1. **Name of Company:**  
   As shown on Line 1 of Form E001

2. **Equipment Name:**  
   As shown on Line 10 of Form E001

3. **Equipment Data:**
   - Single Cyclone
   - Multiple Cyclone
   - Settling Chamber
   - Long-Cone Cyclone
   - Dynamic Precipitator (dry)
   - Other:

   Manufacturer of Inertia Separator: 

   Model Number:  
   Cost of Equipment: 

   Date of Manufacture:  
   Date of Installation: 

   Additional Control Equipment:  
   - Yes
   - No

   If yes, what type:  
   File applicable form for control equipment

4. **Equipment Design:**  
   (For Cyclones Only)

   Volume of gas discharged from inertial separator at dry standard conditions: 

   **Equipment Dimensions**
   - Major Cylinder Diameter \( (D_c) \):  
   - Major Cylinder Length \( (L_c) \):  
   - Cone Length \( (Z_c) \):  
   - Gas Outlet Diameter \( (D_e) \):  
   - Gas Outlet Length \( (H_c+S_c) \):  
   - Gas Inlet Height \( (H_i) \):  
   - Gas Inlet Width \( (B_c) \):  
   - Dust Outlet \( (J_c) \):  

   I. Gas Inlet Design:  
   - Tangential
   - Helical
   - Axial
   - Involute
   - Other:

   J. For multiple cyclone, give the number of small cyclones: 

5. **Inlet Gas Properties:**
   - Inlet Gas Temperature \( (T_i) \): °F  
   - Inlet Gas Pressure \( (P_i) \): In. H₂O  
   - Inlet Gas Velocity \( (V_i) \): Ft/sec  
   - Area of Inlet \( (A_i) \): Ft²  
   - Effective number of turns in cyclone \( (N_e) \):  

   - Inlet Gas Density \( (\rho_g) \): Lbs/ft³  
   - Inlet Gas Viscosity \( (\mu) \): Lbs/ft·sec  
   - Moisture in Gas Stream: %

6. **Pressure Drop Across Inertial Separator:**
   Stated by Manufacturer: In. H₂O  
   Measured (actual): In. H₂O

---

*The density of air at 70°F and a barometric pressure of 29.92 inches Hg is 0.075 lbs/ft³.*
7. **Particle Properties:**

   A. **Particle Type(s):**
   
   B. **Inlet Particle Concentration (C_p):**
   
   C. **Physical Properties of Particles (check all that apply):**
   - Powder-like
   - Coarse
   - Abrasive
   - Wet
   - Dry
   - Tacky
   - Extremely Sticky
   - Sawdust
   - Pine Sander Dust
   - Wood Chips
   - Fiberous
   - Metallic
   - Rock
   - Glass
   - Silica (sand)
   - Vinyl, plastic, rubber
   - Hygroscopic
   - Other:

   D. **Particle Size Distribution in microns (μ):**

<table>
<thead>
<tr>
<th>Size</th>
<th>0-5 μ</th>
<th>5-10 μ</th>
<th>10-20 μ</th>
<th>10-44 μ</th>
<th>Greater than 44μ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give % by wt.</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

   E. **Particle Cut Size (D_{p,\text{cut}}):** __________ microns
   
   F. **Mean Particle Size (D_{p,\text{mean}}):** __________ microns

8. **Component Information:**

   Indicate which of the following are components of this inertial separator (check all that apply):

   A. Flow rate instrumentation
   - Inlet gas instrumentation
   - Water spray
   - Differential pressure instrumentation
   - Wear resistant shields
   - Corrosion-resistant linings

   B. Additional Cyclone Information
   - Stainless steel construction
   - No Cone
   - Horizontal Cyclone
   - Refractory lined
   - Baffles installed on the axis near the dust outlet

9. **Equipment Operation:**

   A. **Operation of Inertial Separator:** Continuous
   - Intermittent

   B. **Volume of Inertial Separator:** __________ Ft³

   C. **Dimensions of Inertial Separator:**
   
<table>
<thead>
<tr>
<th>Height:</th>
<th>Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>Ft</td>
</tr>
<tr>
<td>Width:</td>
<td>Ft</td>
</tr>
</tbody>
</table>

   D. **Type of Waste Discharge:** Axial
   - Peripheral

   E. **Dust Disposal Method:**
   - Single Closed Drum
   - Screw Conveyor
   - Waste Hoppers
   - Rotary Star Valve (motor)
   - Double-lock Valve
   - Spherical Segment Valve
   - Other (Describe):

   F. **Hoppers are emptied every** ________ Hours.
   - Is material wetted? Yes
   - No

   G. **Name of commercial disposal company (if applicable):**

   H. **Site of disposal:** __________
10. **Control Efficiency:**

- Manufacturer’s stated efficiency: ____________ %
- Required efficiency: ____________ %
- Actual Efficiency (performance testing): ____________ %

**Efficiency for Particle Size:**

<table>
<thead>
<tr>
<th>Size</th>
<th>0-5µ</th>
<th>5-10µ</th>
<th>10-20µ</th>
<th>20-44µ</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Give % by wt.</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

11. **Fan Data:**

- Location of Fan (check one):  
  - [ ] Clean air side (pull through)  
  - [ ] Dirty air side (push through)

- Fan Design (check one: a, b, or c):
  - a. [ ] Cintrifugal (Radial Flow)
  - b. [ ] Axial Flow
  - [ ] Forward Curve
  - [ ] Backward Curve
  - [ ] Straight
  - [ ] Propeller
  - [ ] Tube-axial
  - [ ] Vane-axial

**Fan Data:**

- Diameter: ____________ In.
- Braking Horsepower: ____________ BHP
- Speed: ____________ RPM
- Inlet Area: ____________ Ft²
- Volume: ____________ Cfm @ STP
- Outlet Area: ____________ Ft²
- Static Pressure: ____________ In. WC
- Motor Horsepower: ____________ HP

- [ ] Standard
- [ ] Heavy Duty

- Submitted copies of manufacture’s multi-rating tables?  
  - [ ] Yes  
  - [ ] No

- Special Materials of Construction:
  - [ ] Bronze Alloys
  - [ ] Aluminum
  - [ ] Stainless Steel
  - [ ] Bisonite
  - [ ] Zinc Chromate Primer
  - [ ] Rubber, Phenolics, Vinlys, or Epoxy Coverings

- [ ] Compressor
- [ ] Positive Displacement
- [ ] Dynamic
- [ ] Reciprocating

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**This is to certify that I am familiar with the operations concerning this equipment and that the information provided on this application is true and complete to the best of my knowledge. This form must be completely filled out before it will be acceptable.**

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Mail to:
CHATTANOOGA-HAMILTON COUNTY  
AIR POLLUTION CONTROL BUREAU  
6125 Preservation Drive  
Chattanooga, TN 37416

Company Official: ____________________________
Title: ____________________________
Date: ____________________________

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**DO NOT WRITE BELOW THIS LINE**

_________ Engineer Approval  
This form corresponds to permit number: ____________________________

Special Notations: ____________________________