

Date 5-24-79

- ### C. Procedure

One

OPERATION OF VACUUM PUMP DISCHARGE FILTER

J-TMI - UNIT. 2

OPERATING PROCEDURE

CONDENSER AIR EXTRACTION EXHAUST FILTRATION SYSTEM

TABLE OF CONTENTS

- 1.0 REFERENCES
 - 1.1 Drawings Applicable for Operation
 - 1.2 Operating Procedures Applicable for Operation
 - 1.3 Manufacturers Instruction Manuals
 - 1.4 Applicable System Descriptions
- 2.0 LIMITS AND PRECAUTIONS
- 3.0 PREREQUISITES
- 4.0 PROCEDURE
 - 4.1 Start-up
 - Normal Operation
 - 4.3 Shutdown
 - 4.4 Special or Infrequent Operation

Appendix

Valve Lineup for Startup	A
Valve Lineup Signature Sheet	B

1.0 REFERENCES

1.1 Drawings applicable for operation:

1.1.1 Condenser Air Extraction Exhaust filtration flow diagram,

U & R Dwg. H 011.

1.1.2 Condenser Air Extraction, B & R Dwg. 2010.

1.1.3 Aux Bldg. H & V, B & R Dwg. 2042.

1.2 Operating procedures applicable for operation.

1.2.1 Condenser air extraction, OP 2106-2.3 .

1.3 Manufacturers Instruction Manuals.

1.3.1 Indeeco Electric Heating Coil Instruction & Maintenance Manual.

1.4 Applicable System Descriptions.

1.4.1 Condenser Air Extraction Exhaust Filtration System.

1.4.2 Condenser Air Extraction.

1.4.3 Aux. Bldg. H & V.

1.5 Curves, Tables, etc.

1.5.1 None

2.0 LIMITS AND PRECAUTIONS

2.1 Equipment.

2.1.1 To avoid excessive temperatures in the charcoal filter, do not increase the manual thermostat set point above 100°F.

2.1.2 Ensure that the heater interlock with the fan running signal is operational at all times.

2.2 Administrative.

2.2.1 Since the filter cabinet may become hot during operation, personnel should take precautions to avoid burns.

2.2.2 All health physics precautions should be observed when operating or maintaining filter unit.

2.2.3 All liquid drains should be closed to ensure that all releases

due to system operation are controlled.

- 2.2.4 The filter differential pressures and radiation levels should be monitored to allow for optimum changing of filter elements.
- 2.2.5 If the filter fan trips, some vacuum pump discharge flow may exhaust into the turbine building. The filter bypass valve should be opened and the filter isolated.

Rev. 2

3.0 PREREQUISITES

Initial each step after completion.

Filter Unit should be put in service when VA-A-748 Iodine Channel Reaches A Reading of 5×10^{-5} $\mu\text{Ci/cc}$.

NOTE :

- 3.1 Condenser Air Extraction System Operational per 2106-2.3.
- 3.2 Aux. Bldg. H & V System operational per 2104-5.3
- 3.3 Valve lineup complete per Appendix A.
- 3.4 Power is available from MCC 2-31A and the breaker is closed for the air preheater (compartment 5B).
- 3.5 Power is available from MCC 2-31D and the breaker is closed for the filter exhaust fan (compartment 4E).
- 3.6 Auto thermostat set at 200°F .
- 3.7 Manual thermostat set at 300°F .
- 3.8 Insure water supply is available and valved up to the manual water spray system isolation valve.
- 3.9 Freon and DOP test performed satisfactorily on filters.

4.0 PROCEDURE

4.1 Startup

- 4.1.1 Start the filtration unit fan and heater by depressing the "Start" pushbutton at the unit.
- 4.1.2 Shut filtration Bypass valve, V-3.
- 4.1.3 Start the condenser air exhaust system if not already operating.

4.2 Normal Operation

- 4.2.1 Monitor pressure drops across each filter.
- 4.2.2 Monitor radiation levels at the filter unit.

4.2.3 Monitor operation of the heater.

4.2.4 Monitor fan low flow signal.

NOTE: The above steps should be performed several times

4.2.5 during each shift.

4.3 shutdown *Daily, add a solution of 10% Sodium Thiosulfate, 10% Sodium Hydroxide and 80% demin water to the filter drains.*

4.3.1 If the exhaust air is not too contaminated to discharge, or if

the Aux. Bldg. Supplementary filter trains are installed, proceed as

per step 4.3.4. Stop the condenser vacuum pumps per 2106-2.3

if the radiation levels in the air stream are so high as to prohibit discharging to the air.

4.3.2 Push the "stop" pushbutton at the filter unit and verify that the heater is deenergized.

4.3.3 Close the inlet and outlet dampers.

Supplementary Instructions

4.3.4 If the vacuum pumps are to remain in operation, open the filter unit bypass valve V3.

4.3.5 Push the STOP pushbutton at the filter unit and verify that the heater is deenergized.

4.3.6 Close the inlet and outlet valves.

4.4 Special or Infrequent Operation

4.4.1 Operating fan trips.

CAUTION: If the operating fan trips, vacuum pump exhaust air may be exhausted into the turbine building through the gravity damper.

4.4.1.1 Open the filter vent bypass valve.

4.4.1.2 Close the filter unit inlet and outlet valves.

4.4.2 Hi temperature alarm from charcoal unit.

4.4.2.1 Deenergize electrical heater and fan.

CAUTION: Fumes and water discharge from filter unit may be radioactive.

4.4.2.2 Open filter bypass valve and close filter inlet valve and outlet valve.

4.4.2.3 Initiate water spray by opening manual isolation valve.

4.4.2.4 When charcoal is wet, terminate spray flow.

4.2.3 Monitor operation of the heater.

4.2.4 Monitor fan low flow signal.

NOTE: The above steps should be performed several times

4.2.5 Daily, during each shift.

4.3 shutdown Hydroxide and 80% demin water to the filter drains. Daily, add a solution of 10% Sodium Thiosulfate, 10% Sodium

4.3.1 If the exhaust air is not too contaminated to discharge, or if

the Aux. Bldg. Supplementary filter trains are installed, proceed as

per step 4.3.4. Stop the condenser vacuum pumps per 2106-2.3

if the radiation levels in the air stream are so high as to
prohibit discharging to the air.

4.3.2 Push the "stop" pushbutton at the filter unit and verify that the
heater is deenergized.

4.3.3 Close the inlet and outlet dampers.

Supplementary Instructions

4.3.4 If the vacuum pumps are to remain in operation, open the
filter unit bypass valve V3.

4.3.5 Push the STOP pushbutton at the filter unit and verify
that the heater is deenergized.

4.3.6 Close the inlet and outlet valves.

4.4 Special or Infrequent Operation

4.4.1 Operating fan trips.

CAUTION: If the operating fan trips, vacuum pump exhaust air may
be exhausted into the turbine building through the
gravity damper.

4.4.1.1 Open the filter vent bypass valve.

4.4.1.2 Close the filter unit inlet and outlet valves.

4.4.2 Hi temperature alarm from charcoal unit.

4.4.2.1 Deenergize electrical heater and fan.

APPENDIX A
VALVE LINE UP

<u>VALVE NO.</u>	<u>DESCRIPTION</u>	<u>POSITION</u>	<u>INITIALS</u>
V1-F1	Filter Inlet Valve	OP	_____
V2-F1	Filter Outlet Valve	OP	_____
V3-F1	Filter Bypass Valve	OP	_____

APPENDIX A
VALVE LINE UP

<u>VALVE NO.</u>	<u>DESCRIPTION</u>	<u>POSITION</u>	<u>INITIALS</u>
V1-F1	Filter Inlet Valve	OP	_____
V2-F1	Filter Outlet Valve	OP	_____
V3-F1	Filter Bypass Valve	OP	_____