

ABSORPTION DEVICE INFORMATION

(Gas Absorption, Towers, Venturi Scrubbers, Etc.)

FORM E113
07/2001

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

2. Name of Equipment: _____
(As shown on Line 10 of Form E001)

3. Equipment Data:

Manufacturer of Equipment:		Model Number:	
Date of Manufacture:		Date of Installation:	
		Equip. Cost:	

4. Emissions Data:

A. Contaminants to be removed from carrier gas stream and the corresponding concentrations:

Air Contaminant	Concentration of Contaminant at Standard Conditions – Check Units	
	<input type="checkbox"/> ppm	<input type="checkbox"/> µg/m ³
	<input type="checkbox"/> ppm	<input type="checkbox"/> µg/m ³
	<input type="checkbox"/> ppm	<input type="checkbox"/> µg/m ³
	<input type="checkbox"/> ppm	<input type="checkbox"/> µg/m ³
	<input type="checkbox"/> ppm	<input type="checkbox"/> µg/m ³

B. Carrier Gas: Air Other (Specify): _____

C. Inlet Gas Conditions:

a. Flow Rate: _____ Ft³/min Standard Conditions Actual Inlet Conditions

b. Conditions of gas stream at absorption device inlet:

Temperature: _____ °F	
Pressure: _____ In. Hg	
Moisture Content: _____ %	

5. Absorbing Medium Data:

A. Absorbing Medium: Water Other (Specify): _____

B. Flow Rate: _____ Lbs/hr

C. Conditions: Temperature: _____ °F Pressure: _____ In. Hg

6. Emissions Data:

Concentration of air contaminants in absorber (i.e. liquid phase) at inlet:

Contaminant	Concentration (% by wt.)	
		%
		%
		%
		%
		%

7. Packed Tower Data:

A. Packing Information:

Type of Packing: Raschig Rings Berl Saddles Spiral Rings Spheres
 Other (Specify): _____

B. Dimensions of Packing: Size: _____ Units: _____ Dimension: _____

C. Height of Absorbing Tower: _____ Ft

D. Inside Diameter of Tower: _____ Ft

E. Absorbing Mechanism: Concurrent Countercurrent Crosscurrent

8. Plate Tower Information:

A. Type of Plates (Give brief description including type of valves or openings through plate):

B. Size of Plates: Size: _____ Units: _____ Dimension: _____

C. Number of Openings per square foot: _____

D. Number of Plates in Absorbing Tower: _____

E. Height of Tower: _____

F. Diameter of Plates in Absorbing Tower: _____ Ft

G. Depth of Absorber on Plates: _____ In

9. Spray Scrubber Information:

A. Type of Scrubber: _____ (e.g. venturi)

B. Absorber Velocity Leaving Spray Nozzle(s): _____ Ft/sec

C. Exit Diameter of Individual Spray Nozzle(s): _____ In

D. Number of Spray Nozzles: _____ (For spray plates, give number of openings/ft² and size of plate.)

E. Diameter of Spray Chamber: _____ Ft

F. Length of Spray Chamber: _____ Ft

G. Number of Spray Chambers: _____

H. Concurrent Flow Countercurrent Flow Crosscurrent Flow

I. Type of Entrainment (Describe): _____

10. Additional Information (Complete for all types of Absorbers):

A. Exit Gas Conditions: Temperature: _____ °F Pressure: _____ In. Hg

B. Type of Demister (if any): _____

C. Absorber Stream Exit Conditions (liquid phase): Temperature: _____ °F Pressure: _____ In. Hg

D. Efficiency of Absorption Device:

Contaminant	Efficiency (% by wt.)
_____	_____
_____	_____
_____	_____
_____	_____

Check One:
 Efficiency based on Stack Test (Submit Report)
 Estimated Efficiency
 Manufacturer's rated efficiency

*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.***

Mail to:
 Chattanooga-Hamilton County Air Pollution
 Control Bureau
 2034 Hamilton Place Blvd. Suite 300
 Chattanooga, TN 37421

Company Official: _____
 Title: _____
 Date: _____

DO NOT WRITE BELOW THIS LINE

_____ Engineer Approval This form corresponds to permit number: _____

Special Notations: _____

