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

February 22, 2011

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

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

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

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

PTI NUMBER	Rev.	TITLE
2-PTI-065-01	0	Emergency Gas Treatment System Logic Test

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

Respectfully,

David Stinson
Watts Bar Unit 2 Vice President

Enclosure
cc (Enclosure):

U. S. Nuclear Regulatory Commission
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D030
NRR

WATTS BAR NUCLEAR PLANT
UNIT 2 PREOPERATIONAL TEST

TITLE: EMERGENCY GAS TREATMENT SYSTEM LOGIC TEST

Instruction No: 2-PTI-065-01

Revision No: 0

PREPARED BY: Bethany B Merriman _____ DATE: 12-15-10
PRINT NAME / SIGNATURE

REVIEWED BY: Keith Jones _____ DATE: 12-15-10
PRINT NAME / SIGNATURE

INSTRUCTION APPROVAL

JTG MEETING No: 2-11-005

JTG CHAIRMAN: _____ DATE: 2/17/11

APPROVED BY : _____ DATE: 2/17/11
PREOPERATIONAL STARTUP MANAGER

TEST RESULTS APPROVAL

JTG MEETING No: _____

JTG CHAIRMAN: _____ DATE: _____

APPROVED BY : _____ DATE: _____
PREOPERATIONAL STARTUP MANAGER

Revision Log

Revision or Change Number	Effective Date	Affected Page Numbers	Description of Revision/Change
0	2/17/11	ALL	This procedure was written using the Unit 1 test procedure PTI-065-01 Rev 1 as a guide.

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1.0 INTRODUCTION

1.1 Test Objectives

The Emergency Gas Treatment System (EGTS) is provided for ventilation control and cleanup of the containment annulus atmosphere. To support that function, this instruction tests that the manual and automatic controls of the EGTS operate in accordance with design documents.

1.2 Scope

NOTE
All required air flows and pressure differentials will be tested in 2-PTI-065-02.

Demonstrate that the manual and automatic controls of the EGTS operate in accordance with design documents.

A. Manual controls and indication for the required valves, dampers, and fans function in accordance with design requirements.

B. All required dampers move to their design position upon a simulated low annulus differential pressure signal.

C. All required dampers move to their design position upon their respective annulus vacuum fan start and stop signal.

D. The annulus vacuum fans start upon a low flow signal from the opposite train fan.

E. The annulus vacuum fans stop upon a simulated U2 Phase A (∅A) Containment Isolation Signal (CIS).

F. All required valves and dampers move to their design position upon a simulated ∅A CIS.

G. The EGTS fans start upon a simulated ∅A CIS.

H. All required alarms are annunciated in the Main Control Room (MCR).

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2.0 REFERENCES

2.1 Performance References

A. SMP-9.0, Conduct of Test

B. GTM-05, HVAC Air Balance

C. OPDP-7, Fuse Control

2.2 Developmental References

A. Final Safety Analysis Report, Amendment 102

1. Section 6.2.3, Secondary Containment Functional Design

2. Table 6.2.3.2, Failure Modes and Effects Analysis Emergency Gas Treatment System

3. Table 14.2-1, Sheets 41/42, Secondary Containment Ventilation System Test Summary

B. Drawings

1. Flow Diagrams

a. 2-47W866-1, Rev 2, Heating and Ventilation Air Flow
DRAs 53232-040, -041, -042, Rev 0
DRA 53809-053, Rev 0

2. Electrical Drawings

a. 1-45W760-65-1, Rev 12, Emergency Gas Treatment System Schematic Diagram

b. 2-45W760-65-2, Rev 1, Emergency Gas Treatment System Schematic Diagrams
DRAs 53290-55, -71, Rev 1

c. 2-45W600-65-1, Rev 0, Emergency Gas Treatment System Schematic Diagram
DRA 53534-64, Rev 0
DRA 52453-124, Rev 0

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2.2 Developmental References (continued)

d. 2-45W600-65-2, Rev 0, Emergency Gas Treatment System Schematic Diagram
DCAs 52641-02-61, -62, Rev 0
DCAs 52641-03-57, -58, Rev 0

e. 2-45W600-65-3, Rev 0, Emergency Gas Treatment System Schematic Diagram
DRA 53534-65, Rev 0

f. 2-45W600-57-5, Rev 1, Separation & Misc Aux Relays Schematic Diagrams
DCA 52641-02-63, Rev 0
DCA 52641-03-59, Rev 0

g. 2-45W600-57-22, Rev 1, Separation & Misc Aux Relays Schematic Diagrams
DRA 52378-75, Rev 0

h. 2-45W756-9, Rev 0, 480V Cont & Aux Bldg Vt Bd 2A1-A Single Line
DRA 53534-60, Rev 0
DRA 53290-99, Rev 0

i. 2-45W756-10, Rev 0, 480V Cont & Aux Bldg Vt Bd 2B1-B Single Line
DRA 53534-61, Rev 0
DRA 53290-106, Rev 0

j. 45W2770-4, Rev 9, 480V Cont & Aux Bldg Vent Bd 2A1-A Connection Diagram

k. 45B2770-13C, Rev 6, 480V C&A Bldg Vt Bd 2A1-A Conn Diag - Compt 13C
DRA 53290-17, Rev 1

l. 45B2772-13C, Rev 8, 480V C&A Bldg Vt Bd 2B1-B Conn Diag - Compt 13C
DRA 53290-39, Rev 1

m. 45N2676-5, Rev 10, Solid State Protection Sys Train A Connection Diagram

n. 45N2677-5, Rev 9, Solid State Protection Sys Train B Connection Diagram

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2.2 Developmental References (continued)

o. 1-45B655-27B, Rev 5, Annunciator Inputs Window Box XA-55-27B
DCA 52641-02-7, Rev 0
DCA 52641-03-20, Rev 0

p. 1-45B655-E27B, Rev 1, Annunciator Window Box XA-55-27B Engraving
DCA 52641-04-6, Rev 0
DCA 52641-05-19, Rev 0

q. 2-47A615-0, Rev 1, Integrated Computer System Terminations and I/O List
DRA 52378-261, Rev 0
DRAs 53534-48, -50, Rev 1
DRA 53534-49, Rev 0
DRAs 53809-21, -30, Rev 0

r. 2-47B601-55-1, Electrical Instrument Tabulation, [Later]
DRA 52453-04, Rev 0

s. 2-47B601-55-2, Electrical Instrument Tabulation, [Later]
DRA 52453-05, Rev 0

t. 2-47B601-55-3, Electrical Instrument Tabulation, [Later]
DRA 52453-06, Rev 0

u. 2-47B601-55-4, Electrical Instrument Tabulation, [Later]
DRA 52453-07, Rev 0

3. Logic/Control Diagrams

a. 2-47W610-65-1, Rev 3, Control Diagram Emergency Gas Treatment System
DRAs 53534-44, -45, -46, -47, -67, Rev 0
DRA 52378-473, Rev 0
DRA 53232-2, Rev 0
DRA 53809-101, Rev 0

b. 2-47W610-65-1A, Rev 0, Control Diagram Emerg Gas Treatment System
DCAs 52641-02-1, -2, Rev 0
DCAs 52641-03-14, -15, Rev 0
DRAs 53232-3, -4, Rev 0
DRA 53809-13, Rev 1
DRAs 53809-14, -102, Rev 0

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2.2 Developmental References (continued)

c. 2-47W611-65-1, Rev 2, Logic Diagram Emergency Gas Treatment System
DRAs 52378-605, -635, Rev 0

d. 2-47W611-65-2, Rev 1, Logic Diagram Emergency Gas Treatment System

e. 2-47W611-65-3, Rev 0, Logic Diagram Emergency Gas Treatment System
DCA 52641-02-3, Rev 0
DCA 52641-03-16, Rev 0

4. Vendor Drawings

a. 08F800063-RL-1201, Rev 3, Rack Loading Aux. Building Press. Controller & Emergency Gas Treatment System Panel 0-L-430 - Train A & B

C. Documents

1. WBN2-65-4001, Rev 2, System Description for Emergency Gas Treatment System

2. 2-TSD-65-1, Rev 0, Emergency Gas Treatment System

3. 2-TSD-88-5, Rev 1, Containment Isolation System

4. 2-PTI-065-02, Emergency Gas Treatment System Pressure Test [LATER]

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3.0 PRECAUTIONS AND NOTES

A. Standard precautions shall be followed for working around energized electrical equipment in accordance with TVA Safety Manual Procedure 1021.

B. Steps may be repeated if all components cannot be tested in a step. However, if the test has been exited, prerequisite steps must be re-verified and a Chronological Test Log (CTL) entry made.

C. Discrepancies between component ID tags and the description in a procedure/instruction if the UNIDs match, exclusive of place keeping zeros and train designators (e.g.; 2-HS-31-468 vs. 2-HS-031-0468) and the noun description is sufficient to identify the component. This condition does not require a TDN in accordance SMP-14.0. If the component label needs to be changed, a Tag Request Form (TR Card) should be processed in accordance with TI-12.14. Make an entry in the CTL and continue testing.

D. All wires removed/lifted from a terminal shall be identified, grouped together, and taped or covered with an insulator to prevent personnel or equipment hazard and possible spurious initiations. The wires should be 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 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 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 the restored bend radius to be equal to or greater than the as found condition.

J. During the performance of this procedure, visual observation of fans and ductwork is required. This includes steady-state and transient operations (fan starts and stops). Confirm by sight, sound, and touch, that vibration is NOT excessive.

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3.0 PRECAUTIONS AND NOTES (continued)

K. If vibration is determined to be excessive, the Startup Test Engineer (STE) shall initiate a Test Deficiency Notice (TDN).

L. Vibration testing of this system is performed during GTM-05.

M. During the performance of this instruction, ensure no adverse impacts to the operation of Unit 1 systems, structures, or components.

N. Fuse control shall be in accordance with OPDP-7. If multiple fuses will concurrently be in the uninstalled position, each fuse shall be bagged and tagged for identification immediately after removal from the circuit. If fuse(s) will be in the uninstalled position for more than one shift, each fuse shall be bagged, tagged, and locked in a secure location.

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4.0 PREREQUISITE ACTIONS

NOTE

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

4.1 Preliminary Actions

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

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

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

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

[4] **VERIFY** current revisions and change papers 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 papers that were reviewed to data package. _____

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

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

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

Data Package: Page ____ of ____ **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, **AND**

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

[8] **ENSURE** a review of outstanding Clearances has been coordinated with U2 Operations for impact to the test performance, **AND**

IF items are found, **THEN**

RECORD in Appendix B, Temporary Condition Log. _____

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

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

[11] **CONDUCT** a pretest briefing with Test and Operations personnel in accordance with SMP-9.0. _____

[12] **ENSURE** that communications are available in areas where testing is to be conducted. _____

[13] **OBTAIN** a copy of the Special Instructions For EGTS Dedicated Operator During Performance Of EGTS Testing (or equivalent), to protect Unit 1 during the performance of this PTI, **AND**

ENSURE that a dedicated operator is available to support these instructions. _____

[14] **REVIEW** preventative maintenance for systems/components covered by this test, **AND**

VERIFY no conditions exist that will impact test performance. _____

Data Package: Page ____ of ____ **Date _____**

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

[1] **OBTAIN** the following items:

A. Handheld electrical jumper (Subsections 6.2 and 6.4) _____

B. Electrical jumper (Subsection 6.3) _____

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4.3 Field Preparations

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

A. System 32, Control Air System _____

B. System 55, Annunciator and Sequential Events Recording System _____

C. System 99, Reactor Protection System _____

D. System 214, 480V Control and Auxiliary Building Vent Power System _____

E. System 235, 120V AC Vital Power System _____

F. System 236, 125V DC Vital Power System _____

G. System 261, Integrated Computer System (ICS) _____

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.

[2] **ENSURE** Annunciator applicable TBK Switches are ON, the applicable Master Switches are ON, and window software input(s) are ENABLED for the following Annunciator Windows:

A. 0-XA-55-27B-233A, ANNULUS VAC FAN 2A FLOW LO _____

B. 0-XA-55-27B-234A, ANNULUS VAC FAN 2B FLOW LO _____

C. 0-XA-55-27B-233B, U2 ANNULUS DP LO _____

D. 0-XA-55-27B-230D, U2 PNL 0-L-430 TR-A PWR FAIL _____

E. 0-XA-55-27B-235D, U2 PNL 0-L-430 TR-B PWR FAIL _____

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4.3 Field Preparations (continued)

[3] **ENSURE** the following ICS points are in scan:

A. FD2015, EGTS TR-A UNIT 2 SUCT DMPR _____

B. FD2016, EGTS TR-A UNIT 2 SUCT DMPR SW _____

C. FD2017, EGTS TRAIN A UNIT 2 SUCT DMPR _____

D. FD2021, U-2 SHLD BLDG EXH DMPR _____

E. FD2022, U-2 SHLD BLDG EXH DMPR SW _____

F. FD2023, U-2 SHLD BLDG EXH DMPR _____

G. FD2363, EGTS TRAIN B UNIT 2 SUCT DMPR _____

H. FD2364, EGTS TRAIN B UNIT 2 SUCT DMPR SW _____

I. FD2365, EGTS TRAIN B UNIT 2 SUCT DMPR _____

J. FD2369, U-2 SHLD BLDG EXH DMPR _____

K. FD2370, U-2 SHLD BLDG EXH DMPR SW _____

L. FD2371, U-2 SHLD BLDG EXH DMPR _____

M. HD2019, EGTS TR-A HS-9A, AND -46A _____

N. HD2020, EGTS TR-B SUCT VLV SW _____

O. HD2053, EGTS TR-B HS-45A, AND -29A _____

P. HD2054, EGTS TR-A SUCT VLV SW _____

Q. HD2071, SHLD BLDG VENT&ANNS HS-81A, -83B _____

R. PD2006, SHLD BLDG VENT&ANNS DMPR -80, -88 _____

S. PD2008, SHLD&ANNS ISO DMPR -81,86 DC PW _____

T. PD2009, SHLD&ANNS ISO DMPR SW _____

U. PD2010, SHLD BLDG ISO DMPR _____

V. PD2011, CNTMT ANNS ISO DMPR _____

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4.3 Field Preparations (continued)

W. PD2013, SHLD BLDG VENT&ANNS DMPR -82,89 _____

X. PD2015, SHLD&ANNS ISO DMPR -83,87 DC PW _____

Y. PD2016, SHLD&ANNS ISO DMPR SW _____

Z. PD2017, SHLD BLDG ISO DMPR _____

AA. PD2018, CNTMT ANNS ISO DMPR _____

[4] **VERIFY** there are no Unit 2 ∅A Containment Isolation Signals present by Window 1, ∅A, NOT LIT on the following panels on 2-M-6:

A. TR-A MASTER ISOLATION SIGNAL STATUS PANEL (2-XX-55-6C) _____

B. TR-B MASTER ISOLATION SIGNAL STATUS PANEL (2-XX-55-6D) _____

[5] **ENSURE** plant instruments required for test performance, listed on Appendix C, Permanent Plant Instrumentation Log, have been (as required) filled, vented, and placed in service, and are within their calibration interval, **AND**

RECORD data on Appendix C. _____

[6] **PERFORM** Switch Lineup, Appendix D. _____

[7] **PERFORM** Electrical Lineup, Appendix E. _____

[8] **VERIFY** the U2 Annulus Access Door A78 [EL 713] is OPEN to the Auxiliary Building. _____

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4.4 Approvals and Notifications

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

_____ _____
Preoperational Startup Manager Signature — Date

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

_____ _____
U2 US/SRO/SM Signature — Date

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

_____ _____
U1 US/SRO/SM Signature — Date

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5.0 ACCEPTANCE CRITERIA

A. Manual controls and indication for the following valves/dampers function in accordance with design requirements:

1. 2-FCV-65-5 (Subsection 6.1.2)
2. 2-FCV-65-4 (Subsection 6.1.3)
3. 2-FCV-65-9 (Subsection 6.1.4)
4. 2-FCV-65-29 (Subsection 6.1.5)
5. 2-FCO-65-46 (Subsection 6.1.6)
6. 2-FCO-65-45 (Subsection 6.1.7)
7. 2-PCV-65-81 (Subsection 6.1.8)
8. 2-PCV-65-86 (Subsection 6.1.8)
9. 2-PCV-65-83 (Subsection 6.1.9)
10. 2-PCV-65-87 (Subsection 6.1.9)
11. 2-FCV-65-7 (Subsection 6.1.10)
12. 2-FCV-65-50 (Subsection 6.1.11)
13. 2-PCO-65-95 (Subsection 6.1.12)
14. 2-PCO-65-96 (Subsection 6.1.13)

B. The following dampers move to their design position upon a simulated low annulus differential pressure signal:

1. 2-PCO-65-95 OPENS (Step 6.1.12[7]A)
2. 2-PCO-65-96 CLOSES (Step 6.1.13[7]A)

C. Manual controls and indication for the following annulus vacuum control fans function in accordance with design requirements:

1. 2-FAN-65-77 (Subsection 6.2.2)
2. 2-FAN-65-74 (Subsection 6.2.3)

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5.0 ACCEPTANCE CRITERIA (continued)

D. The following dampers OPEN when their respective annulus vacuum fan starts, and CLOSE when their respective annulus vacuum fan stops.

1. 2-FCO-65-77 (Steps 6.2.2[7] and 6.2.2[11])
2. 2-FCO-65-74 (Steps 6.2.3[7] and 6.2.3[11])

E. The following fans START upon a low flow signal from the opposite train fan:

1. 2-FAN-65-77 (Step 6.2.4[3])
2. 2-FAN-65-74 (Step 6.2.4[5])

F. The following fans STOP upon a simulated U2 ∅A Containment Isolation Signal (CIS):

1. 2-FAN-65-77 (Step 6.2.4[18])
2. 2-FAN-65-74 (Step 6.2.4[22])

G. The following valves CLOSE upon a simulated ∅A CIS:

1. 2-FCV-65-5 (Step 6.3.2[4])
2. 2-FCV-65-4 (Step 6.3.3[4])

H. The following valves/dampers OPEN upon a simulated ∅A CIS:

1. 2-FCV-65-9 (Step 6.3.4[4])
2. 2-FCV-65-29 (Step 6.3.5[4])
3. 2-FCO-65-46 (Step 6.3.6[4])
4. 2-FCO-65-45 (Step 6.3.7[4])
5. 2-PCV-65-81 (Step 6.3.8[4])
6. 2-PCV-65-86 (Step 6.3.8[4])
7. 2-PCV-65-83 (Step 6.3.9[4])
8. 2-PCV-65-87 (Step 6.3.9[4])

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5.0 ACCEPTANCE CRITERIA (continued)

I. The following fans START upon a simulated ∅A CIS:

1. 0-FAN-65-23 (Step 6.4.2[4])
2. 0-FAN-65-42 (Step 6.4.3[4])

J. The following alarms are annunciated in the Main Control Room (MCR):

1. Low annulus differential pressure (Steps 6.1.12[7]B and 6.1.13[7]B)
2. Low flow, 2-FAN-65-77 (Step 6.2.4[11]A)
3. Low flow, 2-FAN-65-74 (Step 6.2.4[15]A)
4. Train A power failure on 0-L-430 (Step 6.5.4[4]A)
5. Train B power failure on 0-L-430 (Step 6.5.4[4]C)

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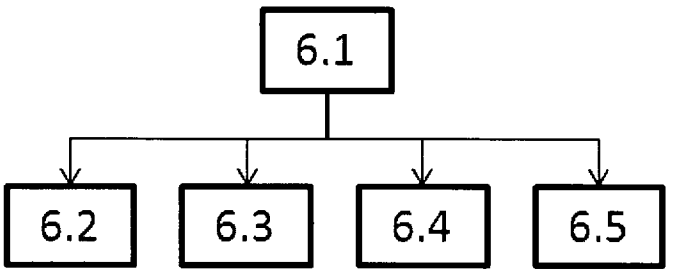
6.0 PERFORMANCE

NOTES

1) Subsections of this test shall be performed in the order shown in the flow diagram below. Subsections 6.2, 6.3, 6.4 and 6.5 may be performed in any order after the successful completion of Subsection 6.1. Steps within subsections shall be performed in the order written, unless otherwise noted.



2) Valve, damper, and fan status shall be determined by local observation throughout Section 6.0, unless otherwise stated.

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6.1 Valve and Damper Manual Operation and Controls

6.1.1 Preliminary Actions

[1] **VERIFY** prerequisites listed in Section 4.0 for SubSection 6.1 have been completed. _____

NOTE

Subsections 6.1.2 thru 6.1.13 may be performed in any order. Steps within these subsections must be performed in the order written.

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6.1.2 2-FCV-65-5 Manual Operation and Controls

NOTE

Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, spring returns to A AUTO from the OPEN position.

[1] **ENSURE** Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT, is CLOSED. _____

[3] **PLACE** and **HOLD** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, to OPEN, **AND**

VERIFY Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **VERIFY** status lights on Train A Containment Isolation Status Panel (CISP) 2-XX-55-6E, Window 80, FCV-65-5 [2-M-6], are:

A. Green Light OFF _____

B. Red Light ON _____

[6] **RELEASE** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, to A AUTO, **AND**

VERIFY Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT, is OPEN. _____

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6.1.2 2-FCV-65-5 Manual Operation and Controls (continued)

[7] **PLACE** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT, is CLOSED. _____

[8] **VERIFY** status lights on Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT, are:

A. Green Light ON _____

B. Red Light OFF _____

[9] **VERIFY** status lights on Train A CISP 2-XX-55-6E, Window 80, FCV-65-5 are:

A. Green Light ON _____

B. Red Light OFF _____

[10] **VERIFY** successful completion of this Subsection 6.1.2. **(Acc Crit)** _____

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6.1.3 2-FCV-65-4 Manual Operation and Controls

NOTE

Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, spring returns to A AUTO from the OPEN position.

[1] **ENSURE** Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV, is CLOSED. _____

[3] **PLACE** and **HOLD** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, to OPEN, **AND**

VERIFY Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **VERIFY** status lights on Train B Containment Isolation Status Panel (CISP) 2-XX-55-6F, Window 80, FCV-65-4 [2-M-6], are:

A. Green Light OFF _____

B. Red Light ON _____

[6] **RELEASE** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, to A AUTO, **AND**

VERIFY Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.3 2-FCV-65-4 Manual Operation and Controls (continued)

[7] **PLACE** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV, is CLOSED. _____

[8] **VERIFY** status lights on Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT, are:

A. Green Light ON _____

B. Red Light OFF _____

[9] **VERIFY** status lights on Train B CISP 2-XX-55-6F, Window 80, FCV-65-4 are:

A. Green Light ON _____

B. Red Light OFF _____

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

Data Package: Page ____ of ____ **Date _____**

6.1.4 2-FCV-65-9 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL, is CLOSED. _____

[3] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to OPEN, **AND**

VERIFY Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL, is CLOSED. _____

[6] **VERIFY** status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[7] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to OPEN, **AND**

VERIFY Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.4 2-FCV-65-9 Manual Operation and Controls (continued)

[8] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to A AUTO, **AND**

VERIFY Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL, is CLOSED. _____

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

Data Package: Page ____ of ____ **Date _____**

6.1.5 2-FCV-65-29 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL, is CLOSED. _____

[3] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to OPEN, **AND**

VERIFY Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL, is CLOSED. _____

[6] **VERIFY** status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[7] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to OPEN, **AND**

VERIFY Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.5 2-FCV-65-29 Manual Operation and Controls (continued)

[8] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to A AUTO, **AND**

VERIFY Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL, is CLOSED. _____

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

Data Package: Page ____ of ____ **Date _____**

6.1.6 2-FCO-65-46 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

[3] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to OPEN, **AND**

VERIFY Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

[6] **VERIFY** status lights on Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, are:

A. Green Light ON _____

B. Red Light OFF _____

[7] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to OPEN, **AND**

VERIFY Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.6 2-FCO-65-46 Manual Operation and Controls (continued)

[8] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to A AUTO, **AND**

VERIFY Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

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

Data Package: Page ____ of ____ **Date _____**

6.1.7 2-FCO-65-45 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG [0-M-27B], to A AUTO, **AND**

VERIFY Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

[3] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to OPEN, **AND**

VERIFY Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG, is OPEN. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, are:

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

[6] **VERIFY** status lights on Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, are:

A. Green Light ON _____

B. Red Light OFF _____

[7] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to OPEN, **AND**

VERIFY Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.7 2-FCO-65-45 Manual Operation and Controls (continued)

[8] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to A AUTO, **AND**

VERIFY Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG, is CLOSED. _____

[9] **VERIFY** successful completion of this Subsection 6.1.7. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.1.8 2-PCV-65-81 and 2-PCV-65-86 Manual Operation and Controls

NOTES

1) Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, spring returns to A AUTO from the OPEN position.
2) Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, controls the following valves:
   - 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL
   - 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION

[1] **ENSURE** the following valves are CLOSED:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360] _____

B. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360] _____

[2] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL [0-M-27B], to A AUTO, **AND**

VERIFY the following valves are CLOSED:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION _____

[3] **PLACE** and **HOLD** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to OPEN, **AND**

VERIFY the following valves are OPEN:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION _____

Data Package: Page ____ of ____ **Date _____**

6.1.8 2-PCV-65-81 and 2-PCV-65-86 Manual Operation and Controls (continued)

[4] **VERIFY** status lights on Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, are:

A. Green Light OFF, 81 _____

B. Red Light ON, 81 _____

C. Green Light OFF, 86 _____

D. Red Light ON, 86 _____

[5] **RELEASE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to A AUTO, **AND**

VERIFY the following valves are OPEN:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION _____

[6] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to CLOSE, **AND**

VERIFY the following valves are CLOSED:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION _____

[7] **VERIFY** status lights on Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, are:

A. Green Light ON, 81 _____

B. Red Light OFF, 81 _____

C. Green Light ON, 86 _____

D. Red Light OFF, 86 _____

[8] **VERIFY** successful completion of this Subsection 6.1.8. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.1.9 2-PCV-65-83 and 2-PCV-65-87 Manual Operation and Controls

NOTES

1) Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, spring returns to A AUTO from the OPEN position.
2) Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, controls the following valves:
   - 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL
   - 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION

[1] **ENSURE** the following valves are CLOSED:

A. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360] _____

B. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360] _____

[2] **PLACE** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL [0-M-27B], to A AUTO, **AND**

VERIFY the following valves are CLOSED:

A. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION _____

[3] **PLACE** and **HOLD** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, to OPEN, **AND**

VERIFY the following valves are OPEN:

A. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION _____

Data Package: Page ____ of ____ **Date _____**

6.1.9 2-PCV-65-83 and 2-PCV-65-87 Manual Operation and Controls (continued)

[4] **VERIFY** status lights on Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, are:

A. Green Light OFF, 83 _____

B. Red Light ON, 83 _____

C. Green Light OFF, 87 _____

D. Red Light ON, 87 _____

[5] **RELEASE** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, to A AUTO, **AND**

VERIFY the following valves are OPEN:

A. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION _____

[6] **PLACE** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, to CLOSE, **AND**

VERIFY the following valves are CLOSED:

A. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL _____

B. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION _____

[7] **VERIFY** status lights on Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, are:

A. Green Light ON, 83 _____

B. Red Light OFF, 83 _____

C. Green Light ON, 87 _____

D. Red Light OFF, 87 _____

[8] **VERIFY** successful completion of this Subsection 6.1.9. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.1.10 2-FCV-65-7 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCV-65-7, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-7, EGTS FAN A U2 SUCT DMPR [0-M-27B], to OPEN, **AND**

VERIFY Valve 2-FCV-65-7, EGTS TRAIN A UNIT 2 SUCT ISOL, is OPEN. _____

[3] **VERIFY** status lights on Handswitch 2-HS-65-7, EGTS FAN A U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[4] **PLACE** Handswitch 2-HS-65-7, EGTS FAN A U2 SUCT DMPR, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-7, EGTS TRAIN A UNIT 2 SUCT ISOL, is CLOSED. _____

[5] **VERIFY** status lights on Handswitch 2-HS-65-7, EGTS FAN A U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[6] **VERIFY** successful completion of this Subsection 6.1.10. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.1.11 2-FCV-65-50 Manual Operation and Controls

[1] **ENSURE** Valve 2-FCV-65-50, EGTS TRAIN B UNIT 2 SUCT ISOL [757/A12V], is CLOSED. _____

[2] **PLACE** Handswitch 2-HS-65-50, EGTS TR-B U2 SUCT DMPR [0-M-27B], to OPEN, **AND**

VERIFY Valve 2-FCV-65-50, EGTS TRAIN B UNIT 2 SUCT ISOL, is OPEN. _____

[3] **VERIFY** status lights on Handswitch 2-HS-65-50, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[4] **PLACE** Handswitch 2-HS-65-50, EGTS TR-B U2 SUCT DMPR, to CLOSE, **AND**

VERIFY Valve 2-FCV-65-50, EGTS TRAIN B UNIT 2 SUCT ISOL, is CLOSED. _____

[5] **VERIFY** status lights on Handswitch 2-HS-65-50, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[6] **VERIFY** successful completion of this Subsection 6.1.11. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.1.12 2-PCO-65-95 Manual Operation and Controls

CAUTION

Work in Auxiliary Relay Rack 2-R-75 involves energized circuits.

NOTES

1) Handswitch 2-HS-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, spring returns to AUTO from the OPEN and CLOSE positions.
2) Each fuse in this section has a blown fuse indicator which must be oriented towards the annunciator circuit.

[1] **PULL** Fuse 2-FU-275-R75/K6, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE SEPARATION RELAYS, from 2-R-75 to simulate normal containment annulus differential pressure.

_____ 1st

_____ CV

[2] **PLACE** Handswitch 2-HS-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR [0-JB-292-1165, 757/A12V], to CLOSE, **AND**

VERIFY Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR [757/A12V], is CLOSED. _____

[3] **PLACE** Handswitch 2-HS-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to OPEN, **AND**

VERIFY Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is OPEN. _____

[4] **PLACE** Handswitch 2-HS-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to CLOSE, **AND**

VERIFY Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is CLOSED. _____

[5] **VERIFY** Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, is CLEAR. _____

Data Package: Page ____ of ____ **Date _____**

6.1.12 2-PCO-65-95 Manual Operation and Controls (continued)

[6] **INSTALL** Fuse 2-FU-275-R75/K6, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE SEPARATION RELAYS, into 2-R-75 to simulate low containment annulus differential pressure.

_____ 1st

_____ CV

[7] **VERIFY** the following:

A. Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is OPEN. **(Acc Crit)** _____

B. Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, ALARMS. **(Acc Crit)** _____

C. Unit 2 Alarm Events Display Screen indicates 233-B U2 ANNULUS DP LO is in ALARM (Red). _____

[8] **PULL** Fuse 2-FU-275-R75/K6, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE SEPARATION RELAYS, from 2-R-75 to simulate normal containment annulus differential pressure.

_____ 1st

_____ CV

[9] **VERIFY** the following:

A. Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is OPEN. _____

B. Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, is CLEAR. _____

C. Unit 2 Alarm Events Display Screen indicates 233-B U2 ANNULUS DP LO is in NORMAL (Green). _____

[10] **PLACE** Handswitch 2-HS-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to CLOSE, **AND**

VERIFY Damper 2-PCO-65-95, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is CLOSED. _____

Data Package: Page ____ of ____ **Date _____**

6.1.12 2-PCO-65-95 Manual Operation and Controls (continued)

[11] **INSTALL** Fuse 2-FU-275-R75/K6, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE SEPARATION RELAYS, into 2-R-75.

_____ 1st

_____ CV

[12] **VERIFY** successful completion of this Subsection 6.1.12. **(Acc Crit)**

_____

Data Package: Page ____ of ____ **Date _____**

6.1.13 2-PCO-65-96 Manual Operation and Controls

CAUTION

Work in Auxiliary Relay Rack 2-R-75 involves energized circuits.

NOTES

1) Handswitch 2-HS-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, spring returns to AUTO from the OPEN and CLOSE positions.
2) Each fuse in this section has a blown fuse indicator which must be oriented towards the annunciator circuit.

[1] **PULL** Fuse 2-FU-275-R75/K16, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE ANN SEPARATION RELAY, from 2-R-75 to simulate normal containment annulus differential pressure. _____ 1st _____ CV

[2] **PLACE** Handswitch 2-HS-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR [0-JB-292-1165, 757/A12V], to OPEN, **AND**

VERIFY Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR [757/A12V], is OPEN. _____

[3] **PLACE** Handswitch 2-HS-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to CLOSE, **AND**

VERIFY Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is CLOSED. _____

[4] **PLACE** Handswitch 2-HS-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to OPEN, **AND**

VERIFY Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is OPEN. _____

[5] **VERIFY** Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, is CLEAR. _____

Data Package: Page ____ of ____ **Date _____**

6.1.13 2-PCO-65-96 Manual Operation and Controls (continued)

[6] **INSTALL** Fuse 2-FU-275-R75/K16, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE ANN SEPARATION RELAY, into 2-R-75 to simulate low containment annulus differential pressure.

_____ 1st

_____ CV

[7] **VERIFY** the following:

A. Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is CLOSED. **(Acc Crit)** _____

B. Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, ALARMS. **(Acc Crit)** _____

C. Unit 2 Alarm Events Display Screen indicates 233-B U2 ANNULUS DP LO is in ALARM (Red). _____

[8] **PULL** Fuse 2-FU-275-R75/K16, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE ANN SEPARATION RELAY, from 2-R-75 to simulate normal containment annulus differential pressure.

_____ 1st

_____ CV

[9] **VERIFY** the following:

A. Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is CLOSED. _____

B. Annunciator Window 0-XA-55-27B-233B, U2 ANNULUS DP LO, is CLEAR. _____

C. Unit 2 Alarm Events Display Screen indicates 233-B U2 ANNULUS DP LO is in NORMAL (Green). _____

[10] **PLACE** Handswitch 2-HS-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, to OPEN, **AND**

VERIFY Damper 2-PCO-65-96, EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR, is OPEN. _____

Data Package: Page ____ of ____ **Date _____**

6.1.13 2-PCO-65-96 Manual Operation and Controls (continued)

[11] **INSTALL** Fuse 2-FU-275-R75/K16, EGTS CONTAINMENT ANNULUS PURGE DIFFERENTIAL PRESSURE ANN SEPARATION RELAY, into 2-R-75.

_____ 1st

_____ CV

[12] **VERIFY** successful completion of this Subsection 6.1.13. **(Acc Crit)**

_____

Data Package: Page ____ of ____ **Date _____**

6.2 Containment Annulus Vacuum Fan Logic Test

6.2.1 Preliminary Actions

[1] **VERIFY** prerequisites listed in Section 4.0 for SubSection 6.2 have been completed. _____

CAUTION

Circuits inside 0-JB-292-1165 shall be considered energized.

[2] **LIFT** the following wires in 0-JB-292-1165 [757/A12V] to disable the low flow start signals:

A. Wire 13C3 on Terminal Block TD _____ 1st _____ CV

B. Wire 13C3 on Terminal Block TB _____ 1st _____ CV

[3] **PLACE** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT [0-M-27B], to OPEN, **AND**

VERIFY Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT [757/A12V], is OPEN. _____

[4] **PLACE** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT [0-M-27B], to OPEN, **AND**

VERIFY Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV [757/A12V], is OPEN. _____

[5] **PLACE** the following breakers in ON:

A. 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77) [480V C&A Vent Bd 2A1-A Compt 13C] _____

B. 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74) [480V C&A Vent Bd 2B1-B Compt 13C] _____

Data Package: Page ____ of ____ **Date _____**

NOTE

1) Subsections 6.2.2 and 6.2.3 may be performed in any order. Steps within these subsections must be performed in the order written. Subsection 6.2.4 shall be performed after completion of subsections 6.2.2 and 6.2.3.

6.2.2 2-FAN-65-77 Manual Operation and Controls

NOTE

Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, spring returns to A-P AUTO from the START and STOP positions.

[1] **ENSURE** Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A [757/A12V] is OFF. _____

[2] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO [0-M-27B], to STOP, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

[3] **VERIFY** Damper 2-FCO-65-77, EGTS CNTMT ANN VAC FAN 2A SUCT ISOLATION [757/A12V], is CLOSED. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, are:

A. Green Light ON _____

B. Red Light OFF _____

[5] **VERIFY** the Red status light on Breaker 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77), is OFF. _____

[6] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is ON. _____

Data Package: Page ____ of ____ **Date _____**

6.2.2 2-FAN-65-77 Manual Operation and Controls (continued)

[7] **VERIFY** Damper 2-FCO-65-77, EGTS CNTMT ANN VAC FAN 2A SUCT ISOLATION, is OPEN. **(Acc Crit)** _____

[8] **VERIFY** status lights on Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, are:

A. Green Light OFF _____

B. Red Light ON _____

[9] **VERIFY** the Red status light on Breaker 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77), is ON. _____

[10] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to STOP, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

[11] **VERIFY** Damper 2-FCO-65-77, EGTS CNTMT ANN VAC FAN 2A SUCT ISOLATION, is CLOSED. **(Acc Crit)** _____

[12] **PRESS** the START pushbutton on Handswitch 2-HS-65-77B, EGTS CNTMT ANN VAC FAN 2A SUCT ISOL DMPR [0-JB-292-1165, 757/A12V], **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is ON. _____

[13] **PRESS** the STOP pushbutton on Handswitch 2-HS-65-77B, EGTS CNTMT ANN VAC FAN 2A SUCT ISOL DMPR, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

[14] **VERIFY** successful completion of this Subsection 6.2.2. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.2.3 2-FAN-65-74 Manual Operation and Controls

NOTE

Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, spring returns to A-P AUTO from the START and STOP positions.

[1] **ENSURE** Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B [757/A12V], is OFF. _____

[2] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO [0-M-27B], to STOP, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

[3] **VERIFY** Damper 2-FCO-65-74, EGTS CNTMT ANN VAC FAN 2B SUCT ISOLATION [757/A12V], is CLOSED. _____

[4] **VERIFY** status lights on Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, are:

A. Green Light ON _____

B. Red Light OFF _____

[5] **VERIFY** the Red status light on Breaker 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74), is OFF. _____

[6] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is ON. _____

[7] **VERIFY** Damper 2-FCO-65-74, EGTS CNTMT ANN VAC FAN 2B SUCT ISOLATION, is OPEN. **(Acc Crit)** _____

[8] **VERIFY** status lights on Handswitch 2-HS-65-74A, ANN VAC FAN 2A & SUCT FCO, are:

A. Green Light OFF _____

B. Red Light ON _____

Data Package: Page ____ of ____ **Date _____**

6.2.3 2-FAN-65-74 Manual Operation and Controls (continued)

[9] **VERIFY** the Red status light on Breaker 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74), is ON. _____

[10] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, to STOP, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

[11] **VERIFY** Damper 2-FCO-65-74, EGTS CNTMT ANN VAC FAN 2B SUCT ISOLATION, is CLOSED. **(Acc Crit)** _____

[12] **PRESS** the START pushbutton on Handswitch 2-HS-65-74B, EGTS CNTMT ANN VAC FAN 2B SUCT ISOL DMPR [0-JB-292-1165, 757/A12V], **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is ON. _____

[13] **PRESS** the STOP pushbutton on Handswitch 2-HS-65-74B, EGTS CNTMT ANN VAC FAN 2B SUCT ISOL DMPR, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

[14] **VERIFY** successful completion of this Subsection 6.2.3. **(Acc Crit)** _____

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal

[1] **PLACE** the following breakers in OFF:

A. 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77) _____

B. 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74) _____

[2] **LAND** the following wires in 0-JB-292-1165 to restore the low flow start signals:

A. Wire 13C3 on Terminal Block TD _____ 1st _____ CV

B. Wire 13C3 on Terminal Block TB _____ 1st _____ CV

[3] **PLACE** Breaker 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77), in ON, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is ON. **(Acc Crit)** _____

[4] **WAIT** approximately one minute for Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, to reach equilibrium flow, **THEN**

PLACE Breaker 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74), in ON, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal (continued)

[5] **PLACE** Breaker 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77), in OFF, **THEN**

WAIT approximately two minutes for Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, to coast down, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is ON. **(Acc Crit)** _____

[6] **PLACE** Breaker 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77), in ON, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

[7] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is ON. _____

[8] **VERIFY** the following annunciator windows are CLEAR:

A. 0-XA-55-27B-233A, ANNULUS VAC FAN 2A FLOW LO _____

B. 0-XA-55-27B-234A, ANNULUS VAC FAN 2B FLOW LO _____

[9] **ENSURE** that BOTH Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, AND Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, have been ON for at least 50 seconds. _____

[10] **PLACE** and **HOLD** a handheld jumper in the rear panel of 2A1-A Control and Auxiliary Vent Board compartment 13C, between Terminal Point 22 (Wire M587) and Terminal Point 23 (Wire M587A), to simulate a low flow signal. _____ 1st

_____ CV

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal (continued)

[11] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-233A, ANNULUS VAC FAN 2A FLOW LO, ALARMS. **(Acc Crit)** _____

B. Unit 2 Alarm Events Display Screen indicates 233-A ANNULUS VAC FAN 2A FLOW LO is in ALARM (Red). _____

[12] **REMOVE** the handheld jumper from the rear panel of 2A1-A Control and Auxiliary Vent Board compartment 13C, between Terminal Point 22 (Wire M587) and Terminal Point 23 (Wire M587A), to simulate a low flow signal reset. _____ 1st

_____ CV

[13] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-233A, ANNULUS VAC FAN 2A FLOW LO, is CLEAR. _____

B. Unit 2 Alarm Events Display Screen indicates 233-A ANNULUS VAC FAN 2A FLOW LO is in NORMAL (Green). _____

[14] **PLACE** and **HOLD** a handheld jumper in the rear panel of 2B1-B Control and Auxiliary Vent Board compartment 13C, between Terminal Point 22 (Wire M588) and Terminal Point 23 (Wire M588A), to simulate a low flow signal. _____ 1st

_____ CV

[15] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-234A, ANNULUS VAC FAN 2B FLOW LO, ALARMS. **(Acc Crit)** _____

B. Unit 2 Alarm Events Display Screen indicates 234-A ANNULUS VAC FAN 2B FLOW LO is in ALARM (Red). _____

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal (continued)

[16] **REMOVE** the handheld jumper from the rear panel of 2B1-B Control and Auxiliary Vent Board compartment 13C, between Terminal Point 22 (Wire M588) and Terminal Point 23 (Wire M588A), to simulate a low flow signal reset.

_____ 1st

_____ CV

[17] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-234A, ANNULUS VAC FAN 2B FLOW LO, is CLEAR. _____

B. Unit 2 Alarm Events Display Screen indicates 234-A ANNULUS VAC FAN 2B FLOW LO is in NORMAL (Green). _____

CAUTION

Work in Solid State Protection Cabinets 2-R-48 and 2-R-51 involves energized circuits.

[18] **MOMENTARILY PLACE** a handheld jumper at TB 629, between Terminal Point 5 (Wire 13CX) and Terminal Point 6 (Wire 13C16) in 2-R-48 to simulate a U2 Containment Isolation ØA signal initiation and reset, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. **(Acc Crit)**

_____ 1st

_____ CV

[19] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal (continued)

[20] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to STOP, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is OFF. _____

[21] **PLACE** Handswitch 2-HS-65-77A, ANN VAC FAN 2A & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-77, EGTS CNTMT ANN VAC FAN 2A, is ON. _____

[22] **MOMENTARILY PLACE** a handheld jumper at TB 629, between Terminal Point 5 (Wire 13CX) and Terminal Point 6 (Wire 13C16) in 2-R-51 to simulate a U2 Containment Isolation ØA signal initiation and reset, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. **(Acc Crit)** _____ 1st _____ CV

[23] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

[24] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, to STOP, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is OFF. _____

[25] **PLACE** Handswitch 2-HS-65-74A, ANN VAC FAN 2B & SUCT FCO, to START, **AND**

VERIFY Fan 2-FAN-65-74, EGTS CNTMT ANN VAC FAN 2B, is ON. _____

Data Package: Page ____ of ____ **Date _____**

6.2.4 Containment Annulus Vacuum Fans Start on Low Flow and Trip on Simulated ØA Containment Isolation Signal (continued)

[26] **PLACE** the following breakers in OFF:

A. 2-BKR-65-77, EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77) _____

B. 2-BKR-65-74, EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74) _____

Data Package: Page ____ of ____ **Date _____**

6.3 Valves and Dampers Move to Safety Position on Unit 2 Simulated Containment Isolation ØA

6.3.1 Preliminary Actions

[1] **VERIFY** prerequisites listed in Section 4.0 for SubSection 6.3 have been completed. _____

CAUTION

Work in Solid State Protection Cabinets 2-R-48 and 2-R-51 involves energized circuits.

NOTE

Subsections 6.3.2 thru 6.3.9 may be performed in any order. Steps within these subsections must be performed in the order written.

Data Package: Page ____ of ____ **Date _____**

6.3.2 2-FCV-65-5 Move to Safety Position

[1] **ENSURE** Valve 2-FCV-65-5, CNTMT ANN VAC FANS SUCT [757/A12V], is OPEN, as indicated by status lights on Train A CISP 2-XX-55-6E, Window 80, FCV-65-5 [2-M-6], are:

A. Green Light OFF _____

B. Red Light ON _____

[2] **VERIFY** Handswitch 2-HS-65-5, U2 ANN VAC FAN SUCT [0-M-27B], is in A AUTO. _____

[3] **LIFT** Wire GBP5 from Terminal Point 10 on TB 629 in 2-R-48 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st

_____ CV

[4] **VERIFY** status lights on Train A CISP 2-XX-55-6E, Window 80, FCV-65-5 are: **(Acc Crit)**

A. Green Light ON _____

B. Red Light OFF _____

[5] **LAND** Wire GBP5 from Terminal Point 10 on TB 629 in 2-R-48 to simulate a U2 Containment Isolation ∅A signal reset. _____ 1st

_____ CV

[6] **VERIFY** status lights on Train A CISP 2-XX-55-6E, Window 80, FCV-65-5 are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.3 2-FCV-65-4 Move to Safety Position

[1] **ENSURE** Valve 2-FCV-65-4, CNTM ANNULUS VAC FANS ISLN VLV [757/A12V], is OPEN, as indicated by status lights on Train B CISP 2-XX-55-6F, Window 80, FCV-65-4 [2-M-6], are:

A. Green Light OFF _____

B. Red Light ON _____

[2] **VERIFY** Handswitch 2-HS-65-4, U2 ANN VAC FAN SUCT [0-M-27B], is in A AUTO. _____

[3] **LIFT** Wire GBN5 from Terminal Point 10 on TB 629 in 2-R-51 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st _____ CV

[4] **VERIFY** status lights on Train B CISP 2-XX-55-6F, Window 80, FCV-65-4 are: **(Acc Crit)**

A. Green Light ON _____

B. Red Light OFF _____

[5] **LAND** Wire GBN5 from Terminal Point 10 on TB 629 in 2-R-51 to simulate a U2 Containment Isolation ∅A signal reset. _____ 1st _____ CV

[6] **VERIFY** status lights on Train B CISP 2-XX-55-6F, Window 80, FCV-65-4 are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.4 2-FCV-65-9 Move to Safety Position

[1] **ENSURE** Valve 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V], is CLOSED, as indicated by status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR [0-M-27B], are:

A. Green Light ON _____

B. Red Light OFF _____

[2] **ENSURE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, is in A AUTO. _____

[3] **INSTALL** a jumper at TB 637, between Terminal Point 1 (Wire GBF5) and Terminal Point 2 (Wire GBF6) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.4 2-FCV-65-9 Move to Safety Position (continued)

[6] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to A AUTO, **AND**

VERIFY status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[7] **REMOVE** the jumper from TB 637, between Terminal Point 1 (Wire GBF5) and Terminal Point 2 (Wire GBF6) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal reset. _____ 1st

_____ CV

[8] **VERIFY** status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[9] **PLACE** Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-9, EGTS TR-A U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.5 2-FCV-65-29 Move to Safety Position

[1] **ENSURE** Valve 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL [757/A12V], is CLOSED, as indicated by status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR [0-M-27B], are:

A. Green Light ON _____

B. Red Light OFF _____

[2] **ENSURE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, is in A AUTO. _____

[3] **INSTALL** a jumper at TB 637, between Terminal Point 1 (Wire GBK5) and Terminal Point 2 (Wire GBK6) in 2-R-51 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.5 2-FCV-65-29 Move to Safety Position (continued)

[6] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to A AUTO, **AND**

VERIFY status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[7] **REMOVE** the jumper from TB 637, between Terminal Point 1 (Wire GBK5) and Terminal Point 2 (Wire GBK6) in 2-R-51 to simulate a U2 Containment Isolation ∅A signal reset. _____ 1st

_____ CV

[8] **VERIFY** status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[9] **PLACE** Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-29, EGTS TR-B U2 SUCT DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.6 2-FCO-65-46 Move to Safety Position

[1] **ENSURE** Valve 2-FCO-65-46, EGTS TO U2 SHIELD BLDG [757/A12V], is CLOSED, as indicated by status lights on Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG [0-M-27B], are:

A. Green Light ON _____

B. Red Light OFF _____

[2] **ENSURE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, is in A AUTO. _____

[3] **INSTALL** a jumper at TB 630, between Terminal Point 1 (Wire GBM5) and Terminal Point 2 (Wire GBM6) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-46 are:

A. Green Light ON _____

B. Red Light OFF _____

[6] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to A AUTO, **AND**

VERIFY status lights on Handswitch 2-HS-65-46 are:

A. Green Light OFF _____

B. Red Light ON _____

Data Package: Page ____ of ____ **Date _____**

6.3.6 2-FCO-65-46 Move to Safety Position (continued)

[7] **REMOVE** jumper from TB 630, between Terminal Point 1 (Wire GBM5) and Terminal Point 2 (Wire GBM6) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal reset.

_____ 1st

_____ CV

[8] **VERIFY** status lights on Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, are:

A. Green Light OFF _____

B. Red Light ON _____

[9] **PLACE** Handswitch 2-HS-65-46, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-46 are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.7 2-FCO-65-45 Move to Safety Position

[1] **ENSURE** Valve 2-FCO-65-45, EGTS TO U2 SHIELD BLDG [757/A12V], is CLOSED, as indicated by status lights on Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG [0-M-27B], are:

A. Green Light ON _____

B. Red Light OFF _____

[2] **ENSURE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, is in A AUTO. _____

[3] **INSTALL** a jumper at TB 630, between Terminal Point 1 (Wire GBL5) and Terminal Point 2 (Wire GBL6) in 2-R-51 to simulate a U2 Containment Isolation ∅A signal initiation. _____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-45 are:

A. Green Light ON _____

B. Red Light OFF _____

[6] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to A AUTO, **AND**

VERIFY status lights on Handswitch 2-HS-65-45 are:

A. Green Light OFF _____

B. Red Light ON _____

Data Package: Page ____ of ____ **Date _____**

6.3.7 2-FCO-65-45 Move to Safety Position (continued)

[7] **REMOVE** jumper from TB 630, between Terminal Point 1 (Wire GBL5) and Terminal Point 2 (Wire GBL6) in 2-R-51 to simulate a U2 Containment Isolation ∅A signal reset.

_____ 1st

_____ CV

[8] **VERIFY** status lights on Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, are:

A. Green Light OFF _____

B. Red Light ON _____

[9] **PLACE** Handswitch 2-HS-65-45, EGTS TO U2 SHIELD BLDG, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-45 are:

A. Green Light ON _____

B. Red Light OFF _____

Data Package: Page ____ of ____ **Date _____**

6.3.8 2-PCV-65-81 and 2-PCV-65-86 Move to Safety Position

[1] **ENSURE** Valves 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360], and 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360], are CLOSED, as indicated by status lights on Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL [0-M-27B], are:

A. Green Light ON, 81 _____

B. Red Light OFF, 81 _____

C. Green Light ON, 86 _____

D. Red Light OFF, 86 _____

[2] **VERIFY** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, is in A AUTO. _____

[3] **MOMENTARILY PLACE** a handheld jumper at TB 630, between Terminal Point 3 (Wire GBW4) and Terminal Point 4 (Wire GBW5) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal initiation and reset.

_____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, are: **(Acc Crit)**

A. Green Light OFF, 81 _____

B. Red Light ON, 81 _____

C. Green Light OFF, 86 _____

D. Red Light ON, 86 _____

Data Package: Page ____ of ____ **Date _____**

6.3.8 2-PCV-65-81 and 2-PCV-65-86 Move to Safety Position (continued)

[5] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-81/86 are:

A. Green Light ON, 81 _____

B. Red Light OFF, 81 _____

C. Green Light ON, 86 _____

D. Red Light OFF, 86 _____

Data Package: Page ____ of ____ **Date _____**

6.3.9 2-PCV-65-83 and 2-PCV-65-87 Move to Safety Position

[1] **ENSURE** Valves 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360], and 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360], are CLOSED, as indicated by status lights on Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL [0-M-27B], are:

A. Green Light ON, 83 _____

B. Red Light OFF, 83 _____

C. Green Light ON, 87 _____

D. Red Light OFF, 87 _____

[2] **VERIFY** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, is in A AUTO. _____

[3] **MOMENTARILY PLACE** a handheld jumper at TB 630, between Terminal Point 3 (Wire GBX4) and Terminal Point 4 (Wire GBX5) in 2-R-51 to simulate a U2 Containment Isolation ∅A signal initiation and reset.

_____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, are: **(Acc Crit)**

A. Green Light OFF, 83 _____

B. Red Light ON, 83 _____

C. Green Light OFF, 87 _____

D. Red Light ON, 87 _____

Data Package: Page ____ of ____ **Date _____**

6.3.9 2-PCV-65-83 and 2-PCV-65-87 Move to Safety Position (continued)

[5] **PLACE** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, to CLOSE, **AND**

VERIFY status lights on Handswitch 2-HS-65-83/87 are:

A. Green Light ON, 83 _____

B. Red Light OFF, 83 _____

C. Green Light ON, 87 _____

D. Red Light OFF, 87 _____

Data Package: Page ____ of ____ **Date _____**

6.4 Emergency Gas Treatment Fans Start on Unit 2 Simulated Containment Isolation ØA

6.4.1 Preliminary Actions

[1] **VERIFY** prerequisites listed in Section 4.0 for SubSection 6.4 have been completed. _____

CAUTION

Work in Solid State Protection Cabinets 2-R-48 and 2-R-51 involves energized circuits.

[2] **ENSURE** the following valves/dampers are OPEN, as indicated by the status lights on their respective handswitches:

A. 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V], indicated at 2-HS-65-9, EGTS TR-A U2 SUCT DMPR [0-M-27B]:

- Green Light OFF _____
- Red Light ON _____

B. 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL [757/A12V], indicated at 2-HS-65-29, EGTS TR-B U2 SUCT DMPR [0-M-27B]:

- Green Light OFF _____
- Red Light ON _____

C. 2-FCO-65-46, EGTS TO U2 SHIELD BLDG [757/A12V], indicated at 2-HS-65-46, EGTS TO U2 SHIELD BLDG [0-M-27B]:

- Green Light OFF _____
- Red Light ON _____

Data Package: Page ____ of ____ **Date _____**

6.4.1 Preliminary Actions (continued)

D. 2-FCO-65-45, EGTS TO U2 SHIELD BLDG [757/A12V], indicated at 2-HS-65-45, EGTS TO U2 SHIELD BLDG [0-M-27B]:

- Green Light OFF _____
- Red Light ON _____

E. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360] and 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360], indicated at 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL [0-M-27B]:

- Green Light OFF, 81 _____
- Red Light ON, 81 _____
- Green Light OFF, 86 _____
- Red Light ON, 86 _____

F. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [ANN 834/AZ360] and 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION [ANN 834/AZ360], indicated at 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL [0-M-27B]

- Green Light OFF, 83 _____
- Red Light ON, 83 _____
- Green Light OFF, 87 _____
- Red Light ON, 87 _____

NOTE

1) Subsections 6.4.2 thru 6.4.3 may be performed in any order. Steps within these subsections must be performed in the order written.

Data Package: Page ____ of ____ **Date _____**

6.4.2 0-FAN-65-23 Start on U2 Simulated ∅A

[1] **RECORD** the as-found positions of Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR [0-M-27B], and its respective status lights:

Handswitch As-Found Position: _____ _____

Green Light As-Found Status: _____ _____

Red Light As-Found Status: _____ _____

[2] **ENSURE** Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, is in A AUTO, **AND**

VERIFY status lights on Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[3] **PLACE** and **HOLD** a handheld jumper at TB 637, between Terminal Point 5 (Wire 4D3) and Terminal Point 6 (Wire 4D5) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal initiation.

_____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **REMOVE** handheld jumper from TB 637, between Terminal Point 5 (Wire 4D3) and Terminal Point 6 (Wire 4D5) in 2-R-48 to simulate a U2 Containment Isolation ∅A signal reset.

_____ 1st

_____ CV

Data Package: Page ____ of ____ **Date _____**

6.4.2 0-FAN-65-23 Start on U2 Simulated ØA (continued)

[6] **VERIFY** status lights on Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[7] **PLACE** Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, to STOP, **AND**

VERIFY status lights on Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[8] **RESTORE** Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, and its respective status lights to their as-found position, as recorded in Step 6.4.2[1], **AND**

RECORD the as-left positions of Handswitch 0-HS-65-23A, EGTS FAN A & DISCH DMPR, and its respective status lights:

Handswitch As-Left Position: _____ _____

Green Light As-Left Status: _____ _____

Red Light As-Left Status: _____ _____

Data Package: Page ____ of ____ **Date _____**

6.4.3 0-FAN-65-42 Start on U2 Simulated ØA

[1] **RECORD** the as-found positions of Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR [0-M-27B], and its respective status lights:

Handswitch As-Found Position: _____ _____

Green Light As-Found Status: _____ _____

Red Light As-Found Status: _____ _____

[2] **ENSURE** Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, is in A AUTO, **AND**

VERIFY status lights on Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[3] **PLACE** and **HOLD** a handheld jumper at TB 637, between Terminal Point 5 (Wire 4D3) and Terminal Point 6 (Wire 4D5) in 2-R-51 to simulate a U2 Containment Isolation ØA signal initiation.

_____ 1st

_____ CV

[4] **VERIFY** status lights on Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, are: **(Acc Crit)**

A. Green Light OFF _____

B. Red Light ON _____

[5] **REMOVE** handheld jumper from TB 637, between Terminal Point 5 (Wire 4D3) and Terminal Point 6 (Wire 4D5) in 2-R-51 to simulate a U2 Containment Isolation ØA signal reset.

_____ 1st

_____ CV

Data Package: Page ____ of ____ **Date _____**

6.4.3 0-FAN-65-42 Start on U2 Simulated ØA (continued)

[6] **VERIFY** status lights on Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, are:

A. Green Light OFF _____

B. Red Light ON _____

[7] **PLACE** Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, to STOP, **AND**

VERIFY status lights on Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, are:

A. Green Light ON _____

B. Red Light OFF _____

[8] **RESTORE** Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, and its respective status lights to their as-found position, as recorded in Step 6.4.3[1], **AND**

RECORD the as-left positions of Handswitch 0-HS-65-42A, EGTS FAN B & DISCH DMPR, and its respective status lights:

Handswitch As-Left Position: _____ _____

Green Light As-Left Status: _____ _____

Red Light As-Left Status: _____ _____

Data Package: Page ____ of ____ **Date _____**

6.5 ICS Point Verification

6.5.1 Preliminary Actions

[1] **VERIFY** prerequisites listed in Section 4.0 for Subsection 6.5 have been completed. _____

NOTE

1) Subsections 6.5.2 thru 6.5.4 may be performed in any order. Steps within these subsections must be performed in the order written.

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification

[1] **ENSURE** the following handswitches are in OPEN:

A. 2-HS-65-46, EGTS TO U2 SHIELD BLDG [0-M-27B]: _____

B. 2-HS-65-45, EGTS TO U2 SHIELD BLDG [0-M-27B]: _____

C. 2-HS-65-7, EGTS FAN A U2 SUCT DMPR [0-M-27B]: _____

D. 2-HS-65-9, EGTS TR-A U2 SUCT DMPR [0-M-27B]: _____

E. 2-HS-65-29, EGTS TR-B U2 SUCT DMPR [0-M-27B]: _____

F. 2-HS-65-50, EGTS TR-B U2 SUCT DMPR [0-M-27B]: _____

[2] **ENSURE** the following valves are OPEN, as indicated by the status lights on their respective handswitches:

A. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [834/AZ360] and 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION [834/AZ360], indicated at 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL [0-M-27B]:

- Green Light OFF, 81 _____
- Red Light ON, 81 _____
- Green Light OFF, 86 _____
- Red Light ON, 86 _____

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification (continued)

B. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [834/AZ360] and 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION [834/AZ360], indicated at 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL [0-M-27B]

- Green Light OFF, 83 _____
- Red Light ON, 83 _____
- Green Light OFF, 87 _____
- Red Light ON, 87 _____

[3] **VERIFY** the following ICS points:

A. FD2371, U-2 SHLD BLDG EXH DMPR displays OPEN. _____

B. FD2023, U-2 SHLD BLDG EXH DMPR displays OPEN. _____

C. HD2054, EGTS TR-A SUCT VLV SW displays OPEN. _____

D. FD2017, EGTS TRAIN A UNIT 2 SUCT DMPR displays OPEN. _____

E. FD2365, EGTS TRAIN B UNIT 2 SUCT DMPR displays OPEN. _____

F. HD2020, EGTS TR-B SUCT VLV SW displays OPEN. _____

G. PD2010, SHLD BLDG ISO DMPR displays NOT CLS. _____

H. PD2011, CNTMT ANNS ISO DMPR displays NOT CLS. _____

I. PD2017, SHLD BLDG ISO DMPR displays NOT CLS. _____

J. PD2018, CNTMT ANNS ISO DMPR displays NOT CLS. _____

K. HD2019, EGTS TR-A HS-9A, AND -46A displays NOT AUT. _____

L. HD2053, EGTS TR-B HS-45A, AND -29A displays NOT AUT. _____

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification (continued)

M. FD2016, EGTS TR-A UNIT 2 SUCT DMPR SW displays NOT CLOS. _____

N. FD2364, EGTS TRAIN B UNIT 2 SUCT DMPR SW displays NOT CLOS. _____

O. FD2370, U-2 SHLD BLDG EXH DMPR SW displays NOT CLOS. _____

P. FD2022, U-2 SHLD BLDG EXH DMPR SW displays NOT CLOS. _____

Q. PD2009, SHLD&ANNS ISO DMPR SW displays NOT CLOS. _____

R. PD2016, SHLD&ANNS ISO DMPR SW displays NOT CLS. _____

[4] **PLACE** the following handswitches to CLOSE:

A. 2-HS-65-46, EGTS TO U2 SHIELD BLDG _____

B. 2-HS-65-45, EGTS TO U2 SHIELD BLDG _____

C. 2-HS-65-7, EGTS FAN A U2 SUCT DMPR _____

D. 2-HS-65-9, EGTS TR-A U2 SUCT DMPR _____

E. 2-HS-65-29, EGTS TR-B U2 SUCT DMPR _____

F. 2-HS-65-50, EGTS TR-B U2 SUCT DMPR _____

G. 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL _____

H. 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL _____

[5] **VERIFY** the following ICS points:

A. FD2371, U-2 SHLD BLDG EXH DMPR displays NOT OPE. _____

B. FD2023, U-2 SHLD BLDG EXH DMPR displays NOT OPE. _____

C. HD2054, EGTS TR-A SUCT VLV SW displays NOT OPE. _____

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification (continued)

D. FD2017, EGTS TRAIN A UNIT 2 SUCT DMPR displays NOT OPE. _____

E. FD2365, EGTS TRAIN B UNIT 2 SUCT DMPR displays NOT OPE. _____

F. HD2020, EGTS TR-B SUCT VLV SW displays NOT OPE. _____

G. PD2010, SHLD BLDG ISO DMPR displays CLOSED. _____

H. PD2011, CNTMT ANNS ISO DMPR displays CLOSED. _____

I. PD2017, SHLD BLDG ISO DMPR displays CLOSED. _____

J. PD2018, CNTMT ANNS ISO DMPR displays CLOSED. _____

K. HD2019, EGTS TR-A HS-9A, AND -46A displays NOT AUT. _____

L. HD2053, EGTS TR-B HS-45A, AND -29A displays NOT AUT. _____

M. FD2016, EGTS TR-A UNIT 2 SUCT DMPR SW displays CLOSE. _____

N. FD2364, EGTS TRAIN B UNIT 2 SUCT DMPR SW displays CLOSE. _____

O. FD2370, U-2 SHLD BLDG EXH DMPR SW displays CLOSE. _____

P. FD2022, U-2 SHLD BLDG EXH DMPR SW displays CLOSE. _____

Q. PD2009, SHLD&ANNS ISO DMPR SW displays CLOSE. _____

R. PD2016, SHLD&ANNS ISO DMPR SW displays CLOSED. _____

[6] **PLACE** the following handswitches to A AUTO:

A. 2-HS-65-9, EGTS TR-A U2 SUCT DMPR _____

B. 2-HS-65-29, EGTS TR-B U2 SUCT DMPR _____

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification (continued)

[7] **VERIFY** the following ICS points:

A. HD2019, EGTS TR-A HS-9A, AND -46A displays NOT AUT _____

B. HD2053, EGTS TR-B HS-45A, AND -29A displays NOT AUT _____

[8] **PLACE** the following handswitches to CLOSE:

A. 2-HS-65-9, EGTS TR-A U2 SUCT DMPR _____

B. 2-HS-65-29, EGTS TR-B U2 SUCT DMPR _____

[9] **PLACE** the following handswitches to A AUTO:

A. 2-HS-65-46, EGTS TO U2 SHIELD BLDG _____

B. 2-HS-65-45, EGTS TO U2 SHIELD BLDG _____

[10] **VERIFY** the following ICS points:

A. HD2019, EGTS TR-A HS-9A, AND -46A displays NOT AUT. _____

B. HD2053, EGTS TR-B HS-45A, AND -29A displays NOT AUT. _____

[11] **PLACE** the following handswitches to A AUTO:

A. 2-HS-65-9, EGTS TR-A U2 SUCT DMPR _____

B. 2-HS-65-29, EGTS TR-B U2 SUCT DMPR _____

[12] **VERIFY** the following ICS points:

A. HD2019, EGTS TR-A HS-9A, AND -46A displays A AUTO. _____

B. HD2053, EGTS TR-B HS-45A, AND -29A displays A AUTO. _____

[13] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to A AUTO. _____

Data Package: Page ____ of ____ **Date _____**

6.5.2 Valve, Damper, and Handswitch Position ICS Point Verification (continued)

[14] **VERIFY** ICS point HD2071, SHLD BLDG VENT&ANNS HS-81A, -83B displays NOT AUT. _____

[15] **PLACE** Handswitch 2-HS-65-83/87, U2 EGTS-ANN ΔP CNTLR B ISOL, to A AUTO. _____

[16] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL, to CLOSE. _____

[17] **VERIFY** ICS point HD2071, SHLD BLDG VENT&ANNS HS-81A, -83B displays NOT AUT. _____

[18] **PLACE** Handswitch 2-HS-65-81/86, U2 EGTS-ANN ΔP CNTLR A ISOL to A AUTO. _____

[19] **VERIFY** ICS point HD2071, SHLD BLDG VENT&ANNS HS-81A, -83B displays AUTO. _____

Data Package: Page ____ of ____ **Date _____**

6.5.3 125V DC Power ICS Point Verification

NOTES

1) Each fuse in this section has a blown fuse indicator which must be oriented towards the annunciator section.
2) Each fuse shall be bagged and tagged for identification immediately after removal from the circuit.

[1] **PULL** the following fuses:

A. 0-FU-236-3/A34, SHIELD BUILDING VENT ISOLATION VLV AND CONTAINMENT ANNULUS ISOLATION VLV, TRAIN A [125V VIT BATT BD III, CKT A34]

_____ 1st

_____ CV

B. 0-FU-236-3/A35, EMER GAS TREAT, TRAIN A UNIT 2 SUCTION DAMPER [125V VIT BATT BD III, CKT A35]

_____ 1st

_____ CV

C. 0-FU-236-3/A36, UNIT 2 SHIELD BLDG EXH DAMPER B [125V VIT BATT BD III, CKT A36]

_____ 1st

_____ CV

D. 0-FU-236-4/A31, EGTS TRAIN B UNIT 2 SUCTION DMP [125V VIT BATT BD IV, CKT A31]

_____ 1st

_____ CV

E. 0-FU-236-4/A32, UNIT 2 SHIELD BLDG EXH DMP A [125V VIT BATT BD IV, CKT A32]

_____ 1st

_____ CV

Data Package: Page ____ of ____ **Date _____**

6.5.3 125V DC Power ICS Point Verification (continued)

F. 0-FU-236-4/A34, SHIELD BLDG VENT ISOL VLV, CNTMT ANNU ISOL VLV [125V VIT BATT BD IV, CKT A34]

_____ 1st

_____ CV

[2] **VERIFY** the following ICS points:

A. FD2015, EGTS TR-A UNIT 2 SUCT DMPR displays PWR OFF. _____

B. FD2363, EGTS TRAIN B UNIT 2 SUCT DMPR displays PWR OFF. _____

C. FD2021, U-2 SHLD BLDG EXH DMPR displays PWR OFF. _____

D. FD2369, U-2 SHLD BLDG EXH DMPR displays PWR OFF. _____

E. PD2008, SHLD&ANNS ISO DMPR -81,86 DC PW displays PWR OFF. _____

F. PD2015, SHLD&ANNS ISO DMPR -83,87 DC PW displays PWR OFF. _____

Data Package: Page ____ of ____ **Date _____**

6.5.3 125V DC Power ICS Point Verification (continued)

[3] **INSTALL** the following fuses:

A. 0-FU-236-3/A34, SHIELD BUILDING VENT ISOLATION VLV AND CONTAINMENT ANNULUS ISOLATION VLV, TRAIN A

_____ 1st

_____ CV

B. 0-FU-236-3/A35, EMER GAS TREAT, TRAIN A UNIT 2 SUCTION DAMPER

_____ 1st

_____ CV

C. 0-FU-236-3/A36, UNIT 2 SHIELD BLDG EXH DAMPER B

_____ 1st

_____ CV

D. 0-FU-236-4/A31, EGTS TRAIN B UNIT 2 SUCTION DMP

_____ 1st

_____ CV

E. 0-FU-236-4/A32, UNIT 2 SHIELD BLDG EXH DMP A

_____ 1st

_____ CV

F. 0-FU-236-4/A34, SHIELD BLDG VENT ISOL VLV, CNTMT ANNU ISOL VLV

_____ 1st

_____ CV

Data Package: Page ____ of ____ **Date _____**

6.5.3 125V DC Power ICS Point Verification (continued)

[4] **VERIFY** the following ICS points:

A. FD2015, EGTS TR-A UNIT 2 SUCT DMPR displays PWR ON. _____

B. FD2363, EGTS TRAIN B UNIT 2 SUCT DMPR displays PWR ON. _____

C. FD2021, U-2 SHLD BLDG EXH DMPR displays PWR ON. _____

D. FD2369, U-2 SHLD BLDG EXH DMPR displays PWR ON. _____

E. PD2008, SHLD&ANNS ISO DMPR -81,86 DC PW displays PWR ON. _____

F. PD2015, SHLD&ANNS ISO DMPR -83,87 DC PW displays PWR ON. _____

Data Package: Page ____ of ____ **Date _____**

6.5.4 0-L-430 Power ICS Point and Alarm Verification

[1] **VERIFY** the following annunciator windows are CLEAR:

A. 0-XA-55-27B-230D, U2 PNL 0-L-430 TR-A PWR FAIL _____

B. 0-XA-55-27B-235D, U2 PNL 0-L-430 TR-B PWR FAIL _____

[2] **PLACE** the following toggle switches in 0-L-430 [757/A7U] to OFF:

A. Nest 2 _____ 1st _____ CV

B. Nest 6 _____ 1st _____ CV

[3] **VERIFY** the following ICS points:

A. PD2006, SHLD BLDG VENT&ANNS DMPR -80, -88 displays PWR OFF. _____

B. PD2013, SHLD BLDG VENT&ANNS DMPR -82,89 displays PWR OFF. _____

[4] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-230D, U2 PNL 0-L-430 TR-A PWR FAIL, ALARMS **(Acc Crit)** _____

B. Unit 2 Alarm Events Display Screen indicates 230-D, U2 PNL 0-L-430 TR-A PWR FAIL is in ALARM (Red) _____

C. Annunciator Window 0-XA-55-27B-235D, U2 PNL 0-L-430 TR-B PWR FAIL, ALARMS **(Acc Crit)** _____

D. Unit 2 Alarm Events Display Screen indicates 235-D, U2 PNL 0-L-430 TR-B PWR FAIL is in ALARM (Red) _____

Data Package: Page ____ of ____ **Date _____**

6.5.4 0-L-430 Power ICS Point and Alarm Verification (continued)

[5] **PLACE** the following toggle switches in 0-L-430 to ON:

A. Nest 2 _____ 1st _____ CV

B. Nest 6 _____ 1st _____ CV

[6] **VERIFY** the following ICS points:

A. PD2006, SHLD BLDG VENT&ANNS DMPR -80, -88 displays PWR ON. _____

B. PD2013, SHLD BLDG VENT&ANNS DMPR -82,89 displays PWR ON. _____

[7] **VERIFY** the following:

A. Annunciator Window 0-XA-55-27B-230D, U2 PNL 0-L-430 TR-A PWR FAIL, is CLEAR _____

B. Unit 2 Alarm Events Display Screen indicates 230-D, U2 PNL 0-L-430 TR-A PWR FAIL is in NORMAL (Green) _____

C. Annunciator Window 0-XA-55-27B-235D, U2 PNL 0-L-430 TR-B PWR FAIL, is CLEAR _____

D. Unit 2 Alarm Events Display Screen indicates 235-D, U2 PNL 0-L-430 TR-B PWR FAIL is in NORMAL (Green) _____

Data Package: Page ____ of ____ **Date _____**

7.0 POST PERFORMANCE ACTIVITIES

[1] **ENSURE** the following valves/dampers are CLOSED:

A. 2-FCO-65-46, EGTS TO U2 SHIELD BLDG [757/A12V] _____

B. 2-FCO-65-45, EGTS TO U2 SHIELD BLDG [757/A12V] _____

C. 2-FCV-65-7, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V] _____

D. 2-FCV-65-9, EGTS TRAIN A UNIT 2 SUCT ISOL [757/A12V] _____

E. 2-FCV-65-29, EGTS TRAIN B UNIT 2 SUCT ISOL [757/A12V] _____

F. 2-FCV-65-50, EGTS TRAIN B UNIT 2 SUCT ISOL, [757/A12V] _____

G. 2-PCV-65-81, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [834/AZ360] _____

H. 2-PCV-65-83, EGTS UNIT 2 SHIELD BLDG EXHAUST VENT ISOL [834/AZ360] _____

I. 2-PCV-65-86, EGTS CNTMT ANNULUS ISOLATION [834/AZ360] _____

J. 2-PCV-65-87, EGTS CNTMT ANNULUS ISOLATION [834/AZ360] _____

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

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

Data Package: Page ____ of ____ **Date _____**

8.0 RECORDS

A. QA Records

Completed Test Package.

B. Non-QA Records

None

Appendix A
(Page 1 of 1)

TEST PROCEDURES/INSTRUCTIONS REFERENCE REVIEW

Data Package: Page ____ of ____ **Date _____**

NOTES

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

PROCEDURE/ INSTRUCTION	REVISION/CHANGES	IMPACT Yes/No	INITIAL AND DATE (N/A for no change)
FSAR Section 6.2.3 Table 6.2.3.2 Table 14.2-1, Sheets 41/42			
WBN2-65-4001			
2-TSD-65-1			
2-TSD-88-5			
2-PTI-065-02			

Appendix B
(Page 1 of 1)

TEMPORARY CONDITION LOG

Data Package: Page ____ of ____ **Date ________**

NOTES

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

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

Appendix C
(Page 1 of 1)

PERMANENT PLANT INSTRUMENTATION LOG

Data Package: Page ____ of ____ **Date _____**

INSTRUMENT OR INSTRUMENT LOOP #	CAL DUE DATE	FILLED AND VENTED[1]	PLACED IN SERVICE[1]	USED FOR QUANTITATIVE ACC CRIT		POST-TEST CAL DATE[2]	POST-TEST CALIBRATION ACCEPTABLE[2] INITIAL/DATE
		INIT/DATE	INIT/DATE	YES	NO		
2-FS-65-91		NA			X	NA	NA
2-FS-65-92		NA			X	NA	NA
2-LPP-65-80		NA			X	NA	NA
2-LPP-65-82		NA			X	NA	NA
2-LPP-30-126		NA			X	NA	NA
2-LPP-30-127		NA			X	NA	NA

[1] These items may be initialed and dated by personnel performing the task. Instrumentation NOT required to be filled and vented may be identified as Not Applicable. (NA)

[2] May be identified as NA if instrument was NOT used to verify/record quantitative acceptance criteria data.

Appendix D
(Page 1 of 1)
SWITCH LINEUP

Data Package: Page ____ of ____ **Date _____**

SWITCH UNID	LOCATION	DESCRIPTION	POSITION	INITIALS
2-HS-65-5	0-M-27B	U2 ANN VAC FAN SUCT	CLOSE	
2-HS-65-4	0-M-27B	U2 ANN VAC FAN SUCT	CLOSE	
2-HS-65-9	0-M-27B	EGTS TRAIN A UNIT 2 SUCT ISOL	CLOSE	
2-HS-65-29	0-M-27B	EGTS TRAIN B UNIT 2 SUCT ISOL	CLOSE	
2-HS-65-46	0-M-27B	EGTS TO U2 SHIELD BLDG	CLOSE	
2-HS-65-45	0-M-27B	EGTS TO U2 SHIELD BLDG	CLOSE	
2-HS-65-81/86	0-M-27B	U2 EGTS-ANN ΔP CNTLR A ISOL	CLOSE	
2-HS-65-83/87	0-M-27B	U2 EGTS-ANN ΔP CNTLR B ISOL	CLOSE	
2-HS-65-7	0-M-27B	EGTS FAN A U2 SUCT DMPR	CLOSE	
2-HS-65-50	0-M-27B	EGTS TR-B U2 SUCT DMPR	CLOSE	
2-HS-65-95	0-JB-292-1165, 757/A12V	EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR	CLOSE return to AUTO	
2-HS-65-96	0-JB-292-1165, 757/A12V	EGTS CNTMT ANN VAC FANS PURGE ISOL DMPR	CLOSE return to AUTO	
2-HS-65-77A	0-M-27B	ANN VAC FAN 2A & SUCT FCO	A-P AUTO	
2-HS-65-74A	0-M-27B	ANN VAC FAN 2B & SUCT FCO	A-P AUTO	

Appendix E
(Page 1 of 2)
ELECTRICAL LINEUP

Data Package: Page ____ of ____ **Date _____**

NOTE

Each fuse in this table has a blown fuse indicator which must be oriented towards the annunciator circuit.

BREAKER/FUSE UNID	LOCATION	DESCRIPTION	POSITION	INITIALS
2-BKR-65-77	480V C&A Vent Bd 2A1-A Compt 13C	EGTS CNTMT ANN VAC FAN 2A (2-FAN-65-77)	OFF	
2-BKR-65-74	480V C&A Vent Bd 2B1-B Compt 13C	EGTS CNTMT ANN VAC FAN 2B (2-MTR-65-74)	OFF	
2-BKR-235-1/11	120V VIPB 2-I, BKR 11	AUX RELAY RACK A BUS TO PNL 2-R-75	ON	
2-BKR-235-2/9	120V VIPB 2-II, BKR 9	AUX RELAY RACK B BUS TO PNL 2-R-75	ON	
1-BKR-235-1/19	120V VIPB 1-I, BKR 19	GAS TREATMENT FAN A-A PANEL 0-L-429	ON	
1-BKR-235-2/19	120V VIPB 1-II, BKR 19	GAS TREATMENT FAN B-B PANEL 0-L-428	ON	
1-BKR-235-3/36	120V VIPB 1-III BKR 36	FLUID DYNAMIC FLOW SENSORS	ON	
0-FU-236-3/D11	125V VIT BATT BD III, CKT D11	CONTAINMENT ANNULUS VACUUM FANS PURGE ISOLATION DAMPER	INSTALLED	
0-FU-236-3/A33	125V VIT BATT BD III, CKT A33	EGTS TRAIN B UNIT 2 SUCTION VLV	INSTALLED	
0-FU-236-3/A34	125V VIT BATT BD III, CKT A34	SHIELD BUILDING VENT ISOLATION VLV AND CONTAINMENT ANNULUS ISOLATION VLV, TRAIN A	INSTALLED	

Appendix E
(Page 2 of 2)
ELECTRICAL LINEUP

Data Package: Page ____ of ____ **Date _____**

BREAKER/FUSE UNID	LOCATION	DESCRIPTION	POSITION	INITIALS
0-FU-236-3/A35	125V VIT BATT BD III, CKT A35	EMER GAS TREAT, TRAIN A UNIT 2 SUCTION DAMPER	INSTALLED	
0-FU-236-3/A36	125V VIT BATT BD III, CKT A36	UNIT 2 SHIELD BLDG EXH DAMPER B	INSTALLED	
0-FU-236-3/39	125V VIT BATT BD III, CKT A39	CONTAINMENT ANNULUS VACUUM FANS ISOL DAMPER	INSTALLED	
0-FU-236-4/D17	125V VIT BATT BD IV, CKT D17	CNTMT ANNULUS VACUUM FANS PURGE ISOL DMP	INSTALLED	
0-FU-236-4/A31	125V VIT BATT BD IV, CKT A31	EGTS TRAIN B UNIT 2 SUCTION DMP	INSTALLED	
0-FU-236-4/A32	125V VIT BATT BD IV, CKT A32	UNIT 2 SHIELD BLDG EXH DMP A	INSTALLED	
0-FU-236-4/A33	125V VIT BATT BD IV, CKT A33	EGTS TRAIN A UNIT 2 SUCTION VLV	INSTALLED	
0-FU-236-4/A34	125V VIT BATT BD IV, CKT A34	SHIELD BLDG VENT ISOL VLV, CNTMT ANNU ISOL VLV	INSTALLED	
0-FU-236-4/A39	125V VIT BATT BD IV, CKT A39	CNTMT ANNULUS VACUUM FANS ISOL DMP	INSTALLED	