

SCRUBBER WORKSHEET INSTRUCTIONS

Be sure to review the following instructions prior to completing this application. More detailed instructions can be found on Page 4.

- a. Submit this worksheet as a supplemental document to an *Application for Authority to Construct/Permit to Operate*. If submitting this worksheet without a permit application, or in response to an AQMD request for supplemental information, locate and check the "Supplemental Information" box at the top left of Page 2.
- b. The worksheet must be filled out completely for all items that are applicable, except where noted as optional.
- c. The *Application for Authority to Construct/Permit to Operate*, all applicable emission unit and/or control device worksheet(s), and payment should be hand delivered to the AQMD drop box located ([here](#)), or mailed to:
NNPH, AQMD
1001 E. Ninth Street, Suite B171
Reno, NV 89512
- d. Other forms that may be required in addition to this worksheet:
 - For emission control equipment, use the appropriate *Emission Control Device Worksheet (Control Device, Cyclone, Flare, or Fabric Filter/Baghouse)* and duplicate as needed. Be sure to indicate the emission unit (Emission Unit ID) that the control equipment is affecting.
 - If not operating on grid power and/or if there is an engine on site, use the *Internal Combustion Engine Worksheet*.

ASSISTANCE AND RESOURCES

District Board of Health Regulations Governing Air Quality Management:

<https://www.nnph.org/programs-and-services/air-quality/regulations/index.php>

The Air Quality Management Division Permitting Department can be contacted at (775) 784-7200 or AQMDPermitting@nnph.org.

FOR AQMD USE ONLY

SCRUBBER WORKSHEET

Permit No.:

Supplemental Information

Facility Information		
1. New Permit	Permit Modification	
2. Existing facilities only. Permit Number (AAIRXX-XXXX):		
3. Facility Name:		
4. Facility Address:		
City:	State:	ZIP Code:
Specifications		
5. Manufacturer:		6. Date of Manufacture:
7. Model No.:	8. Serial No.:	
9. Rated Control Efficiency (%):		
10. Check which pollutant(s) are controlled by the device: CO NO _x VOC PM ₁₀ PM _{2.5} SO ₂ Other (specify):		
11. Normal pressure drop across the scrubber: Max. inches of water: Min. inches of water:		
12. Device measure pressure drop: Magnehelic Gauge Manometer Other (specify):		
13. Scrubber Type: Impingement Scrubbing Tower. Indicate type: Target Plate Packed Bed Other (specify): Spray Tower Scrubber. Indicate number and arrangement of nozzles: Venturi Scrubber. Integral mist injection eliminator used? Yes No Self-Induced Spray Scrubber Wet Centrifugal Scrubber Wet Dynamic Scrubber Other (specify):		
14. Scrubbing solution: Water Other (specify):		

15. Emission unit(s) or process(es) of emissions vented to the scrubber:		
16. Operating parameter(s) used to monitor normal operation		
Flow Rate (liquid):	Flow Rate (gas):	pH:
Temperature:	Other (specify):	
Supplemental Information (Optional)		
Liquid Flow Rate (gpm):		
Scrubbing Solution (pH):		
Solution Temp. (°F):		
Length of Packing (if applicable):	inches at	°F
Volume of air or gas discharged to the atmosphere (cfm):		
Scrubber Exhaust Stack Parameters		
Temperature (°F):	Flow Rate (cfm):	Velocity (fps):
Height (feet):	Diameter (inches):	

***Attach flow diagram and manufacturer's specification sheet(s) for the scrubber.
Duplicate sheet as needed.***

DETAILED WORKSHEET INSTRUCTIONS

Facility Information

1. Specify if the worksheet is for a new permit or for modification of an existing permit by checking the appropriate box.
2. **For existing facilities only.** Provide the Permit Number which can be found at the top of page 1 of the existing Permit to Operate (ex. AAIRXX-XXXX).
3. Provide the facility name as it appears on the *Application for Authority to Construct/Permit to Operate*. If a permit already exists for this operation, enter the name as it appears on the existing permit, which can be found at the top of page 1 of the existing Permit to Operate where it says, "Permit Issued To".
4. Provide the facility address.

Specifications

- 5-8. Specify the scrubber manufacturer, date of manufacture, model number, and serial number.
9. Specify the scrubber's rated control efficiency (%).
10. Specify the pollutant(s) associated with the rated control efficiency.
11. Specify the minimum and maximum range pressure drop across the scrubber in inches of water.
12. Specify the type of device measuring the pressure drop across the scrubber.
13. Specify the type of scrubber being used.
14. Specify the type of scrubbing solution that will be used.
15. Specify the emission unit(s)/process(es) vented to the scrubber. Include emission unit number if listed in an existing permit.
16. Specify the parameter that is used to monitor normal operation. Specify the associated value(s), as necessary.

Supplemental Information (Optional)

- Specify the flow rate of the scrubbing solution in gallons per minute.
- Specify the pH of the scrubbing solution.
- Specify the length of packing (if applicable) in inches.
- Specify the volume of air or gas discharged to the atmosphere in cubic feet per minute.
- Specify the scrubber exhaust stack parameters:
 - The height above the grade through the stack or duct (feet)
 - The diameter (inches)
 - The exhaust temperature in degrees Fahrenheit
 - The flow rate in cubic feet per minute
 - The velocity in feet per second