SCRUBBER WORKSHEET INSTRUCTIONS

How to Complete this Worksheet

- Submit this worksheet as a supplemental document to an *Application for a Minor Source 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.
- The worksheet must be filled out completely for all items that are applicable, except where noted as optional.
- The *Application for a Minor Source 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
- Other forms that may be required in addition to this worksheet:
  - For other 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 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*.
- More detailed instructions can be found on page 4.

Assistance and Resources

The Business Environmental Program, operated through the University of Nevada, is a free and confidential program designed to help small businesses in Washoe County comply with local and federal environmental regulations. This service may be contacted at 800.882.3233 or help@unrbep.org. The Business Environmental Program may provide information on completing this air quality application. They can also provide assistance in reviewing options for emission control equipment and submitting annual emissions.

BEP BUSINESS ENVIRONMENTAL PROGRAM NEVADA

Visit this link to learn more about working with BEP: https://unrbep.org/about-bep/working-with-bep/

- District Board of Health Regulations Governing Air Quality Management: https://www.washoecounty.gov/health/programs-and-services/air-quality/regulations/index.php
- The Air Quality Management Division Permitting Department can be contacted at 775.784.7200 Option 6 or AQMDPermitting@NNPH.org.

NORTHERN NEVADA Public Health | Air Quality

FOR AQMD USE ONLY
Permit No.:

SCRUBBER WORKSHEET

☐ **Supplemental Information**

Facility Information

1. ☐ New Permit ☐ Permit Modification	2. **Existing facilities only.** Permit Number:	
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: inches of water (max.)	inches of water (min.)
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 Parameters: Flow Rate (liquid): Flow Rate (gas): pH: Temperature: Other (specify):	

Attach flow diagram and manufacturer's specification sheet(s) for the scrubber.

All information above this line is required for this form to be considered complete. Duplicate sheet as needed.

The information below is not required but may assist in processing the application.

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: Height (feet): Flow Rate (cfm):	Diameter (inches): Velocity (fps):	Temperature (˚F):

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 a Minor Source 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 by specifying the associated value(s) for the parameter.

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