



Massachusetts Department of Environmental Protection

Bureau of Air and Waste - Air Quality

BAW AQ Baghouse/Filter

Submit with Form CPA-FUEL and/or CPA-PROCESS whenever the construction, substantial reconstruction or alteration of an Baghouse/Filter is proposed unless exempt per 310 CMR 7.02(2)(b).

Facility ID (if known)

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Inlet Operating Conditions

1. Complete the tables below with information on inlet gas flow(s).

Table 1a				
Emission Unit No(s). Being Controlled	Average Inlet Gas Flow (Actual Cubic Feet Per Minute)	Moisture Content in the Inlet (Pounds Per Minute)	Inlet Temperature (Degrees Fahrenheit (°F))	Inlet Velocity (Feet Per Second)

Table 1b					
Emission Unit No(s). Being Controlled	Is the Gas Stream Pre-Cooled?	If Pre-Cooled, Specify Method & Temperature to Which Gas is Cooled	Is the Inlet Gas Stream Corrosive?	Is the Gas Stream Pre-Cleaned? ¹	If Pre-Cleaned, Explain
	☐ Yes ☐ No	Method: Temperature (°F)	☐ Yes - Acid ☐ Yes - Basic ☐ No	☐ Yes ☐ No	
	☐ Yes ☐ No	Method: Temperature (°F)	☐ Yes - Acid ☐ Yes - Basic ☐ No	☐ Yes ☐ No	
	☐ Yes ☐ No	Method: Temperature (°F)	☐ Yes - Acid ☐ Yes - Basic ☐ No	☐ Yes ☐ No	
	☐ Yes ☐ No	Method: Temperature (°F)	☐ Yes - Acid ☐ Yes - Basic ☐ No	☐ Yes ☐ No	

¹ You may be required to submit an additional supplemental form if you operate pre-cleaner equipment. Contact the appropriate MassDEP regional office for guidance.



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A. Inlet Operating Conditions (continued)

1. Complete the table below with information on inlet gas flow(s).

Table 1c			
Particle Size	Particulate Concentration Before Control (Grains Per Actual Cubic Foot)	Particulate Emission Rate Before Control (Pounds Per hour)	Total Weight Percent (%) Before Control
≤ 2.5 Microns			
> 2.5 Microns & ≤10 Microns			
> 10 Microns			

B. Specifications

1. Manufacturer of Baghouse/Filter:

Company _____

2. Model Number (or Equivalent):

Number _____

3. Capacity of the Unit:

_____ at _____
Actual Cubic Feet Per Minute Degrees Fahrenheit (°F)

4. Pressure drop across Baghouse/Filter:

Inches Water Gauge

5. Equipment used to measure pressure drop:
(e.g. Manometer, magnehelic)

Describe _____

6. Number of compartments in unit:

Number _____

7. Number of filter elements in each compartment:

Number _____

8. Filter design:
(e.g. cartridge, cylindrical, envelope)

Describe _____

9. Filter material type (check one):

☐ Felted ☐ Woven

☐ Other – Specify: _____

10. Filter fabric/material:
(e.g. cotton, fiberglass, wool)

Describe _____

11. Justify choice of filter fabric (e.g. fiberglass chosen for high temperature gas stream):



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B. Specifications (continued)

12. Maximum recommended temperature:

Degrees Fahrenheit (°F)

13. Maximum exhaust gas outlet temperature:

Degrees Fahrenheit (°F)

14. Describe temperature controls, if any:

15. Type of filter elements:
(e.g. cartridges, envelopes, tubes)

Describe

16. Area per filter element:

Square Feet

17. Describe measures to evenly distribute inlet steam to all filter elements:

18. Maximum air to cloth/filter media ratio:

Ratio

19. Type of filter cleaning mechanism:
(e.g. pulse jet, rapping, reverse jet, sonic)

Describe

20. Estimated time between cleaning phase:
(If continuous, enter "0")

Seconds

21. Number of filter elements cleaned at the same time:

Number

22. Describe the controller:
(e.g. pressure gauge)

Description

23. Number of filter elements in operation during the cleaning phase:

Number

24. Net air to cloth/filter media ratio during cleaning:

Ratio

25. Describe the unloading schedule for the collection hopper(s) and how the release of fugitive emissions will be minimized:

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C. Emissions Data

1. Describe the particulate matter emissions after control by the proposed Baghouse/Filter:

a. Overall particulate matter concentration after control:

Grains Per Actual Cubic Foot

b. Overall particulate matter emission rate after control:

Pounds Per Hour

c. Overall particulate matter collection efficiency:

Weight Percent

2. Explain how the above particulate matter emissions data were obtained. Attach appropriate calculations and documentation.

D. Description of Air Handling System

Provide the requested information on the fan(s) and flow parameters associated with the processes and/or air pollution control equipment.

	Fan A	Fan B	Fan C
1. Identify fan (from process schematic):			
2. Fan manufacturer:			
3. Fan model number:			
4. Fan type (e.g. axial, centrifugal):			
5. Capacity (standard cubic feet per minute):			

You must submit with this application the manufacturer's fan performance curve or rating curve, with operating point indicated if fans are an integral part of the project to be installed or the equipment to be modified. Explain any fan modifications that might alter system performance.

6. Fan operating point in this system:	Fan A	Fan B	Fan C
a. Actual revolutions per minute:			
b. Temperature at the fan (°F):			
c. Fan pressure (static pressure in H ₂ O):			
d. Actual flow rate of fan (actual cubic feet per minute at °F):			
e. Actual horsepower requirements:			



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(b).

E. Drawing of Baghouse/Filter Control System

You must attach to this form a schematic drawing of the proposed Baghouse/Filter and any pre-cleaner. At a minimum, it must show the stack, sampling ports for emissions testing, and the location of each pressure and temperature indicator.

F. Monitoring, Record Keeping & Failure Notification

1. Describe the parameters that will be monitored as a surrogate for control device efficiency, and the frequency of monitoring. Continue on a separate attachment, if necessary.

2. Describe the monitoring methods and warning/alarm system that protect against operation when the unit is not meeting design efficiency (e.g. visual monitoring, audible alarm, flashing lights, temperature indicator, pressure indicator). Continue on a separate attachment, if necessary.

3. Describe the record keeping procedures to be used to verify monitoring and to identify the cause, duration and resolution of each failure. Continue on a separate attachment, if necessary.

4. Describe how failure of the Baghouse/Filter will be made known to the operator during normal operations (e.g. visual monitoring, audible alarm, flashing lights, time indicator, pressure indicator). Continue on a separate attachment, if necessary.

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F. Monitoring, Record Keeping & Failure Notification (continued)

5. List and explain all operating and safety controls associated with this system, including interlock systems that prevent introduction of the air contaminant(s) stream until the Baghouse/Filter is operating properly. Continue on a separate attachment, if necessary.

6. Describe the Baghouse/Filter's emergency procedures during system upsets. Continue on a separate attachment, if necessary.

7. Describe features of the system design and operation that will allow for emissions testing using MassDEP-sanctioned test methods. Continue on a separate attachment, if necessary.

8. Describe the proposed frequency of Visolite Testing (or equivalent). Continue on a separate attachment, if necessary.

G. Standard Operating & Maintenance Procedures

Attach to this Form the standard operating and maintenance procedures for the proposed Baghouse/Filter, as well as a list of the spare parts inventory that you will maintain on site, as recommended by the equipment vendor(s).