMP RM B PIPE BREAK	
G.	2-XI-30-5238A, RHR HX A RM PIPE BREAK	
H.	2-XI-30-5238B, RHR HX A RM PIPE BREAK	
I.	2-XI-30-5239A, RHR HX B RM PIPE BREAK	
J.	2-XI-30-5239B, RHR HX B RM PIPE BREAK	

Date \_\_\_\_\_

NOTE

SubSections 6.29.2 through 6.29.6 may be performed in any order provided the steps within are performed in the order written.

## 6.29.2 CVCS LETDOWN HEAT EXCHANGER ROOM HELB DETECTION

## CAUTION

The following step will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [1] **HEAT** Temperature Switch 2-TS-30-5235A, CVCS LETDOWN HT EXCH RM HI TEMP SW, on Panel 2-L-730A, [A10U/737], sensing bulb to a temperature greater than 144°F.
- [2] **IF** temperature of the sensing bulb reaches 165°F, **THEN**

**STOP** applying heat to the sensing bulb.

- [3] **VERIFY** the following
  - A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. (Acc Crit)
  - B. Unit 2 Alarm Events Display Screen indicates 113-B CVC LTDN HX RM HI TEMP PIPE BREAK (TS-30-5235 A/B), is in ALARM (Red). (Acc Crit)
  - C. Indicating Light 2-XI-30-5235A, LETDOWN HX PIPE BREAK, is ON. (**Acc Crit**)

Date \_\_\_\_\_

# 6.29.2 CVCS LETDOWN HEAT EXCHANGER ROOM HELB DETECTION (continued)

[4] **COOL** Temperature Switch 2-TS-30-5235A, CVCS LETDOWN HT EXCH RM HI TEMP SW, sensing bulb until it resets, **AND** 

**VERIFY** the following:

- A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.
- B. Unit 2 Alarm Events Display Screen indicates 113-B CVC LTDN HX RM HI TEMP PIPE BREAK (TS-30-5235 A/B), is NORMAL (Green).
- C. Indicating Light 2-XI-30-5235A, LETDOWN HX PIPE BREAK, is OFF.

## CAUTION

The following step will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

- [5] HEAT Temperature Switch 2-TS-30-5235B, CVCS LETDOWN HT EXCH RM HI TEMP SW, on Panel 2-L-730B, [A10U/737], sensing bulb to a temperature greater than 144°F.
- [6] **IF** temperature of the sensing bulb reaches 165°F, **THEN**

**STOP** applying heat to the sensing bulb.

- [7] **VERIFY** the following
  - A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. (**Acc Crit**)
  - B. Unit 2 Alarm Events Display Screen indicates 113-B CVC LTDN HX RM HI TEMP PIPE BREAK (TS-30-5235 A/B), is in ALARM (Red). (Acc Crit)
  - C. Indicating Light 2-XI-30-5235B, LETDOWN HX PIPE BREAK, is ON. (Acc Crit)

Date \_\_\_\_\_

# 6.29.2 CVCS LETDOWN HEAT EXCHANGER ROOM HELB DETECTION (continued)

[8] **COOL** Temperature Switch 2-TS-30-5235A, CVCS LETDOWN HT EXCH RM HI TEMP SW, sensing bulb until resets, **AND** 

**VERIFY** the following:

- A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.
- B. Unit 2 Alarm Events Display Screen indicates 113-B CVC LTDN HX RM HI TEMP PIPE BREAK (TS-30-5235 A/B), is NORMAL (Green).
- C. Indicating Light 2-XI-30-5235B, LETDOWN HX PIPE BREAK, is OFF.

Date \_\_\_\_\_

## 6.29.3 RHR PUMP ROOM 2A HELB DETECTION

#### CAUTION

[1]	<b>HEAT</b> Temperature Switch 2-TS-30-5236A, RHR PUMP RM A HI TEMP SW, on Panel 2-L-731A, [A10W/676], sensing bulb to a temperature greater than 144°F.				
[2]	IF t	emperature of the sensing bulb reaches 165°F, <b>THEN</b>			
	ST	<b>OP</b> applying heat to the sensing bulb.			
[3]	VE	RIFY the following			
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )			
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM A HI TEMP PIPE BREAK (TS-30-5236 A/B), is in ALARM (Red). (Acc Crit)			
	C.	Indicating Light 2-XI-30-5236A, RHR PMP RM A PIPE BREAK, is ON. ( <b>Acc Crit</b> )			
[4]		<b>OL</b> Temperature Switch 2-TS-30-5236A, RHR PUMP RM A TEMP SW, sensing bulb until it resets, <b>AND</b>			
	VE	<b>RIFY</b> the following:			
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.			
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM A HI TEMP PIPE BREAK (TS-30-5236 A/B), is NORMAL (Green).			
	C.	Indicating Light 2-XI-30-5236A, RHR PMP RM A PIPE BREAK, is OFF.			

Date \_\_\_\_\_

## 6.29.3 RHR PUMP ROOM 2A HELB DETECTION (continued)

## CAUTION

[5]	<b>HEAT</b> Temperature Switch 2-TS-30-5236B, RHR PUMP RM A HI TEMP SW, on Panel 2-L-731B, [A10W/676], sensing bulb to a temperature greater than 144°F.					
[6]	IF temperature of the sensing bulb reaches 165°F, THEN					
	STO	<b>OP</b> applying heat to the sensing bulb.				
[7]	VEF	RIFY the following				
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )				
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM A HI TEMP PIPE BREAK (TS-30-5236 A/B), is in ALARM (Red). (Acc Crit)				
	C.	Indicating Light 2-XI-30-5236B, RHR PMP RM A PIPE BREAK, is ON. ( <b>Acc Crit</b> )				
[8]		<b>OL</b> Temperature Switch 2-TS-30-5236B, RHR PUMP RM A EMP SW, sensing bulb until it resets, <b>AND</b>				
	VEF	RIFY the following:				
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.				
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM A HI TEMP PIPE BREAK (TS-30-5236 A/B), is NORMAL (Green).				
	C.	Indicating Light 2-XI-30-5236B, RHR PMP RM A PIPE BREAK, is OFF.				

Date \_\_\_\_\_

## 6.29.4 RHR PUMP ROOM 2B HELB DETECTION

#### CAUTION

[1]	<b>HEAT</b> Temperature Switch 2-TS-30-5237A, RHR PUMP RM B HI TEMP SW, on Panel 2-L-732A, [A10V/676], sensing bulb to a temperature greater than 144°F.			
[2]	IF t	emperature of the sensing bulb reaches 165°F, <b>THEN</b>		
	ST	<b>OP</b> applying heat to the sensing bulb.		
[3]	VE	RIFY the following		
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )		
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM B HI TEMP PIPE BREAK (TS-30-5237 A/B), is in ALARM (Red). (Acc Crit)		
	C.	Indicating Light 2-XI-30-5237A, RHR PMP RM B PIPE BREAK, is ON. ( <b>Acc Crit</b> )		
[4]		<b>OL</b> Temperature Switch 2-TS-30-5236A, RHR PUMP RM B TEMP SW, sensing bulb until it resets, <b>AND</b>		
	VE	RIFY the following:		
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.		
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM B HI TEMP PIPE BREAK (TS-30-5237 A/B), is NORMAL (Green).		
	C.	Indicating Light 2-XI-30-5237A, RHR PMP RM B PIPE BREAK, is OFF.		

Date \_\_\_\_\_

## 6.29.4 RHR PUMP ROOM 2B HELB DETECTION (continued)

## CAUTION

[5]	<b>HEAT</b> Temperature Switch 2-TS-30-5237B, RHR PUMP RM B HI TEMP SW, on Panel 2-L-732B, [A10V/676], sensing bulb to a temperature greater than 144°F.				
[6]	IF te	emperature of the sensing bulb reaches 165°F, <b>THEN</b>			
	STO	<b>OP</b> applying heat to the sensing bulb.			
[7]	VEF	RIFY the following			
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )			
	B.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM B HI TEMP PIPE BREAK (TS-30-5237 A/B), is in ALARM (Red). (Acc Crit)			
	C.	Indicating Light 2-XI-30-5237B, RHR PMP RM B PIPE BREAK, is ON. ( <b>Acc Crit</b> )			
[8]		<b>OL</b> Temperature Switch 2-TS-30-5237B, RHR PUMP RM B EMP SW, sensing bulb until it resets, <b>AND</b>			
	VERIFY the following:				
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.			
	B.	Unit 2 Alarm Events Display Screen indicates 113-B RHR PUMP ROOM B HI TEMP PIPE BREAK (TS-30-5237 A/B), is NORMAL (Green).			
	C.	Indicating Light 2-XI-30-5237B, RHR PMP RM B PIPE BREAK, is OFF.			

Date \_\_\_\_\_

## 6.29.5 RHR HEAT EXCHANGER ROOM 2A HELB DETECTION

## CAUTION

The following step will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

[1]	HEAT Temperature Switch 2-TS-30-5238A, RHR HEAT
	EXCH A ROOM HI TEMP SW, on 2-L-733A, [A10V/713],
	sensing bulb to greater than 134°F.

[2] **IF** temperature of the sensing bulb reaches 155°F, **THEN** 

**STOP** applying heat to the sensing bulb.

- [3] **VERIFY** the following
  - A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. (**Acc Crit**)
  - B. Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM A HI TEMP PIPE BREAK (TS-30-5238 A/B), is in ALARM (Red). (Acc Crit)
  - C. Indicating Light 2-XI-30-5238A, RHR HX A RM PIPE BREAK, is ON. (**Acc Crit**)
- [4] **COOL** Temperature Switch 2-TS-30-5238A, RHR HEAT EXCH A ROOM HI TEMP SW, sensing bulb until it resets, **AND**

**VERIFY** the following:

- A. 2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.
- B. Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM A HI TEMP PIPE BREAK (TS-30-5238 A/B), is NORMAL (Green).
- C. Indicating Light 2-XI-30-5238A, RHR HX A RM PIPE BREAK, is OFF.

Date \_\_\_\_\_

# 6.29.5 RHR HEAT EXCHANGER ROOM 2A HELB DETECTION (continued)

## CAUTION

The following step will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.

[5]	<b>HEAT</b> Temperature Switch 2-TS-30-5238B, RHR HEAT EXCH A ROOM HI TEMP SW, on 2-L-733B, [A10W/713], sensing bulb to greater than 134°F.				
[6]	IF	temperature of the sensing bulb reaches 155°F, <b>THEN</b>			
	ST	<b>OP</b> applying heat to the sensing bulb.			
[7]	VE	<b>RIFY</b> the following			
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )			
	B.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM A HI TEMP PIPE BREAK (TS-30-5238 A/B), is in ALARM (Red). ( <b>Acc Crit</b> )			
	C.	Indicating Light 2-XI-30-5238B, RHR HX A RM PIPE BREAK, is ON. ( <b>Acc Crit</b> )			
[8]		<b>DOL</b> Temperature Switch 2-TS-30-5238B, RHR HEAT CCH A ROOM HI TEMP SW, sensing bulb until it resets, ID			
	VE	<b>RIFY</b> the following:			
	Α.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.			
	B.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM A HI TEMP PIPE BREAK (TS-30-5238 A/B), is NORMAL (Green).			

C. Indicating Light 2-XI-30-5238B, RHR HX A RM PIPE BREAK, is OFF.

Date \_\_\_\_\_

## 6.29.6 RHR HEAT EXCHANGER ROOM 2B HELB DETECTION

CAUTION							
The following step will simulate a high ambient room temperature using an electric heatgun. Heat the temperature switch sensing bulb SLOWLY while monitoring the bulb temperature with a surface temperature probe.							
[1]	HEAT Temperature Switch 2-TS-30-5239A, RHR HEAT EXCH B ROOM HI TEMP SW, on 2-L-734A, [A10V/713], sensing bulb to greater than 134°F.						
[2]	IF t	temperature of the sensing bulb reaches 155°F, <b>THEN</b>					
	ST	<b>OP</b> applying heat to the sensing bulb.					
[3]	VE	<b>RIFY</b> the following					
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )					
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM B HI TEMP PIPE BREAK (TS-30-5239 A/B), is in ALARM (Red). ( <b>Acc Crit</b> )					
	C.	Indicating Light 2-XI-30-5239A, RHR HX B RM PIPE BREAK, is ON. ( <b>Acc Crit</b> )					
[4]		OOL Temperature Switch 2-TS-30-5239A, RHR HEAT CCH B ROOM HI TEMP SW, sensing bulb until it resets, ID					
	VE	<b>RIFY</b> the following:					
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.					
	B.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM B HI TEMP PIPE BREAK (TS-30-5239 A/B), is NORMAL (Green).					
	C.	Indicating Light 2-XI-30-5239A, RHR HX B RM PIPE BREAK, is OFF.					

BREAK, is OFF.

Date \_\_\_\_\_

#### **RHR HEAT EXCHANGER ROOM 2B HELB DETECTION** 6.29.6 (continued)

## CAUTION

[5]	<b>HEAT</b> Temperature Switch 2-TS-30-5239B, RHR HEAT EXCH B ROOM HI TEMP SW, on 2-L-734B, [A10U/713], sensing bulb to greater than 134°F.					
[6]	IF temperature of the sensing bulb reaches 155°F, THEN					
	STOP applying heat to the sensing bulb.					
[7]	VEF	RIFY the following				
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, ALARMS. ( <b>Acc Crit</b> )				
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM B HI TEMP PIPE BREAK (TS-30-5239 A/B), is in ALARM (Red). ( <b>Acc Crit</b> )				
	C.	Indicating Light 2-XI-30-5239B, RHR HX B RM PIPE BREAK, is ON. ( <b>Acc Crit</b> )				
[8]		<b>OL</b> Temperature Switch 2-TS-30-5239B, RHR HEAT CH B ROOM HI TEMP SW, sensing bulb until it resets, <b>D</b>				
	VE	RIFY the following:				
	A.	2-XA-55-6A-113B, RHR/CVCS HI TEMP PIPE BREAK, CLEARS.				
	В.	Unit 2 Alarm Events Display Screen indicates 113-B RHR HX ROOM B HI TEMP PIPE BREAK (TS-30-5239 A/B), is NORMAL (Green).				
	C.	Indicating Light 2-XI-30-5239B, RHR HX B RM PIPE				

Date \_\_\_\_\_

### 7.0 POST PERFORMANCE ACTIVITIES

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

## 8.0 RECORDS

A. QA Records

Completed Test Package.

B. Non-QA Records

None

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#### Appendix A (Page 1 of 4)

## 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)
SMP-4.0			
SMP-8.0			
SMP-9.0			
0-SOI-67.01			
GTM-05			
GTM-03			
2-TSD-030A-01			
FSAR			
Section 9.2.1			
Section 9.4.5.3			
Table 14.2-1 Shts 4 & 5, 36 & 37 of 90			
2-PTI-067-02			
2-PTI-062-01			
2-PTI-063-5A			
2-PTI-063-05B			
2-PTI-072-01			
2-PTI-074-01			
2-PTI-262-01			
2-PTI-262-02			
G-37			
0-PI-OPS-1.1			

## Appendix A (Page 2 of 4)

## TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Data Package: Page \_\_\_\_\_ of \_\_\_\_\_

Date				

PROCEDURE/ INSTRUCTION	<b>REVISION/CHANGES</b>	IMPACT Yes/No	INITIAL AND DATE (N/A for no change)
WBN2-30AB-4001			
WBN2-67-4002			

### Appendix A (Page 3 of 4)

## TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Data Package: Page \_\_\_\_\_ of \_\_\_\_\_

PROCEDURE/ INSTRUCTION	REVISION/CHANGES	IMPACT Yes/No	INITIAL AND DATE (N/A for no change)
SSD-2-TS-30-175			
SSD-2-TS-30-176			
SSD-2-TS-30-177			
SSD-2-TS-30-178			
SSD-2-TS-30-179			
SSD-2-TS-30-180			
SSD-2-TS-30-182			
SSD-2-TS-30-183			
SSD-2-TS-30-186A			
SSD-2-TS-30-186B			
SSD-2-TS-30-187A			
SSD-2-TS-30-187B			
SSD-2-TS-30-196A			
SSD-2-TS-30-196B			
SSD-2-TS-30-197A			
SSD-2-TS-30-197B			
SSD-2-TS-30-201A			
SSD-2-TS-30-201B			
SSD-2-TS-30-202A			
SSD-2-TS-30-202B			

### Appendix A (Page 4 of 4)

## TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Data Package: Page \_\_\_\_ of \_\_\_\_

PROCEDURE/ INSTRUCTION	<b>REVISION/CHANGES</b>	IMPACT Yes/No	INITIAL AND DATE (N/A for no change)
SSD-2-TS-30-5235A			
SSD-2-TS-30-5235B			
SSD-2-TS-30-5236A			
SSD-2-TS-30-5236B			
SSD-2-TS-30-5237A			
SSD-2-TS-30-5237B			
SSD-2-TS-30-5238A			
SSD-2-TS-30-5238B			
SSD-2-TS-30-5239A			
SSD-2-TS-30-5239B			

## Appendix B (Page 1 of 1)

## **TEMPORARY CONDITION LOG**

Data Package: Page \_\_\_\_ of \_\_\_\_

Date \_\_\_\_\_

## NOTE

These steps will be N/A'd if no temporary condition existed. Additional copies of this table may be made as necessary.

ITEM	TEMPORARY CONDITION		PERFORMED	RETURNED TO NOR		
No.	DESCRIPTION	Step No.	Performed By/Date CV By/Date	Step No.	Returned By/Date CV By/Date	
				-		
				-		
				-		
				-		
				-		
				1		

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## Appendix C (Page 1 of 3)

## PERMANENT PLANT INSTRUMENTATION LOG

Data Package: Page \_\_\_\_ of \_\_\_\_

INSTRUMENT OR INSTRUMENT	CAL DUE DATE	FILLED AND VENTED <sup>1</sup>	PLACED IN SERVICE <sup>1</sup>	USED FOR QUANTITATIVE ACC CRIT		QUANTITATIVE		QUANTITATIVE				POST-TEST CAL DATE <sup>2</sup>	POST-TEST CALIBRATION ACCEPTABLE <sup>2</sup>
LOOP #		INIT/DATE	INIT/DATE	YES	NO		INITIAL/DATE						
2-TS-30-175		N/A	N/A		NO	N/A	N/A						
2-TS-30-176		N/A	N/A		NO	N/A	N/A						
2-TS-30-177		N/A	N/A		NO	N/A	N/A						
2-TS-30-178		N/A	N/A		NO	N/A	N/A						
2-TS-30-179		N/A	N/A		NO	N/A	N/A						
2-TS-30-180		N/A	N/A		NO	N/A	N/A						
2-TS-30-182		N/A	N/A		NO	N/A	N/A						
2-TS-30-183		N/A	N/A		NO	N/A	N/A						

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## Appendix C (Page 2 of 3)

## PERMANENT PLANT INSTRUMENTATION LOG

Data Package: Page \_\_\_\_ of \_\_\_\_

INSTRUMENT OR INSTRUMENT	CAL DUE DATE	FILLED AND VENTED <sup>1</sup>	PLACED IN SERVICE <sup>1</sup>	USED FOR QUANTITATIVE ACC CRIT		QUANTITATIVE		POST-TEST CAL DATE <sup>2</sup>	POST-TEST CALIBRATION ACCEPTABLE <sup>2</sup>
LOOP #		INIT/DATE	INIT/DATE	YES	NO		INITIAL/DATE		
2-TS-30-186A		N/A	N/A		NO	N/A	N/A		
2-TS-30-186B		N/A	N/A		NO	N/A	N/A		
2-TS-30-187A		N/A	N/A		NO	N/A	N/A		
2-TS-30-187B		N/A	N/A		NO	N/A	N/A		
2-TS-30-196A		N/A	N/A		NO	N/A	N/A		
2-TS-30-196B		N/A	N/A		NO	N/A	N/A		
2-TS-30-197A		N/A	N/A		NO	N/A	N/A		
2-TS-30-197B		N/A	N/A		NO	N/A	N/A		
2-TS-30-201A		N/A	N/A		NO	N/A	N/A		
2-TS-30-201B		N/A	N/A		NO	N/A	N/A		
2-TS-30-202A		N/A	N/A		NO	N/A	N/A		
2-TS-30-202B		N/A	N/A		NO	N/A	N/A		

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## PERMANENT PLANT INSTRUMENTATION LOG

Data Package: Page \_\_\_\_\_ of \_\_\_\_\_

Date \_\_\_\_\_

INSTRUMENT OR INSTRUMENT	CAL DUE DATE	FILLED AND VENTED <sup>1</sup>	PLACED IN SERVICE <sup>1</sup>	USED F QUANT ACC CF	ITATIVE	POST-TEST CAL DATE <sup>2</sup>	POST-TEST CALIBRATION ACCEPTABLE <sup>2</sup> INITIAL/DATE	
LOOP #		INIT/DATE	INIT/DATE	YES	NO			
2-TS-30-5235A		N/A	N/A		NO	N/A	N/A	
2-TS-30-5235B		N/A	N/A		NO	N/A	N/A	
2-TS-30-5236A		N/A	N/A		NO	N/A	N/A	
2-TS-30-5236B		N/A	N/A		NO	N/A	N/A	
2-TS-30-5237A		N/A	N/A		NO	N/A	N/A	
2-TS-30-5237B		N/A	N/A		NO	N/A	N/A	
2-TS-30-5238A		N/A	N/A		NO	N/A	N/A	
2-TS-30-5238B		N/A	N/A		NO	N/A	N/A	
2-TS-30-5239A		N/A	N/A		NO	N/A	N/A	
2-TS-30-5239B		N/A	N/A		NO	N/A	N/A	

<sup>1</sup> 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)

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

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# Appendix D (Page 1 of 2)

# ELECTRICAL LINEUP

Data Package: Page \_\_\_\_\_ of \_\_\_\_\_

SECTIONS	IDENTIFICATION	DESCRIPTION	LOCATION	POSITION	INIT
6.1, 6.15	2-BKR-30-175	RHR PUMP 2A-A RM COOLER	C&A Building Vent BD 2A1-A Compartment 9A	ON (CLOSED)	
6.2, 6.16	2-BKR-30-176	RHR PUMP 2B-B RM COOLER	C&A Building Vent BD 2B1-B Compartment 9A	ON (CLOSED)	
6.3, 6.17	2-BKR-30-177	CS PUMP 2A-A RM COOLER	C&A Building Vent BD 2A1-A Compartment 3C	ON (CLOSED)	
6.4, 6.18	2-BKR-30-178	CS PUMP 2B-B RM COOLER	C&A Building Vent BD 2B1-B Compartment 3C	ON (CLOSED)	
6.5, 6.19	2-BKR-30-180	SIS PUMP 2A-A RM COOLER	C&A Building Vent BD 2A1-A Compartment 8A	ON (CLOSED)	
6.6, 6.20	2-BKR-30-179	SIS PUMP 2B-B RM COOLER	C&A Building Vent BD 2B1-B Compartment 8A	ON (CLOSED)	
6.7, 6.21	2-BKR-30-183	CENT CHG PUMP 2A-A RM COOLER	C&A Building Vent BD 2A1-A Compartment 10A	ON (CLOSED)	
6.8, 6.22	2-BKR-30-182	CENT CHG PUMP 2B-B RM COOLER	C&A Building Vent BD 2B1-B Compartment 10A	ON (CLOSED)	
6.9, 6.23	2-BKR-30-186	PENT RM EL 692 CLR 2A-A	C&A Building Vent BD 2A1-A Compartment 2C	ON (CLOSED)	
6.10, 6.24	2-BKR-30-187	PENT RM EL 692 CLR 2B-B	C&A Building Vent BD 2B1-B Compartment 8B	ON (CLOSED)	

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# ELECTRICAL LINEUP

Data Package: Page \_\_\_\_ of \_\_\_\_

SECTIONS	IDENTIFICATION	DESCRIPTION	LOCATION	POSITION	INIT
6.11, 6.25	2-BKR-30-196	PENT RM EL 713 CLR 2A-A	C&A Building Vent BD 2A1-A Compartment 10B	ON (CLOSED)	
6.12, 6.26	2-BKR-30-197	PENT RM EL 713 CLR 2B-B	C&A Building Vent BD 2B1-B Compartment 2C	ON (CLOSED)	
6.13, 6.27	2-BKR-30-201	AB EL 692 PIPE CHASE CLR 2A-A	C&A Building Vent BD 2A1-A Compartment 10C	ON (CLOSED)	
6.14, 6.28	2-BKR-30-202	AB EL 692 PIPE CHASE CLR 2B-B	C&A Building Vent BD 2B1-B Compartment 3B	ON (CLOSED)	
6.29	2-BKR-235-1/11-D	AUX RELAY RACK A BUS TO PANEL 2-R-75	120V AC Vital Inst Pwr BD 2-I	ON (CLOSED)	
6.29	2-BKR-235-2/9-E	AUX RELAY RACK B BUS TO PANEL 2-R-75	120V AC Vital Inst Pwr BD 2-II	ON (CLOSED)	
6.29	2-BKR-235-2/10-E	AUX RELAY RACK 2-R-75 BUS C	120V AC Vital Inst Pwr BD 2-II	ON (CLOSED)	
6.29	2-BKR-235-3/30-F	SEPERATION AUX RELAY PANELS 2-R-73/2-R-74	120V AC Vital Inst Pwr BD 2-III	ON (CLOSED)	
6.29	2-BKR-235-4/39-G	SEPERATION AUX RELAY PANELS 2-R-77/2-R-78	120V AC Vital Inst Pwr BD 2-IV	ON (CLOSED)	

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## Appendix E (Page 1 of 1) SWITCH LINEUP

Data Package: Page \_\_\_\_ of \_\_\_\_

SECTION	SWITCH NUMBER	SWITCH LOCATION	NOMENCLATURE	POSITION	VERIFIED BY INITIALS
6.1	2-HS-30-175	2-JB-292-2506-A [A11W/676]	RHR PUMP 2A-A ROOM COOLER	AUTO after STOP	
6.2	2-HS-30-176	2-JB-292-2505-B [A11V/676]	RHR PUMP 2B-B ROOM COOLER	AUTO after STOP	
6.3	2-HS-30-177	2-JB-292-2502-A [A10U/676]	CS PUMP 2A-A ROOM COOLER	AUTO after STOP	
6.4	2-HS-30-178	2-JB-292-2501-B [A11U/676]	CS PUMP 2B-B ROOM COOLER	AUTO after STOP	
6.5	2-HS-30-180	2-JB-292-1197-A [A10V/692]	SIS PUMP 2A-A ROOM COOLER	AUTO after STOP	
6.6	2-HS-30-179	2-JB-292-1198-B [A10U/692]	SIS PUMP 2B-B ROOM COOLER	AUTO after STOP	
6.7	2-HS-30-183	2-JB-292-1191-A [A12T/692]	CENT CHARGING PUMP 2A-A ROOM COOLER	AUTO after STOP	
6.8	2-HS-30-182	2-JB-292-1192-B [A11U/692]	CENT CHARGING PUMP 2B-B ROOM COOLER	AUTO after STOP	
6.9	2-HS-30-186	2-JB-292-1553-A [A12U/692]	PENETRATION ROOM EL 692 COOLER 2A-A	AUTO after STOP	
6.10	2-HS-30-187	2-JB-292-1554-B [A12V/692]	PENETRATION ROOM EL 692 COOLER 2B-B	AUTO after STOP	
6.11	2-HS-30-196	2-JB-292-1503-A [A14V/713]	PENETRATION ROOM EL 713 COOLER 2A-A	AUTO after STOP	
6.12	2-HS-30-197	2-JB-292-1505-B [A14V/713]	PENETRATION ROOM EL 713 COOLER 2B-B	AUTO after STOP	
6.13	2-HS-30-201	2-JB-292-1555-A [A15U/692]	AB EL 692 PIPE CASE COOLER 2A-A	AUTO after STOP	
6.14	2-HS-30-202	2-JB-292-1556-B [A14U/692]	AB EL 692 PIPE CASE COOLER 2B-B FLOW	AUTO after STOP	