



San Joaquin Valley Air Pollution Control District Supplemental Application Form

PROCESS(ES) SERVED BY A CYCLONE/INERTIAL SEPARATOR

This form must be accompanied by a completed Authority to Construct/Permit to Operate application form.

PERMIT TO BE ISSUED TO:
LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:

- Process cyclone serves: _____
- Type of material collected by the cyclone: _____
- Density of material collected by the cyclone: _____ (lbs/ft³)
- Maximum daily quantity of material collected by the cyclone: _____ (lbs)
- Maximum daily process weight for operation served by the cyclone: _____ (tons)
- Maximum Operating Schedule: _____ (hrs/day), _____ (days/week), _____ (weeks/yr)

CYCLONE DESCRIPTION

Cyclone Data*	Manufacturer:	Model No.:	
	Control Efficiency: _____ (%) PM _____ <input type="checkbox"/> Manufacturers Guarantee; <input type="checkbox"/> Estimate		
	Control Efficiency: _____ (%) PM10 _____ <input type="checkbox"/> Manufacturers Guarantee; <input type="checkbox"/> Estimate		
	Exhaust PM10 Emission Conc.: _____ (gr/dscf) _____ <input type="checkbox"/> Manufacturers Guarantee; <input type="checkbox"/> Estimate		
Blower/Fan Data	Manufacturer:	Model No.:	
	Maximum Power Rating _____ (hp)	Volumetric Air Flow Rate: _____ (dscfm)	

*If available, please submit a copy of the manufacturer's specification sheet for the proposed cyclone/inertial separator.

ADDITIONAL INFORMATION

If the cyclone serves as a precleaner to a high efficiency particulate control device such as a baghouse, venturi scrubber, an ESP, etc., then indicate type of high efficiency particulate control device used _____

Cyclone Type	<input type="checkbox"/> 2D-2D; <input type="checkbox"/> High Efficiency; <input type="checkbox"/> High Volume; <input type="checkbox"/> 1D-3D (Texas A & M)
Cyclone Configuration	<input type="checkbox"/> Single; <input type="checkbox"/> Multicyclones in Parallel; <input type="checkbox"/> Multicyclones in Series
Cyclone Classification	<input type="checkbox"/> Tangential Entry; <input type="checkbox"/> Axial Flow Entry; <input type="checkbox"/> Bottom Inlet Entry
Dust Discharge Collection System	<input type="checkbox"/> Screw Feeder; <input type="checkbox"/> Hopper/Drum Collector; <input type="checkbox"/> Rotary Valve; <input type="checkbox"/> Manual Collection; <input type="checkbox"/> Slide Gate; <input type="checkbox"/> Air Lock System; <input type="checkbox"/> Rack & Pinion Gate; <input type="checkbox"/> Others _____

Pressure drop across the Cyclone (if known) _____ (in inches of H₂O)

Please continue on the reverse side

EQUIPMENT SERVED BY THE CYCLONE/INERTIAL SEPARATOR

<u>Description</u>	<u>Manufacturer</u>	<u>Model No.</u>	<u>Power Rating (Horsepower) or Storage Capacity (Cubic Feet)</u>
Indicate the type of equipment that will be served by the cyclone/inertial separator, such as: Rip saw, drill, router, hammermill, grain cleaner, storage bin, etc.			Indicate the horsepower rating if the equipment is powered by an electric motor or indicate the maximum storage capacity if the equipment is a storage bin/silo.

Operating Hours	Maximum Operating Schedule: _____ hours per day, and _____ hours per year		
	<input type="checkbox"/> Outdoors <input type="checkbox"/> Indoors		
Receptor Data	Distance to nearest Residence	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest apartment, house, dormitory, etc.
	Direction to nearest Residence	_____	Direction from the stack to the receptor, i.e. Northeast or South.
	Distance to nearest Business	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest office building, factory, store, etc.
	Direction to nearest Business	_____	Direction from the stack to the receptor, i.e. North or Southwest.
Stack Parameters	Release Height	_____ feet above grade	
	Stack Diameter	_____ inches at point of release	
	Rain Cap	<input type="checkbox"/> Flapper-type <input type="checkbox"/> Fixed-type <input type="checkbox"/> None <input type="checkbox"/> Other: _____	
	Direction of Flow	<input type="checkbox"/> Vertically Upward <input type="checkbox"/> Horizontal <input type="checkbox"/> Other: _____° from vert. or _____° from horiz.	
Exhaust Data	Flowrate: _____ acfm	Temperature: _____ °F	
Facility	<input type="checkbox"/> Urban (area of dense population) <input type="checkbox"/> Rural (area of sparse population)		

Please note that each permit is required by District Rule 2201 to have a daily emission limit (DEL). The information provided above for maximum process rate and operating schedule may be used as an enforceable limiting condition for each Authority to Construct or Permit to Operate that will be issued for the proposed project.

Definition: Material handling operations may include devices such as cyclones and baghouses used solely for material separation. In general, a permit would not be required if the answer is “yes” to any of the following:

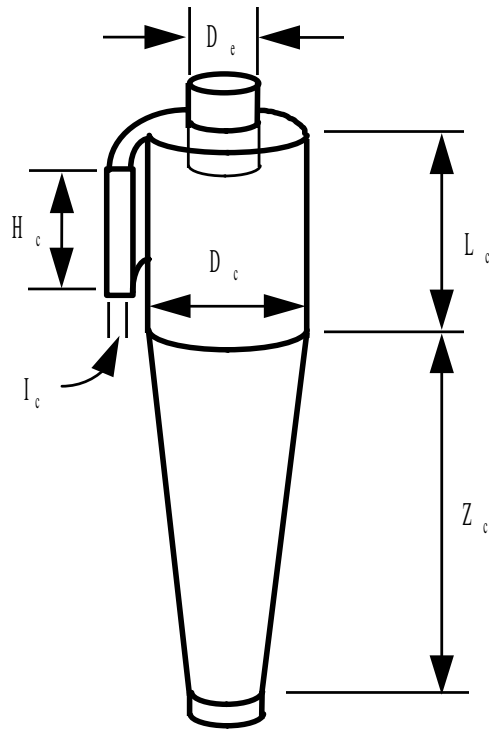
- Is the product being separated been through previous processing step(s) where all of the fine particulate has been removed?
- Does the process served by the material separation operation generate no PM10?
- Are the air legs and collectors (cyclones or fabric filters) used for worker safety, product decontamination, and/or vector control and not as PM10 control devices?
- Is the air handling system a closed loop where the exhaust from the control equipment is routed back to the process line?
- Is the material being collected (e.g. pieces of nut, skins, shell) clearly larger than 10 microns?
- Does the product have sufficient moisture (> 6%) to prevent the generation of PM10 emissions?
- Are expected PM10 emissions from the material separation operation less than 2 lb/day?

Examples of air/material separation systems that typically do not require permits include:

1. Baghouses used for the collection of large fragments of nuts which may present a fire hazard or attract pests.
2. Air legs and cyclones which handle nuts which have been pre-cleaned to remove orchard soil and debris.
3. Cyclones used to remove cotton seed from an air stream for product quality control.
4. Cyclones used for the separation of wet material generated in automobile recycling operations.
5. Paper trimming collection/cleaning and baling operations.

Such devices should generally not be listed in equipment descriptions or permit conditions. However, upon request, such devices may be listed as permit-exempt equipment in the equipment description.

EQUIPMENT SERVED BY THE CYCLONE/INERTIAL SEPARATOR
CYCLONE DIMENSION WORKSHEET



L_c C y l i n d e r H e i g h t = _____ ft/in (C i r c l e o n e)

Z_c C o n e H e i g h t = _____ ft/in (C i r c l e o n e)

D_c ... C y l i n d e r D i a m e t e r = _____ ft/in (C i r c l e o n e)

D_e .. E x i t T u b e D i a m e t e r = _____ ft/in (C i r c l e o n e)

H_c I n p u t D u c t H e i g h t = _____ ft/in (C i r c l e o n e)

I_c I n p u t D u c t W i d t h = _____ ft/in (C i r c l e o n e)