

TMI DOCUMENTS

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229 058

~~227 051~~

THREE MILE ISLAND UNIT II
DOT

AUXILIARY BUILDING
VENTILATION
FUNCTIONAL TEST

NUMBER TP 173/2

MTX 2.4

CATEGORY B

DRAFT Rev. 0

PREPARED: Cognizant Engineer Quinn McMillin Date 3-22-77

APPROVED: Lead Engineer J.M. Jenkins Date 3-25-77

APPROVED: Technical Engineer Mad Nelson Date 4/18/77

DOT APPROVAL FOR PERFORMANCE:

GPU DOT Representative Mad Nelson Date 4/28/77

Met-Ed DOT Representative J.A. Michalski Date 4/28/77

NSSS DOT Representative N.A. Date —

or
A-E DOT Representative P.P. Brownell Date 4/28/77

TEST RESULTS: Acceptable with the following test exceptions and deficiencies—
E 1 thru 10.

Technical Engineer Carl E. Datto Date 3-23-78

DOT APPROVAL OF TEST RESULTS:

GPU DOT Representative Carl E. Datto Date 3-24-78

Met-Ed DOT Representative J.F. Helberich Date 3-24-78

NSSS DOT Representative N.A. Date —

or
A-E DOT Representative Harold Gunter Date 3-24-78

ENCLOSURES: 1. Test Procedure Exception and Deficiency List

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1.0 PURPOSE

1.1 Verify that the quick closing Damper (AH-D-4002) is interlocked with the Supply Fans (AH-E-7A,B) to OPEN when either fan is energized and CLOSE when both fans are de-energized.

1.1.1 Verify that damper (AH-D-4002) is throttled by the Differential Pressure Indicating Controller (AH-DPIC-5312).

1.2 Verify that the supply fans discharge dampers (AH-D-4001A, B) open automatically when the associated fan STARTS and close automatically when the fan STOPS.

1.3 Verify that the exhaust fans discharge dampers (AH-D-4016A, B) and (AH-D-4017A, E) OPEN automatically when the associated fans START and CLOSE when the fans STOP.

1.4 Verify that the supply fans (AH-E-7A, B) are interlocked with the exhaust fans (AH-E-8A, B, C, D) to START 10 seconds after any pair of exhaust fans START, and STOP immediately after one or both exhaust fans are deenergized.

1.5 Verify that the exhaust fans (AH-E-8A, B, C, D) operate in pairs, and the "Stand-by" pair will START automatically if the "Operating" pair TRIPS.

1.6 Verify that the supply duct preheater (AH-C-9A-J) and the duct heaters AH-C-10A thru C, AH-C-42A thru C, and AH-C-43A, B are interlocked with the Supply Fans AH-E-7A, B.

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1.0 PURPOSE (Cont'd.)

1.7 Verify that the elevator machine room fan motor is energized when the room temperature exceeds 90°F.

E-8 1.8 Verify that the static pressure in the Auxiliary Building is maintained at 1/8" W.G. negative pressure with respect to the

~~Air Intake Tunnel~~ ^{mc}
outside atmosphere.

1.9 Verify that control valves AH-V179/180 to Radiation Monitor HP-R-228 OPEN (CLOSE) when Exhaust Fans AH-E-8A,B (C,D) START (STOP).

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2.0 REFERENCES

2.1 B&R Flow Diagrams

E-1 *Jcy* 2.1.1 Heating & Ventilating - Auxiliary Bldg. Dwg. 2042,
Rev. ¹⁶~~24~~*Jcy*

E-1 *Jcy* 2.1.2 Heating and Ventilation Bldg. Air Intake & Exhaust
Dwg. 2219, Rev. ¹⁵~~24~~*Jcy*

2.2 B&R Elementary Diagrams

Jcy 2.2.1 Aux. Bldg. Exhaust Fans Dwg. 3074, Sh. 51, Rev. 16.

E-1 *Jcy* 2.2.2 Aux. Bldg. Supply Fans Dwg. 3074, Sh. 52, Rev. ¹⁶~~15~~.

Jcy 2.2.3 Aux. Bldg. Supply & Exhaust Fans Dwg. 3074, Sh. 52A,
Rev. 9.

E-1 *Jcy* 2.2.4 Aux. Building Supply Duct Preheaters AH-C-9A thru J
Dwg. 3074, Sh. 42, Rev. ⁸~~9~~.

Jcy 2.2.5 Aux. Building Duct Heaters AH-C-10A, B, C, Dwg. 3074,
Sh. 75, Rev. 8.

Jcy 2.2.6 Aux. Building Duct Heaters AH-C-42A, B, C, Dwg. 3074,
Sh. 75A, Rev. 3.

Jcy 2.2.7 Aux. Building Duct Heaters AH-C-43A,B, Dwg. 3074, Sh. 76,
Rev. 8.

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2.0 REFERENCES (Cont'd.)

JCH 2.2.8 Aux. Building Rad. Monitoring Sampling Valves AH-V-179,
AH-V-180, Dwg. 3077, Sh. 68, Rev. 1.

E-1 *JCH* 2.2.9 Filter Drives Dwg. 3077, Sh. 31, Rev. ⁵~~4~~*JCH*

E-1 *JCH* 2.2.10 Aux. Building Elevator Machine Room Exhaust Fan,
Dwg. 3077, Sh. 2, Rev. ⁷~~6~~*JCH*

E-1 *JCH* 2.3 FSAR, Section 9.4.2, Am. ⁶²~~58~~*JCH*

JCH 2.4 Auxiliary Building Heating and Ventilating System Description,
Index No. 36, August, 1976.

2.5 Vendor Manuals

2.5.1 Buffalo Forge Fan Manual (63.05).

2.5.2 Mine Safety Filter Manual (63.03).

2.5.3 Radiant Heater Manual (63.19).

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3.0 TIME REQUIRED

3.1 3 men, 2 shifts.

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4.0 PREREQUISITES

4.1 Tests -

The following tests have been completed sufficiently to support the performance of this test procedure:

4.1.1 TP 250/2, Instrument Calibration, MTX-2.1.

Signature RDCross Date 2/28/78

4.1.2 TP 250/2, Electrical Test, MTX-2.2.

Signature RDCross Date 2/28/78

4.1.3 TP 250/2, Preliminary Operational Test, MTX-2.3.

Signature RDCross Date 2/28/78

4.1.4 Spec. 2555-63, Vendors Tests, MTX 2.6.

Signature RDCross Date 2/28/78

4.2 Construction Completion Status

4.2.1 Met-Ed has accepted the system for Preoperational Testing.

E-2 Signature RDCross Date 2/28/78

4.3 Environmental Conditions

4.3.1 No special environmental conditions are required.

Signature RDCross Date 2/28/78

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5.0 TEST EQUIPMENT

5.1 MTE 22 - Stopwatch.

5.2 MTE 4 - 0 to 5" H₂O manometer.

5.3 MTE 4 - 0 to 1" H₂O manometer.

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6.0 LIMITATIONS AND PRECAUTIONS

None.

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7.0 PLANT STATUS

7.1 Instrument Air is available per 2104-2.3 for operation of the system dampers.

Signature RD [Signature] Date 2/28/78

7.2 Air is available for ventilation from the Air Intake Tunnel per 2104-5.12.

Signature RD [Signature] Date 2/28/78

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8.0 PREREQUISITE SYSTEM CONDITIONS

8.1 The Auxiliary Building Heating and Ventilating system is in normal operation in accordance with 2104-5.3. Exhaust Fans

E-3 AH-E-8A, B are "Operating" and Exhaust Fans AH-E-8C, D are on "Stand-By".

Signature RD Cross Date 3/6/78

8.2 Place the following thermostats or controllers to a temperature

E-4 which will assure that the heating coils will be energized when their control switches are placed in the "On" position.

- | | |
|-------------|-------------------|
| AH-TIC-5315 | AH-C-9A thru 9J |
| AH-TS-5307 | AH-C-10A thru 10C |
| AH-TS-5302 | AH-C-42A thru 42C |
| AH-TS-5297 | AH-C-43A and 43B |

Signature Graig McMiller Date 3/14/78

8.3 For section 9.5

8.3.1 Verify that the Aux. Bldg. H&V is not operating and connect the 0-5" H₂O manometer (MTE-4) to the test tee connections of AH-DPIC-5312.

E-10

Signature _____ Date _____

NOTE: The sequence of testing the major sections is preferred except for sections 9.3 and 9.4 which is mandatory.

8.4 For section 9.6.

8.4.1 Verify that the Aux. Building H&V is not operating and

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8.0 PREREQUISITE SYSTEM CONDITIONS (Cont'd.)

8.4.1 (cont'd.)

E-8

connect the 0 to 1" H₂O manometer to the test tee
connections of AH-DPE-5303.

Signature *Craig McMillen* Date *3/14/8*

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9.0 TEST METHOD

9.1 Verification of Interlocks of Exhaust Fans AH-E-8A, B with Supply Fans AH-E-7A, B Dampers, Heaters, and Valves AH-V179, 180.

9.1.1 Verify the condition of the following equipment and record each item in the specified space on Data Sheet 10.1.1:

- WFO* a) Exhaust Fans AH-E-8C, D.
- WFO* b) Supply Fans AH-E-7A, B
- WFO* c) Air Supply Damper AH-D-4002
- WFO* d) Dampers AH-D-4001A, B at Supply Fans AH-E-7A, B.
- WFO* e) Dampers AH-D-4016A, B at Exhaust Fans AH-E-8A, B.
- WFO* f) Dampers AH-D-4017A, B at Exhaust Fans AH-E-8C, D.

CMC g) Radiation Monitor Valve AH-V179.

CMC h) Radiation Monitor Valve AH-V180.

CMC 9.1.2 Adjust the following thermostat setpoints downward and verify the corresponding heater de-energizes (Red Light Off). Record data in setp 10.1.2.

- | | |
|----------------|-------------------|
| 1) AH-TIC-5315 | AH-C-9A thru 9J |
| 2) AH-TS-5307 | AH-C-10A thru 10C |
| 3) AH-TS-5302 | AH-C-42A thru 42C |
| 4) AH-TS-5297 | AH-C-43A and 43B |

CMC 9.1.3 Adjust the thermostat setpoints in step 10.1.2 upward and verify the corresponding heaters energize (Red Light On). Record data in step 10.1.3.

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9.0 TEST METHOD (Cont'd.)

MC 9.1.4 Return all thermostat setpoints to 70°F except for AH-TIC-5315 which should be set at 50°F.

Section 9.1 Accomplished Sat. ✓ Unsat. _____

Signature. *Graig McMillin* Date *3/14/78*

9.2 Verification that the "Stand-By" pair of fans will START if one of the "Operating" fans STOPS, and then the second fan of the original pair of fans will STOP. Also, verification of interlocks of Fans, Dampers, Heaters and Valves.

POO 9.2.1 STOP Exhaust Fan AH-E-8A and verify the condition of the following equipment and record each item in the specified space on Data Sheet 10.2.1.

POO a) Exhaust Fans AH-E-8A, B

POO b) Exhaust Fans AH-E-8C, D

POO c) Supply Fans AH-E-7A, B

POO d) Air Supply Damper AH-D-4002

POO e) Dampers AH-D-4001A, B at Supply Fan AH-E-7A, B.

POO f) Dampers AH-D-4016A, B at Exhaust Fans AH-E-8A, B.

POO g) Dampers AH-D-4017A, B at Exhaust Fans AH-E-8C, D.

MC h) Heater AH-C-9A-J at Air Supply

MC i) Heater AH-C-10A-C at Elev. 328'-0"

MC j) Heater AH-C-42A-C at Elev. 305'-0"

MC k) Heater AH-C-43A, B at Elev. 280'-6"

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9.0 TEST METHOD (Cont'd.)

9.2.1 (cont'd.)

- onc* l) Radiation Monitor Valve AH-V179
- onc* m) Radiation Monitor Valve AH-V180

Section 9.2 Accomplished Sat. Unsat.

Signature *Graig McArthur* Date 3/14/78

9.3 Verification that Supply Fans AH-E-7A, B will STOP when one or both of the Exhaust Fans are de-energized, Dampers AH-4001A, B Close and Duct Heaters AH-C-9A-J, AH-C-10A-C, AH-C-42A-C, and AH-C-43A, B de-energize.

pp0
E-5 9.3.1 With Exhaust Fans AH-E-8C, D "Operating" and AH-E-8A, B on "Stand-By", place switches for Fans AH-E-8A, B in PULL-TO-LOCK.

pp0
E-5 9.3.2 Place switch for Fan AH-E-8^{A ADD} in PULL-TO-LOCK and record the condition of the following equipment in the specified spaces on Data Sheet 10.3.2.

- pp0* a) Exhaust Fan AH-E-8A, B.
- pp0* b) Exhaust Fan AH-E-8C
- pp0* c) Exhaust Fan AH-E-8D
- pp0* d) Supply Fans AH-E-7A, B
- pp0* e) Air Supply Damper AH-D-4002
- pp0* f) Dampers AH-D-4001A, B at Supply Fans AH-E-7A, B
- E-5* *pp0* g) Dampers AH-D-4016A, B at Exhaust Fans AH-E-8A, B *pp0*

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9.0 TEST METHOD (Cont'd.)

9.3.2 (cont'd.)

- ^{E-5} h) Damper AH-D-4017A^D at Exhaust Fan AH-E-8C, D
^{E-5} i) Damper AH-D-~~4017B~~^{4016B} at Exhaust Fan AH-E-8~~C~~^B
j) Heater AH-C-9A-J at Air Supply
k) Heater AH-C-10A-C at Elev. 328'-0"
l) Heater AH-C-42A-C at Elev. 305'-0"
m) Heater AH-C-43A-C at Elev. 280'-0"
n) Radiation Monitor Valve AH-V179
^{E-7} o) Radiation Monitor Valve AH-V180

Section 9.3 Accomplished Sat. Unsat.

Signature Greg McMillan Date 3/14/78

9.4 Verification that Damper AH-D-4002 interlocks with Air Supply Fans AH-E-7A, B and that Dampers AH-D-4001A, B CLOSE when Air Supply Fans AH-E-7A, B STOP and OPEN when Air Supply Fans AH-E-7A, B START. Also, that Air Supply Fans AH-E-7A, B START ten seconds after a pair of the Exhaust Fans AH-E-8A, B, C, D START.

^{PO} 9.4.1 Observe the positions of Dampers AH-D-4002, AH-D-4001A & B and record their positions on Data Sheet 10.4.1.

^{PO} ^{E-5} 9.4.2 Continuing from conditions established in Step 9.3.2, and by use of stopwatch, determine the elapsed time between the time the switch for Fan AH-E-8^{BA} is placed in START and Air Supply Fans AH-E-7A, B START. Record this time on Data Sheet 10.4.2.

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9.0 TEST METHOD (Cont'd.)

9.4.3 Observe the positions of Dampers AH-D-4002, AH-D-4001A & B after Air Supply Fans AH-E-7A, B have started, and record their positions on Data Sheet 10.4.3.

9.4.4 Change control switches on Exhaust Fans AH-E-8A, B from PULL-TO-LOCK to AUTO.

Section 9.4 Accomplished Sat. Unsat.

Signature Gregory M. Miller Date 3/14/78

9.5 Verification of control of set differential pressure across the supply filter bank by D-4002.

E-10

9.5.1 Prerequisites of section 8.3 are complete.

Signature _____ Date _____

9.5.2 Place the Aux. Bldg. H&V system in operation per 2104-5.3 record controlling setpoint _____.

9.5.3 Set the controlling pressure on AH-DPIC-5312 to 3.0" WG and verify that AH-D4002 moves to a new position and record the manometer reading in 10.5.3.

9.5.4 Set the controlling pressure on AH-DPIC-5312 to 2.0" WG and verify that AH-D4002 moves to a new position and record the manometer reading in 10.5.4.

9.5.5 Set the controlling pressure on AH-DPIC-5312 to 2.5" WG

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9.0 TEST METHOD (Cont'd.)

9.5.5 (cont'd.)

E-10

and verify that AH-4002 moves to a new position and record the manometer reading in 10.5.5.

9.5.6 Shut down the Aux. Bldg. H&V per 2104-5.2 and remove the manometer connected in step 8.3.1. Return DPIC to setpoint in step 9.5.2.

Signature _____ Date _____

Section 9.5 Accomplished Sat. _____ Unsat. _____

Signature _____ Date _____

9.6 Verification of the Aux. Building pressure controller capability

E-8

to control building pressure at a negative 1/8" WG with respect to ~~the Air Intake Tunnel~~ *outside atmosphere.*

9.6.1 Prerequisites of section 8.4 are complete.

Signature *Greg McPherson* Date *3/14/78*

E-9
E-8 *Jay*

9.6.2 Place Aux. Bldg. H&V in operation per 2104-5.3. Record AH-DPC-5303 ~~DPC setpoint~~ *pressure in section 10.6.2.*

E-8

CMC

9.6.3 Set the controlling pressure on AH-DPC-5303 to ~~4 psi~~ *.0625" WG* ~~CMC~~ and verify that the Aux. Bldg. Hi/Lo alarm energizes in 10.6.3 (1/16" WG in Aux. Bldg.).

E-8

CMC

9.6.4 Set the controlling pressure on AH-DPC-5303 to ~~5.5 psi~~ *.125" W.G.* ~~CMC~~ and verify that the Aux. Bldg. Hi/Lo alarm clears in 10.6.4 (1/8" WG).

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9.0 TEST METHOD (Cont'd.)

E-8 CMC 9.6.5 Set the controlling pressure on AH-DPC-5303 to ~~7.5~~ ^{T CMC .1875" W.G.} CMC and verify that the Aux. Bldg. Hi/Lo alarm energizes in 10.6.6 (3/16" WG).

E-8 CMC 9.6.6 Set the controlling pressure on AH-DPC-5303 to ~~5.5~~ ^{T CMC .125" W.G.} psi and verify that the Aux. Bldg. Hi/Lo alarm deenergizes in 10.6.6 (1/8" WG).

E-8 ~~9.6.7 Shut down the Aux. Bldg. H&V per 2104-5.9 and remove the manometer installed in step 8.4.1.~~

~~Signature _____ Date _____~~

Section 9.6 Accomplished Sat. Unsat. _____

Signature John C. Ulrich Date 3/15/78

9.7 Verification that Elevator Machine Room Fan Motor AH-E-41 is energized when room temperature exceeds 90°F.

^{POO} 9.7.1 Observe the setpoint of temperature switch AH-TS-5320. ^{of Elevator Machine Room} Record setting on Data Sheet 10.7.1.

^{POO} 9.7.2 Raise, and Lower the setpoint on AH-TS-5320 to the point where the Fan AH-E-41 stops and starts. Record the data on step 10.7.2.

^{POO} 9.7.3 Reset AH-TS-5320 to original setting. Record setpoint on data sheet 10.7.3.

Section 9.7 Accomplished Sat. Unsat. _____

Signature P. D. O'Leary / J. M. Sawyers Date 3/8/78

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9.0 TEST METHOD (Cont'd.)

9.8 Return the system to Met-Ed for normal operation per 2104-5.3.

Signature Carl E. Gatto Date 3-23-78

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SECTION 10.0 - DATA REQUIRED

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials Org.	Date
10.1.1a	Condition of Exhaust Fans AH-E-8C,D	<input type="checkbox"/> On <input type="checkbox"/> Off <input checked="" type="checkbox"/> Stand-by	Stand-by	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1b	Condition of Supply Fans AH-E-7A,B	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1c	Position of Air Supply Damper AH-D-4002	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open (throttled)	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1d	Position of Dampers AH-D-4001A, B at Supply Fans AH-E-7A,B	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1e	Position of Dampers AH-D-4016A,B at Exhaust Fans AH-E-8A,B	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1f	Position of Dampers AH-D-4017A,B at Exhaust Fans AH-E-8C,D	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	<i>RDO</i> <i>GPU</i>	3/6/78
10.1.1g	Position of Radiation Monitor Valve AH-V179	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	<i>CMC</i> <i>GPU</i>	3/14/78
10.1.1h	Position of Radiation Monitor Valve AH-V180	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	<i>CMC</i> <i>GPU</i>	3/14/78
10.1.2	AH-C-9A thru 9J de-energized <i>A,B,C,E,F</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	<i>CMC</i> <i>GPU</i>	3/14/78
	AH-C-10A thru 10C de-energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	<i>CMC</i> <i>GPU</i>	3/14/78
	AH-C-42A thru 42C de-energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	<i>CMC</i> <i>GPU</i>	3/14/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials / Org.	Date
10.1.2 (cont'd.)	AH-C-43A and 43B de-energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
10.1.3	AH-C-9A thru 9J energized A, B, C, E, F	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
	AH-C-10A thru 10C energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
	AH-C-42A thru 42C energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
	AH-C-43A and 43B energized	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
10.2.1a	Condition of Exhaust Fans AH-E-8A,B	<input type="checkbox"/> On <input type="checkbox"/> Off <input checked="" type="checkbox"/> Stand-by	Stand-by	PDO / GPU-JW	3/6/78
10.2.1b	Condition of Exhaust Fans AH-E-8C,D	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off <input type="checkbox"/> Stand-by	On	PDO / GPU-JW	3/6/78
10.2.1c	Condition of Supply Fans AH-E-7A,B	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	PDO / GPU-JW	3/6/78
10.2.1d	Position of Air Supply Damper AH-D-4002	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open (throttled)	PDO / GPU-JW	3/6/78
10.2.1e	Position of Dampers AH-D-4001A, B at Supply Fans AH-E-7A,B	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	PDO / GPU-JW	3/6/78
10.2.1f	Position of Dampers AH-D-4016A, B at Exhaust Fans AH-E-8A,B	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	PDO / GPU-JW	3/6/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials / Org.	Date
10.2.1g	Position of Dampers AH-D-4017A, B at Exhaust Fans AH-E-8C, D	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	POO / GPC-Ju	3/6/78
10.2.1h	Condition of Heater AH-C-9A-J at Air Supply	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPC	3/14/78
10.2.1i	Condition of Heater AH-C-10A-C at Elev. 328'-0"	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPC	3/14/78
10.2.1j	Condition of Heater AH-C-42A-C at Elev. 305'-0"	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPC	3/14/78
10.2.1k	Condition of Heater AH-C-43A-C at Elev. 280'-6"	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPC	3/14/78
10.2.1l	Position of Radiation Monitor Valve AH-V179	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	CMC / GPC	3/14/78
10.2.1m	Position of Radiation Monitor Valve AH-V180	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	CMC / GPC	3/14/78
10.3.2a	Condition of Exhaust Fans AH-E-8A, B, C, D E-5	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	POO / GPC-Ju	3/6/78
10.3.2b	Condition of Exhaust Fan AH-E-8C, D E-5	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	POO / GPC-Ju	3/6/78
10.3.2c	Condition of Exhaust Fan AH-E-8D E-5	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	POO / GPC-Ju	3/6/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials		Date
					Org.	
10.3.2d	Condition of Supply Fans AH-E-7A,B	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	PDO	GPU	3/6/78
10.3.2e	Condition of Air Supply Damper AH-D-4002	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	PDO	GPU	3/6/78
10.3.2f	Condition of Dampers AH-D-4001A, B at Supply Fans AH-E-7A,B	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	PDO	GPU	3/6/78
10.3.2g	Condition of Dampers AH-D-4016A, B at Exhaust Fans AH-E-8A, B E-5	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	PDO	GPU	3/6/78
10.3.2h	Condition of Damper AH-D-4017A, B at Exhaust Fan AH-E-8C, D E-5	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	PDO	GPU	3/6/78
10.3.2i	Condition of Damper AH-D-4017B at Exhaust Fan AH-E-8D E-5	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	PDO	GPU	3/6/78
10.3.2j	Condition of Heater AH-C-9A-J at Air Supply	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	CML	GPU	3/11/78
10.3.2k	Condition of Heater AH-C-10A-C at Elev. 328'-0"	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	CML	GPU	3/11/78
10.3.2l	Condition of Heater AH-C-42A-C at Elev. 305'-0"	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	CML	GPU	3/11/78
10.3.2m	Condition of Heater AH-C-43A-B at Elev. 280'-0"	<input type="checkbox"/> On <input checked="" type="checkbox"/> Off	Off	CML	GPU	3/11/78
10.3.2n	Condition of Radiation Monitor Valve AH-V179	<input type="checkbox"/> Open <input checked="" type="checkbox"/> Closed	Closed	CML	GPU	3/11/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials / Org.	Date
10.3.20 E-7	Condition of Radiation Monitor Valve AH-V180	Open <input checked="" type="checkbox"/> Closed	Open closed Open CMC	CMC GPU	3/14/78
10.4.1	Position of Dampers: -- AH-D-4002	Open <input checked="" type="checkbox"/> Closed	Closed	POO GPU-JW	3/8/78
	AH-D-4001A	Open <input checked="" type="checkbox"/> Closed	Closed	POO GPU-JW	3/8/78
	AH-D-4001B	Open <input checked="" type="checkbox"/> Closed	Closed	POO GPU-JW	3/8/78
10.4.2	Supply Fans AH-E-7A, B started.	CMC-8/10 Seconds	10 ± 2 seconds	POO GPU-JW	3/8/78
10.4.3	Positions of Dampers: -- AH-D-4002	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open (throttled)	POO GPU-JW	3/8/78
	AH-D-4001A	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	POO GPU-JW	3/8/78
	AH-D-4001B	<input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed	Open	POO GPU-JW	3/8/78
	AH-C-9A-J Condition	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC GPU	3/14/78
	AH-C-10A-C Condition	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC GPU	3/14/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials Org.	Date
10.4.3 (cont'd.)	AH-C-42A - C Condition	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPU	3/14/78
	AH-C-42A, B Condition	<input checked="" type="checkbox"/> On <input type="checkbox"/> Off	On	CMC / GPU	3/14/78
10.5.3 E-10	Pressure drop across filters (MTE-4 Manometer reading)	<input type="checkbox"/> In. <input type="checkbox"/> H ₂ O	3.0 ± .3"H ₂ O		
10.5.4 E-10	Pressure drop across filters (MTE-4 Manometer reading)	<input type="checkbox"/> In. <input type="checkbox"/> H ₂ O	2.0 ± .2"H ₂ O		
10.5.5 E-10	Pressure drop across filters MTE-4 Manometer reading)	<input type="checkbox"/> In. <input type="checkbox"/> H ₂ O	2.5 ± .25"H ₂ O		
E-9 10.6.2	Aux. Bldg. Pressure	<input type="checkbox"/> In. <input type="checkbox"/> H ₂ O	- 1/8" w.g.	GPU	3/15/78
10.6.3	Aux. Bldg. Hi/Lo Alarm on panel 25 energizes	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
10.6.4	Aux. Bldg. Hi/Lo Alarm on Panel 25 clears.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
10.6.5	Aux. Bldg. Hi/Lo Alarm on panel 25 energizes.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78
10.6.6	Aux. Bldg. Hi/Lo Alarm on panel 25 clears.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	CMC / GPU	3/14/78

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SECTION 10.0 - DATA REQUIRED (Cont'd.)

Step No.	Description of Data Required	Data	Acceptance Criteria	Initials Org.	Date
10.7.1	Initial setting of Temp. Switch AH-TS-5320	<u>90</u> °F	~90°F	PBO Cruiser	3/8/78
10.7.2	AH-E-41 Starts and Stops	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes	PBO Cruiser	3/8/78
10.7.3	Final setting of Temp. Switch AH-TS-5320	<u>90</u> °F	Same as step 10.7.1.	PBO Cruiser	2/8/78

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11.0 ACCEPTANCE CRITERIA

11.1 Acceptance Criteria is included in Section 10.0.

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TEST PROCEDURE EXCEPTION AND DEFICIENCY LIST

Rev. 1

ENCLOSURE 1 OF TP 173/2

COVER PAGE

The exception and deficiency consists of the following pages: 1, 2

No.	E/D	Par.	Description/Initial/Date	Justification/Resolution	Justified, Completed Signoff	Date
1	E	2.1.1 2.1.2 2.2.2 2.2.4 2.2.9 2.2.10 2.3	Updated drawing revisions to latest revisions. JCU 1/31/78	Doesn't affect the scope or intent of TP.	J.C. Ulrich	1/31/78
2	E	4.2.1	System not turned over to AIEC RDO 2/28/78	Doesn't affect the scope or intent of TP.	RDO Gray	2/28/78
3	E	8.1	System not lined up per 2104-5.3 RDO 3/6/78	System lining supports per- formance of TP	RDO Gray	3/6/78
4	E	8.2	Heaters not ready for service RDO 3/6/78	Heaters will be tested as they are put into service HEATERS PLACED IN SERVICE 3-14-78 PMA	RDO Gray	3/6/78
5	E	9.3.1	AH-E-8A,B Operating AH-E-8C,D Pull-to-Lock RDO 3/6/78	System lining at this time	RDO Gray	3/6/78
6	E	9.4.4	All fans shut down RDO 3/8/78	System not operating to support plant at this time	RDO Gray	3/8/78
7	E	9.3.2.0 9.3.2.0	Changed A/C from "open" to "closed". CAIEC 3/14/78	With supply & exhaust fans recieved values AH-V179.6 AH-V180 should be closed. Changed A/C to reflect same.	Jerry M. Martin	3/14/78

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TEST PROCEDURE EXCEPTION AND DEFICIENCY LIST

Rev. 1

ENCLOSURE 1 OF TP 173/2

COVER PAGE

The exception and deficiency consists of the following pages: 1,

No.	E/D	Par.	Description/Initial/Date	Justification/Resolution	Justified/Completed	
					Signoff	Date
2	E	9.6 8.4.1 9.6.7	Updated procedure wording. CMC 3/14/78	Updated procedure to reflect B&R drawing changes. Also changed "DPC" to "DPT" - alarms could be verified. Alarms were checked with fans off and signal was put on AH-DPT-5303.	Geary M. Mullin	3/14/78
3	E	9.6.2 10.6.2	The Aux. Bldg. bypass dampers were closed to maintain control at $-\frac{1}{8}$ " WG. These dampers are to be deleted permanently. JCU 3/5/78	PR 2646 has identified this problem. aux Bldg. dampers are to be blanked and therefore this does not affect data	CE Sattis	3/23/78
0	E	8.3 9.5 10.5	these sections are deleted from the test procedure CED 3/23/78	the DP control on this damper is to be deleted per FQ 2487 and therefore will not be tested.	CE Sattis	3/23/78
10						

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BRIEFING CHECK LIST

PRIOR TO STARTING A TEST, THE GPU SHIFT TEST ENGINEER SHALL ASSURE HIMSELF THAT ALL ITEMS ON THIS CHECK LIST HAVE BEEN CONSIDERED AND THAT A PROPER BRIEFING HAS BEEN CONDUCTED.

TEST PROCEDURE TITLE: Aux Oldg VentilationNO. TP 173/2

Init. - Date

- | | | |
|-----------|---|-------------------|
| 1. | Test appears on the Test Plan. | <u>PGO 3/6/78</u> |
| 2. | Applicable TCN's incorporated in T/P. | <u>PGO 3/6/78</u> |
| 3. | All key personnel at briefing have indicated that they have read T/P. | <u>PGO 3/6/78</u> |
| 4. | All special precautions have been discussed. | <u>PGO 3/6/78</u> |
| 5. | All required test preparations have been made. | <u>PGO 3/6/78</u> |
| 6. | Adequate communications provided. | <u>PGO 3/6/78</u> |
| 7. | Necessary tools and instruments available. | <u>PGO 3/6/78</u> |
| Rev. 2/8. | All required instruments in service. Check to assure calibration is valid. | <u>PGO 3/6/78</u> |
| 9. | All applicable alarms in service. | <u>PGO 3/6/78</u> |
| 10. | Water quality/chemistry satisfactory. | <u>PGO 3/6/78</u> |
| 11. | All equipment (instruments, switches, valves, etc.) have been tagged out as required. | <u>PGO 3/6/78</u> |
| 12. | Any other tests running concurrently. | <u>PGO 3/6/78</u> |
| 13. | All key personnel have been instructed what to do in case of a casualty. | <u>PGO 3/6/78</u> |
| 14. | Special safety equipment available. | <u>PGO 3/6/78</u> |
| Rev. 1. | 15. List any test rigs installed for this T/P. Check to assure calibration is valid. | <u>PGO 3/6/78</u> |
| 16. | What steps will be taken to remove any test rigs installed in item 15. | <u>PGO 3/6/78</u> |

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17. Is current valve lineup status of systems satisfactory for conduct of this test.

PDO 3/6/78

18. What steps will be taken to return systems to normal lineup following completion of test.

PDO 3/6/78

19. Are all WA's cleared which would effect performance of this test?

PDO 3/6/78

20. Enter type and results of briefings in STE's log.

PDO 3/6/78

Conducted Class C briefing with Dick Hoyt

RDBrox 3/6/78

Conducted Class C briefing with Pat Lydon

Pat Lydon 3/8/78

Conducted class C briefing with Dick Adams.

Graig McMillin 3/11/78

Conducted class C briefing with R. Hoyt.

J. McMillin 3/15/78