



Instructions: Combustion Form

Introduction	Use the following instructions to help guide you through the Combustion form .
Who should use this form?	This form should be submitted with new permit applications and applications to modify or alter existing sources.
Facility Information	<ul style="list-style-type: none">• BAAQMD Facility ID – The facility ID number is available on any permit or invoice issued by BAAQMD. This can be found in the upper right of the permit or the invoice.<ul style="list-style-type: none">➤ If this application is for a new facility (not currently permitted by BAAQMD), you must also submit <i>Facility Creation Form</i> and <i>Facility Contacts Form</i>.
General Information	<ul style="list-style-type: none">• BAAQMD Device ID – For existing facilities, the device ID number can be found on the Permit to Operate to the left of the device name (for example: 51 Natural Gas Fired Boiler).• Device/Operation Name – This is the name you associate with this operation.• Initial/Proposed Date of Operation:<ul style="list-style-type: none">○ For new construction, enter the date that you propose will be the initial date of operation.○ For a modification of an existing permitted operation, enter the date that you propose the changes to occur.○ For an existing operation that is not currently permitted by BAAQMD, enter the date for which the facility initially operated.• Device/Operation Description – This is your description of the device or operation. This field can be used to distinguish it from other similar devices (e.g. ID numbers, location, make, model, etc.)
Small Boiler/ Heater/Steam Generator	If all of the statements under section 4 are true, then your device qualifies for registration. Fill out the equipment information in the table within that section and then skip ahead to section 8 of the form.
Equipment Type	You will enter the equipment type and sub-type in section 5. See Table A for a full list of combustion equipment types and sub-types. If you select ‘Boiler/Heater’, ‘Incinerator’, ‘Turbine’, or ‘Other’, further equipment information is requested.
Combustion Fuel Information	See Table C for a list of combustion fuel material codes and Table B for a list of emission factor basis codes.
Still need help?	Contact the Engineering Division: (415) 749-4990 permits@baaqmd.gov



COMBUSTION DEVICE FORM

For all operations which burn fuel, except for Internal Combustion Engines. All fields are required unless otherwise noted. Please type or print.

Email to: permits@baaqmd.gov

Mail to: BAAQMD

Engineering Division
375 Beale Street, Suite 600
San Francisco, CA 94105

Tel: (415) 749-4990

1. Facility Information

Facility Name, BAAQMD Facility ID (Existing facilities only), Facility Address (Street address and city)

2. General Information

BAAQMD Device ID (If applicable), Device/Operation Name, Initial/Proposed Date of Operation, Device/Operation Description

3. Operating Schedule - Select "Continuous" or specify specific schedule in the 4 columns

Continuous checkbox, Maximum hours/day, Typical hours/day, Days/week, Weeks/year

4. Small Boiler/Heater/Steam Generator - Registered Sources (BAAQMD Regulation 9-7)

If you answer YES to the question below, this device qualifies for Registration. Provide the additional equipment information listed in the table and skip ahead to section 8 of this form. If you answer NO, continue to section 5.

Are the below statements true?

- The rated heat input is greater than 2 MM Btu/hr and less than 10 MM Btu/hr
The boiler, steam generator, or process heater is fired using only natural gas or LPG
The boiler, steam generator, or process heater is not located at a petroleum refinery
The boiler, steam generator, or process heater is not used to generate electricity

Table with 2 columns: Equipment Manufacturer (Make), Equipment Model, Serial Number, Maximum Rated Heat Input (MM Btu/hr)

5. Equipment Type

Fill out the Equipment Type and, if applicable, Sub-type, and answer any additional questions below.

- See Table A for a list of Equipment Types and Sub-types.
If the equipment is an Internal Combustion Engine, use the ICE Form instead (unless it is a gas turbine).

Equipment Type, Equipment Sub-type, If type selected is Boiler/Heater, firetube or watertube?, If sub-type selected is Other, specify sub-type here, Equipment Manufacturer (Make) (Required for All), Equipment Model (Required for All), Temperature (Incinerator only), Residence Time (Incinerator only), Max Rated Output (Turbine only)



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6. Primary Use

Select which primary use is most applicable:

- O Co-generation O Hot Water O Space Heat O Waste Disposal
O Electrical Generation O Process Heat O Testing O Other: _____

7. Additional Information

- Overfire Air? O Yes: _____ % (Overfire air percent) O No
Flue gas recirculation? O Yes: _____ % (Flue gas recirculation percent) O No
Air preheat? O Yes: _____ °F (Temperature) O No
Low NOx burners? O Yes O No

Optional Combustion Information

Table with 3 columns: Maximum Flame Temperature, Wet Gas Flow Rate, Combustion Products Temperature. Includes sub-rows for °F, acfm, Dry Volume Percent, Wet Volume Percent, Excess Air Percent, and %.

8. Combustion Fuel Information

Fill out information on combustion fuel used in this operation:

> See Table C for a list of combustion fuel material codes and Table B for a list of emission factor basis codes.

Table with 4 columns: Material Name, Material Code, Maximum Annual Usage, Material Usage Units. Includes rows for Fuel Consumption Rate, Fuel Rate Units, Higher Heating Value, Higher Heating Value Units, Sulfur Content, Sulfur Content Units, Nitrogen Content, Nitrogen Content Units.

Typical % of Annual Total

Table with 4 columns: Dec-Feb, Mar-May, Jun-Aug, Sep-Nov

Combustion Material Emission Factors

Table with 3 columns: Pollutant, Emission Factors (lb/unit), Basis Code. Includes rows for Particulates, Organics, Nitrogen Oxides (NOx), Sulfur Dioxide, Carbon Monoxide, Other, Other.

9. Emission Train Information

With regard to emission flow, what abatement devices and/or emission points are immediately downstream of this source?

Abatement Devices A _____ A _____ A _____ Emission Points P _____ P _____ P _____

> Complete an Abatement Device Form and/or Emission Point Form for each connection.



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10. Certification/Signature of person responsible for the information on this form

I hereby certify that I am authorized to complete this form for the facility and that all information contained herein is true and correct.

Name	Title	
Signature	Date	Phone (xxx-xxx-xxxx)

Table A. Equipment Types					
TYPE	SUB-TYPE	TYPE	SUB-TYPE		
Afterburner	Catalytic	Furnace	Glass		
	Direct Flame		Metal Melting		
	Other		Mineral Wood		
Boiler/Heater	Co-generation		Furnace	Perlite	
	Commercial/Institutional			Other	
	Electric Generation		Incinerator	Conical	
	Food Cooker			Controlled Air	
	Heat Trans - Ref			Multiple Chamber	
	Industrial			Multiple Hearth	
	Recovery, Pulp Mill			Single Chamber	
	Space Heat	Other			
	Other	Kiln		Brick	
Asphalt	Cement				
Coal	Gypsum				
Feed/Grain	Lime				
Fertilizer	Other				
Dryer Oven	Fiberglass Curing	Minor Sources			
	Food Products	Open Burning			
	Plywood	Turbine	Co-generation		
	Pulpboard		Electric Generation		
	Rock/Gravel		Engine Testing		
	Surface Coating Curing/Drying		Industrial		
	Other		Other		
	Flare		Industrial	Waste Gas Flare	Not Subject To Monitoring
	Fluidized Bed Combustor				Subject To Monitoring
	Furnace	CO/Blast	Sludge or Municipal Waste Incinerator		
Fiberglass Melting		Other Combustion			

Table B. Basis Codes – for Emission Factor Table					
CODE	BASIS	CODE	BASIS	CODE	BASIS
1	BAAQMD Regulation 9-7	5	EPA/CARB Certification	9	Other
2	CARB Certification	6	EPA Certification	10	Other Literature
3	CATEF	7	Manufacturer/Vendor Specification	11	Regulation
4	EPA AP-42	8	Material Balance	12	Source Test

Table C. Combustion Fuel Materials

CODE	MATERIAL NAME	UNITS	CODE	MATERIAL NAME	UNITS
815	Biodiesel (B100)	thou gallons	758	Hydrogen plant pressure swing absorption gas	Mcf
816	Biodiesel (B20-blend)	thou gallons	158	Jet A Fuel	thou gallons
43	Bituminous coal	tons	511	Landfill gas	Mcf
242	Bunker C fuel oil	thou gallons	167	Liquid waste	thou gallons
416	Butane	thou gallons	160	LPG	thou gallons
235	Carbon monoxide	Mcf	841	Medium BTU natural gas	Mcf
708	Chevron refinery fuel gas	Mcf	188	Naphtha	thou gallons
80	Coke	tons	189	Natural gas	Mcf
754	Cremation Case (container and corpse)	tons	200	Other Liquid Fuel	thou gallons
89	Crude oil	thou gallons	237	Process gas - other/not specified	Mcf
98	Diesel fuel	thou gallons	417	Propane	thou gallons
493	Digester gas	Mcf	238	Refinery make gas (RMG)	Mcf
315	Distillate oil	thou gallons	251	Sewage sludge	tons
392	Fuel oil #2	thou gallons	203	Solid fuel - other/not specified	tons
198	Gaseous fuels - H2, etc., other/not specified	Mcf	256	Solid propellant	tons
551	Gasoline - Unleaded	thou gallons	338	Waste gases	Mcf
759	Hydrogen (gas)	Mcf	305	Wood - other/not specified	tons