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

<table>
<thead>
<tr>
<th>Cyclone Data*</th>
<th>Manufacturer:</th>
<th>Model No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Efficiency: (%) PM</td>
<td>[ ] Manufacturers Guarantee; [ ] Estimate</td>
<td></td>
</tr>
<tr>
<td>Control Efficiency: (%) PM10</td>
<td>[ ] Manufacturers Guarantee; [ ] Estimate</td>
<td></td>
</tr>
<tr>
<td>Exhaust PM10 Emission Conc.: (gr/dscf)</td>
<td>[ ] Manufacturers Guarantee; [ ] Estimate</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blower/Fan Data</th>
<th>Manufacturer:</th>
<th>Model No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Rating (hp)</td>
<td>Volumetric Air Flow Rate: (dscfm)</td>
<td></td>
</tr>
</tbody>
</table>

*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 ________________________________

<table>
<thead>
<tr>
<th>Cyclone Type</th>
<th>[ ] 2D-2D; [ ] High Efficiency; [ ] High Volume; [ ] 1D-3D (Texas A &amp; M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclone Configuration</td>
<td>[ ] Single; [ ] Multicyclones in Parallel; [ ] Multicyclones in Series</td>
</tr>
<tr>
<td>Cyclone Classification</td>
<td>[ ] Tangential Entry; [ ] Axial Flow Entry; [ ] Bottom Inlet Entry</td>
</tr>
<tr>
<td>Dust Discharge Collection System</td>
<td>[ ] Screw Feeder; [ ] Hopper/Drum Collector; [ ] Rotary Valve; [ ] Manual Collection; [ ] Slide Gate; [ ] Air Lock System; [ ] Rack &amp; Pinion Gate; [ ] Others ________</td>
</tr>
</tbody>
</table>

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

Please continue on the reverse side

Revised Jan 12, 2017
### EQUIPMENT SERVED BY THE CYCLONE/INERTIAL SEPARATOR

<table>
<thead>
<tr>
<th>Description</th>
<th>Manufacturer</th>
<th>Model No.</th>
<th>Power Rating (Horsepower) or Storage Capacity (Cubic Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

### Operating Hours

- Maximum Operating Schedule: ________ hours per day, and ________ hours per year
- [ ] Outdoors  [ ] 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: [ ] Flapper-type  [ ] Fixed-type  [ ] None  [ ] Other: __________________________
- Direction of Flow: [ ] Vertically Upward  [ ] Horizontal  [ ] Other: ________° from vert. or ________° from horiz.

### Exhaust Data

- Flowrate: ________ acfm  
- Temperature: ________°F

### Facility

- [ ] Urban (area of dense population)  [ ] 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 .......... Cylinder Height = _______________ ft/in (Circle one)
Z_c ............ Cone Height = _______________ ft/in (Circle one)
D_c .... Cylinder Diameter = _______________ ft/in (Circle one)
D_e .. Exit Tube Diameter = _______________ ft/in (Circle one)
H_c .... Input Duct Height = _______________ ft/in (Circle one)
I_c ........ Input Duct Width = _______________ ft/in (Circle one)