

Attachment M
Air Pollution Control Device Sheet
(MECHANICAL COLLECTOR-CYCLONE)

Control Device ID No. (must match Emission Units Table):

Equipment Information

| | |
|---|--|
| <p>1. Manufacturer:</p> <p>Model No.</p> | <p>2. Method: <input type="checkbox"/> Wet <input type="checkbox"/> Dry</p> <p> <input type="checkbox"/> Single-stage</p> <p> <input type="checkbox"/> Multiple: number</p> <p> <input type="checkbox"/> In series: number</p> |
| <p>3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.</p> | |
| <p>4. Provide a diagram of the proposed simple cyclone or multicyclone system with examples of the parameters identified below:</p> | |
| <p>5. Simple cyclone system (show units):</p> <p>Major cylinder diameter: in.</p> <p>Major cylinder length: in.</p> <p>Cone length: in.</p> <p>Gas outlet diameter: in.</p> <p>Gas outlet length: in.</p> <p>Gas inlet height: in.</p> <p>Gas inlet weight: in.</p> <p>Dust outlet diameter: in.</p> <p>Pressure drop across the cyclone: in. H₂O</p> <p>Describe the collected dust discharge valves and system:</p> | <p>6. Multicyclone system (show units):</p> <p>Major cylinder diameter: in.</p> <p>Major cylinder length: in.</p> <p>Cone length: in.</p> <p>Gas outlet diameter: in.</p> <p>Gas outlet length: in.</p> <p>Gas inlet height: in.</p> <p>Gas inlet weight: in.</p> <p>Dust outlet diameter: in.</p> <p>Pressure drop across the system: in. H₂O</p> <p>Number of tubes:</p> <p>Tube diameter: in.</p> <p>Tube length: in.</p> <p>Describe the collected dust discharge valves and system:</p> |
| <p>7. More than one cyclone:</p> <p>Number of cyclones:</p> <p>Arrangement: <input type="checkbox"/> Parallel <input type="checkbox"/> Series</p> <p>Pressure drop across the system: in. H₂O</p> | <p>8. On a separate sheet answer the following questions for each cyclone and attach:</p> <p>Major cylinder diameter: in.</p> <p>Major cylinder length: in.</p> <p>Cone length: in.</p> <p>Gas outlet diameter: in.</p> <p>Gas outlet length: in.</p> <p>Describe the collected dust discharge valves and systems:</p> <p>Gas inlet weight: in.</p> <p>Dust outlet diameter: in.</p> <p>Pressure drop across the system: in. H₂O</p> <p>Number of tubes:</p> <p>Tube diameter: in.</p> |
| <p>9. Guaranteed collection efficiency:</p> <p>Minimum: %</p> | <p>10. Efficiency of cyclone:</p> <p>At design maximum: %</p> <p>At average Operation: %</p> |
| <p>11. Method of handling material removed:</p> | |

Gas Stream Characteristics

| | | | |
|--|------------|--|--|
| 12. Particle characteristics (for particulate matter): | | | |
| Type of material: | | Particulate matter inlet rate to device: | lb/hr |
| Particle density: | | grains/ACF | |
| Emission rate at collector outlet: | lb/hr | | |
| | grains/ACF | | |
| 13. Total flow rate: | | 14. Gas Stream Temperature: | |
| Design maximum: | acfm | Inlet: | °F |
| Average expected: | acfm | Outlet: | °F |
| 15. Gas flow rate into collector: | | acfm at | °F and PSIA |
| 16. Viscosity of gas stream at the above temperature and pressure: | | | lb/sec-ft |
| 17. Inlet gas velocity: | | ft/sec | 18. Particulate Grain Loading in grains/scf: |
| | | | Inlet: |
| | | | Outlet: |
| 19. Supply a curve showing particulate collection efficiency versus gas volume from 25 to 100 percent of design rating of collector. | | | |

Particulate Distribution

| 20. Complete the table: | Particle Size Distribution at Inlet to Collector | Fraction Efficiency of Collector |
|----------------------------------|--|----------------------------------|
| Particulate Size Range (microns) | Weight % for Size Range | Weight % for Size Range |
| 0 – 2 | | |
| 2 – 4 | | |
| 4 – 6 | | |
| 6 – 8 | | |
| 8 – 10 | | |
| 10 – 12 | | |
| 12 – 16 | | |
| 16 – 20 | | |
| 20 – 30 | | |
| 30 – 40 | | |
| 40 – 50 | | |
| 50 – 60 | | |
| 60 – 70 | | |
| 70 – 80 | | |
| 80 – 90 | | |
| 90 – 100 | | |
| >100 | | |

21. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

22. Describe the collection material disposal system:

23. Have you included **Mechanical Collector (Cyclone) Control Device** in the Emissions Points Data Summary Sheet?

24. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

RECORDKEEPING:

REPORTING:

TESTING:

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

25. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

26. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

27. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.