



# San Joaquin Valley Unified Air Pollution Control District Supplemental Application Form

## Scrubbers

Please complete one form for each scrubber.

*This form must be accompanied by a completed Authority to Construct/Permit to Operate Application form*

PERMIT TO BE ISSUED TO:
LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:

### PROCESS DESCRIPTION

<b>Process Data</b>	Gas Streams/Processes the Scrubber Serves (include permit number(s) and/or process flow diagrams, if applicable):	
	Maximum Gas Flowrate: _____ acfm	Expected Gas Flowrate: _____ acfm

### EQUIPMENT DESCRIPTION

<b>Equipment</b>	Manufacturer: _____	Model: _____	Serial No.: _____
<b>Scrubber Type</b>	<input type="checkbox"/> Dry Scrubber		
	<input type="checkbox"/> Wet Scrubber Select Type(s) of Wet Scrubber	<input type="checkbox"/> Packed Bed	<input type="checkbox"/> Orifice
	<input type="checkbox"/> Tray/Plate	<input type="checkbox"/> Spray Chamber	<input type="checkbox"/> Condensation Scrubbing
	<input type="checkbox"/> Other type of scrubber (please provide details): _____		
	Configuration: <input type="checkbox"/> Vertical <input type="checkbox"/> Horizontal	Flow Type: <input type="checkbox"/> Concurrent <input type="checkbox"/> Counter-Current	
<b>Dimensions</b>	Height: _____ ft.    Diameter: _____ ft.    Length: _____ ft.		
<b>Purpose (To Remove)</b>	<input type="checkbox"/> Odor (type): _____		<input type="checkbox"/> SO <sub>x</sub> : _____
	<input type="checkbox"/> VOC (type): _____		<input type="checkbox"/> H <sub>2</sub> S: _____
	<input type="checkbox"/> Particulates (type): _____		<input type="checkbox"/> Inorganic Fumes and Gases (type): _____
	<input type="checkbox"/> Other: _____		
<b>Components</b>	<b>Packed Bed</b>		<b>Venturi</b>
	Type of Packing Material: _____		Throat Diameter: _____ in.
	Manufacturer: _____		Throat Length: _____ in.
	Packing Factor: _____		Pressure Drop Across Throat: _____ in. of water
	Packing Size: _____		Throat Velocity: _____ ft./min
	Height of Packing Material: _____ ft.		Drop Diameter: _____ microns
Operating Pressure Range (all scrubber types): _____ - _____ psi			

### EQUIPMENT DESCRIPTION (continued)

<b>Scrubbing Liquid Medium</b>	Scrubbing Liquor		Temperature: _____ °F
	Composition	Weight %	Blow-Down Rate: _____ gpm
			Make-up Rate: _____ gpm
			Recirculation Rate: _____ gpm
			Flow Meter(s) Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Scrubbing Solution: <input type="checkbox"/> Once Through <input type="checkbox"/> Recirculated		Total Pump H.P.: _____
	pH of Scrubbing Medium (range): _____ - _____		pH Meter Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
ORP of Scrubbing Medium (range): _____ - _____ millivolts		ORP Meter Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	

### EMISSIONS DATA

	Pollutant	ppmvd	lb/hr	Control Efficiency (%)	Source of Data
<b>Emissions Data</b>	Nitrogen Oxides (NO <sub>2</sub> )				<input type="checkbox"/> Manufacturer's Specifications <input type="checkbox"/> Emissions Source Test <input type="checkbox"/> AP-42; Section: _____ <input type="checkbox"/> Other: _____  Note: please provide copies of all sources of emissions data
	Particulate Matter (PM <sub>10</sub> )				
	Carbon Monoxide				
	Volatile Organic Compounds				
	Sulfur Dioxide (SO <sub>2</sub> )				
	Hydrogen Sulfide (H <sub>2</sub> S)				

### HEALTH RISK ASSESSMENT DATA

<b>Operating Hours</b>	Maximum Operating Schedule: _____ hours per day, and _____ hours per year		
<b>Receptor Data</b>	Distance to nearest Residence	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest apartment, house, dormitory, etc.
	Direction to nearest Residence	_____	Direction from the stack to the receptor, i.e. Northeast or South.
	Distance to nearest Business	_____ feet	Distance is measured from the proposed stack location to the nearest boundary of the nearest office building, factory, store, etc.
	Direction to nearest Business	_____	Direction from the stack to the receptor, i.e. North or Southwest.
<b>Stack Parameters</b>	Release Height	_____ feet above grade	
	Stack Diameter	_____ inches at point of release	
	Rain Cap	<input type="checkbox"/> Flapper-type <input type="checkbox"/> Fixed-type <input type="checkbox"/> None <input type="checkbox"/> Other: _____	
	Direction of Flow	<input type="checkbox"/> Vertically Upward <input type="checkbox"/> Horizontal <input type="checkbox"/> Other: _____ ° from vert. or _____ ° from horiz.	
<b>Exhaust Data</b>	Flowrate: _____ acfm	Temperature: _____ °F	Blower H.P.: _____
<b>Facility Location</b>	<input type="checkbox"/> Urban (area of dense population) <input type="checkbox"/> Rural (area of sparse population)		