



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Air Quality

BWP AQ Cyclone

Submit with Form CPA-PROCESS whenever the construction, substantial reconstruction or alteration of a Cyclone 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. Emission unit(s) to be controlled by the proposed Cyclone: _____
Emissions Unit Identification Number(s)
2. Inlet gas flow: _____
Actual Cubic Feet Per Minute, Wet if Moisture is Involved
3. Inlet moisture content: _____
Pounds Per Minute
4. Inlet temperature: _____
Degrees Fahrenheit (°F)
5. Outlet temperature: _____
°F
6. Pressure drop across the collector: _____
Inches of Water
7. Describe how the pressure drop was obtained:

B. Specifications

1. Manufacturer of Cyclone: _____
Company
2. Model Number (or Equivalent): _____
Number
3. Capacity of the Unit: _____ at _____
Actual Cubic Feet Per Minute Degrees Fahrenheit (°F)
4. Is this a wet or dry unit? Wet – Complete 5 & 6. Dry – Skip to C.
5. Water flow rate: _____
Gallons Per Minute
6. Describe the method of re-circulation and/or disposal of water and collected particulate:

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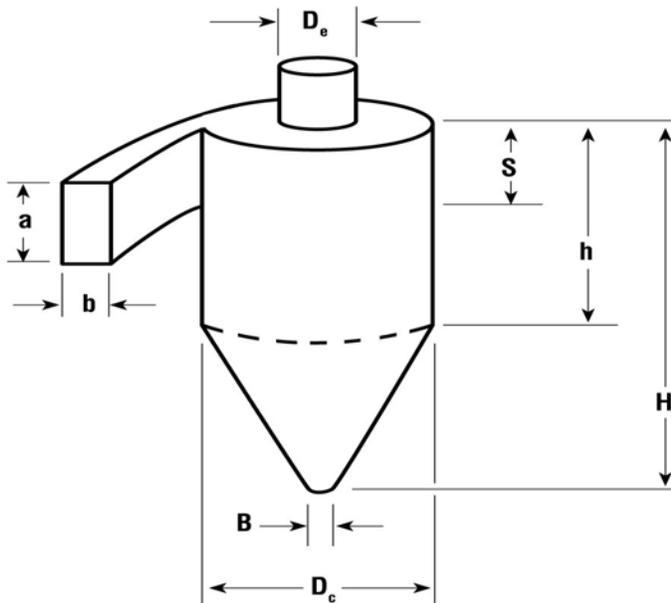
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C. Description of Cyclone

In completing this section, refer to the sketch of a simple tangential inlet cyclone below. If the proposed unit differs from this design, skip to 9.



1. Inlet height (a): _____
Inches
2. Inlet width (b): _____
Inches
3. Body diameter (D_c): _____
Inches
4. Outlet length (S): _____
Inches
5. Outlet diameter (D_e): _____
Inches
6. Cylinder height (h): _____
Inches
7. Overall height (H): _____
Inches
8. Dust outlet diameter (B): _____
Inches
9. If the proposed unit does not conform to the sketch design above, attach a similar dimensioned sketch to this Form.

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D. Emissions Data

1. Overall particulate matter inlet data for the proposed unit.

a. Particulate density:

Pounds Per Cubic Feet

b. Particulate rate before control:

Pounds Per Hour

c. Particulate concentration before control:

Grains Per Actual Cubic Foot

2. Explain how you obtained the particulate concentration:

3. Overall particulate matter outlet data for the proposed unit.

a. Particulate rate after control:

Pounds Per Hour

b. Particulate concentration after control:

Grains Per Actual Cubic Foot

4. Provide the outlet particle size distribution:

Table 1		
Particle Size	Percent of Total	Percent of Fraction Collected
≤ 2.5 Microns		
> 2.5 Microns & ≤10 Microns		
> 10 Microns		

Note: Attach supporting calculations and explanatory notes for the above.

5. Overall particulate matter collection efficiency:

Weight Percent

E. 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.

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.



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

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, time 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 Cyclone 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.

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 Cyclone is operating properly. Continue on a separate attachment, if necessary.

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



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

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.

F. Standard Operating & Maintenance Procedures

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

G. 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.

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H. 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.