



Massachusetts Department of Environmental Protection

Bureau of Waste Prevention – Air Quality

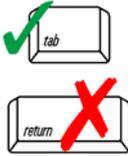
BWP AQ Baghouse/Filter

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).

Transmittal Number _____

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
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Method: Temperature (°F)	<input type="checkbox"/> Yes - Acid <input type="checkbox"/> Yes - Basic <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Method: Temperature (°F)	<input type="checkbox"/> Yes - Acid <input type="checkbox"/> Yes - Basic <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Method: Temperature (°F)	<input type="checkbox"/> Yes - Acid <input type="checkbox"/> Yes - Basic <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Method: Temperature (°F)	<input type="checkbox"/> Yes - Acid <input type="checkbox"/> Yes - Basic <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> 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

- Manufacturer of Baghouse/Filter: _____
Company _____
- Model Number (or Equivalent): _____
Number _____
- Capacity of the Unit: _____ at _____
Actual Cubic Feet Per Minute Degrees Fahrenheit (°F)
- Pressure drop across Baghouse/Filter: _____
Inches Water Gauge
- Equipment used to measure pressure drop:
(e.g. Manometer, magnehelic) _____
Describe
- Number of compartments in unit: _____
Number
- Number of filter elements in each compartment: _____
Number
- Filter design:
(e.g. cartridge, cylindrical, envelope) _____
Describe
- Filter material type (check one):
 Felted Woven
 Other – Specify: _____
- Filter fabric/material:
(e.g. cotton, fiberglass, wool) _____
Describe
- 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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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.

Note: You must notify the BWP Compliance & Enforcement Chief in the appropriate MassDEP regional office by telephone as soon as possible, within but no later than one (1) business day after you discover any upset or malfunction to facility equipment that results in excess emissions to the air and/or a condition of air pollution. You must submit written notice within seven (7) days thereafter.

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).

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H. Professional Engineer's Stamp

The seal or stamp and signature of a Massachusetts Registered Professional Engineer (P.E.) must be entered below. Both the seal or stamp impression and the P.E. signature must be original. This is to certify that the information contained in this Form has been checked for accuracy, and that the design represents good air pollution control engineering practice.

P.E. Name (Type or Print)

P.E. Signature

Position/Title

Company

Date (MM/DD/YYYY)

P.E. Number

Place P.E. Seal or Stamp Here.

I. Certification by Responsible Official

The signature below provides the affirmative demonstration pursuant to 310 CMR 7.02(5)(c)8 that any facility(ies) in Massachusetts, owned or operated by the proponent for this project (or by an entity controlling, controlled by or under common control with such proponent) that is subject to 310 CMR 7.00, et seq., is in compliance with, or on a MassDEP approved compliance schedule to meet, all provisions of 310 CMR 7.00, et seq., and any plan approval, order, notice of noncompliance or permit issued thereunder. This Form must be signed by a Responsible Official working at the location of the proposed new or modified facility. Even if an agent has been designated to fill out this Form, the Responsible Official must sign it. (Refer to the definition given in 310 CMR 7.00.)

I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.

Responsible Official Name (Type or Print)

Responsible Official Signature

Responsible Official Title

Responsible Official Company/Organization Name

Date (MM/DD/YYYY)

This Space Reserved for
MassDEP Approval Stamp.