Massachusetts Department of Environmental Protection
Bureau of Air and Waste - Air Quality

BAW 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).

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:
   Actual Cubic Feet Per Minute at 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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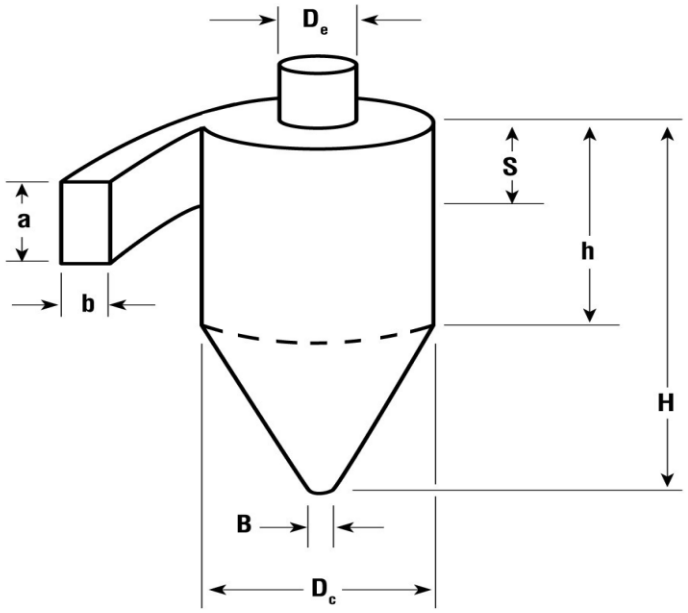
C. Description of Cyclone

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.

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.

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).