ADSORBER SYSTEM APPLICATION

(This form must be accompanied by Form E001, E010, E011, E102, E103 or E104 if not already submitted for this equipment.)

1. Name of Company: ____________________________
   (As shown on Line 1 of Form E001)

2. Name of Equipment: ____________________________
   (As shown on Line 9 of Form E001)

3. Control Equipment Name: ____________________________

4. Control Equipment Data:
   A. Equipment Data:
      Name of Manufacturer: ____________________________
      Model Number: ____________________________
      Date of Manufacture: ____________________________
      Cost of Equipment: ____________________________
      Date of Installation: ____________________________
   B. Pollutant Data:
      List of contaminants to be removed and the corresponding concentrations.

      | Pollutant | Concentration (ppm at Standard Conditions) |
      |-----------|-------------------------------------------|

   C. Carrier Gas Data:
      a. The carrier gas is:  
         - [ ] Air
         - [ ] Other (specify): ____________________________
      b. Vapor concentration:  
         - [ ] Above Upper Explosive Limit
         - [ ] Below Lower Explosive Limit
         - [ ] Within Lower and Upper Explosive Limits*
         - [ ] Not Flammable
      c. Gas Stream Conditions:
         - Temperature: ____________________________ °F
         - Pressure: ____________________________ Inches Hg
         - Moisture Content: ____________________________ %
   D. Emissions data determined by:
      - [ ] Stack Test (submit report)
      - [ ] Calculation (submit copy)

5. Process Data:
   A. Volume of gas to be treated: ____________________________ CFM @ STP
   B. Velocity of gas to be treated: ____________________________ FPM @ STP
   C. Duct diameter: ____________________________ Ft
   D. Process Operation:
      - [ ] Continuous
      - [ ] Intermittent
      - [ ] Periodic
   E. Operating Time:
      - Daily: ____________________________ Hours/day
      - Weekly: ____________________________ Days/week
      - Yearly: ____________________________ Weeks/year

6. Adsorption System Data:
   A. The system is:
      - [ ] Regenerative
      - [ ] Non-regenerative
      - [ ] Single Pass
      - [ ] Multi Pass
      - [ ] Thin Bed
      - [ ] Thick Bed
   B. Adsorbent data:
      - [ ] Activated Carbon – mesh size: ____________________________
      - [ ] Hydrous Oxides (Specify): ____________________________ - mesh size: ____________________________
      - [ ] Metallics (Specify): ____________________________ - mesh size: ____________________________
      - [ ] Other (Specify): ____________________________ - mesh size: ____________________________
   C. If adsorbent is to be chemically impregnated to act as a catalyst or chemsorbent, give details:

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7. Adsorbent System Variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit(s)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bed Depth</td>
<td>Inches</td>
<td>-</td>
</tr>
<tr>
<td>B. Packing Density</td>
<td>Lbs/ft³</td>
<td>-</td>
</tr>
<tr>
<td>C. Total Charge per System</td>
<td>Lbs</td>
<td>-</td>
</tr>
<tr>
<td>D. Temperature of Adsorbent</td>
<td>ºF</td>
<td>All adsorption reactions are exothermic – give maximum working temperature.</td>
</tr>
<tr>
<td>E. Pressure Drop through Bed</td>
<td>Inches Water</td>
<td>inches Hg</td>
</tr>
<tr>
<td>F. Capacity of Adsorbent</td>
<td>________</td>
<td>In weight capacity/weight adsorbent at working temperature and air contaminant concentration.</td>
</tr>
<tr>
<td>G. Estimated Life of Adsorbent to Breakthrough</td>
<td>________</td>
<td>hours</td>
</tr>
<tr>
<td>H. Air Flow Rate through Bed</td>
<td>CFM</td>
<td>-</td>
</tr>
</tbody>
</table>

8. Regenerative Systems:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Number of Adsorbers in System</td>
<td>___</td>
</tr>
<tr>
<td>B. Time required for Regeneration Cycle</td>
<td>___</td>
</tr>
<tr>
<td>C. If steam is used to regenerate, indicate the steam ratio to solvent:</td>
<td>___</td>
</tr>
<tr>
<td>D. Capacity of Working Charge</td>
<td>___</td>
</tr>
<tr>
<td>E. List all equipment to be used for recovery system:</td>
<td>___</td>
</tr>
</tbody>
</table>

9. Control Efficiency:

<table>
<thead>
<tr>
<th>Specify Pollutant</th>
<th>Efficiency %</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

10. Drawings of all equipment should be submitted with each application.

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 correct to the best of my knowledge. This form must be completely filled out before it will be acceptable.

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

Company Official: ________________________________
Signature
Title: ________________________________
Date: ________________________________

DO NOT WRITE BELOW THIS LINE

__________ Engineer Approval
This form corresponds to permit number: ________________________________

Special Notations: __________________________________________
________________________________________________________________
________________________________________________________________
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