Santa Barbara County
Air Pollution Control District

Our Vision Clean Air

EXTERNAL COMBUSTION EQUIPMENT SUMMARY FORM-33

(This form must be submitted for each equipment item)

GENERAL

1. MANUFACTURER _____ MODEL NO. _____

2. SERIAL NO. _____ OPERATOR ID _____

3. EQUIPMENT USED AS A CONTROL DEVICE? [ ] YES [ ] NO DATE OF INSTALLATION _____
(leave blank if not installed)

4. EQUIPMENT TYPE *(Check one)*

[ ] Steam Boiler	[ ] Afterburner	
[ ] Steam Generator	[ ] Dryer	*Material Dried, Baked, or Heated*
[ ] Hot Water Boiler	[ ] Oven	
[ ] Heater Treater	[ ] Furnace	_____
[ ] Process Heater	[ ] Kiln	
[ ] Incinerator	[ ] Other *(Describe)*	

Class Type Waste _____

5. GENERAL INFORMATION REQUIRED: The following general information is required for processing the permit application:

- Site and plot plan, with dimensions, showing the location of the combustion unit.
- General description of the business.
- Description of the general purpose of the combustion unit and its associated production and/or process line.
- New Source Review information. Submit information required by Section E of Rule 204 (Applications) if BACT, AQIA, Offsets or Health Risk Assessment is required.

6. SIC NUMBER _____

Submit manufacturer's literature, catalog, or equivalent information for the combustion unit.

EQUIPMENT RATING

7. MAXIMUM HEAT INPUT _____ MMBtu/hr (report all Btu values in x.xxx format)

8. MAXIMUM ANNUAL HEAT INPUT[(a)] _____ MMBtu/year

(a) *This value represents the maximum requested annual heat input to your equipment and will be listed as a not-to-exceed limit on your permit. (Note: 1 Therm = 100,000 Btu)*

9. BURNER MANUFACTURER _____ NO. OF BURNERS _____

MODEL NO. _____ INPUT: Maximum _____ MMBtu/hr

_____ _____
Company Name *Facility Name*

_____ _____
Person Completing This Form (please print) *Date*

FUEL DATA

10. FUEL USED *(Select all that apply)*

[ ] PUC Quality Natural Gas
[ ] Oilfield Field Gas
[ ] Propane - Commercial Grade
[ ] Propane - HD5 Grade
[ ] LPG - Commercial Grade
[ ] Landfill Gas
[ ] Diesel Fuel #2
[ ] Residual Fuel Oil #_____
[ ] Jet Fuel *(Specify)* _____
[ ] Pathological Waste *(Specify)* _____
[ ] Solid Waste *(Specify)* _____
[ ] Other-Gaseous Fuel _____
[ ] Other-Liquid Fuel _____
[ ] Other-Solid Fuel _____

11. PRIMARY FUEL _____ *(Fuel #1)*

SECONDARY FUEL _____ *(Fuel #2)*

12. HIGHER HEATING VALUE (HHV) *(Circle appropriate units)*

Fuel #1 _____ *(Btu/scf, Btu/gal, Btu/lb)* Fuel #2 _____ *(Btu/scf, Btu/gal, Btu/lb)*

13. SULFUR CONTENT *(Circle appropriate units)*

Fuel #1 _____ *(% by wt., ppmvd as S)* Fuel #2 _____ *(% by wt., ppmvd as S)*

14. IS EQUIPMENT FIRED ON MORE THAN ONE FUEL? [ ] YES [ ] NO *(If yes, fill in Section 15 below)*

15. MULTIPLE FUELS

[ ] Primary or Secondary Fuel Fired as Needed *(Either fuel may be used to supply the total maximum heat input)*

[ ] Gas Is Primary Fuel. Non-Gaseous Fuel Used As a Backup During Times of Natural Gas Curtailment or Testing According to Section B.2 of Rule 342 *(Annual cumulative allowance of 168 hours for curtailment and 24 hours for testing)*

[ ] Secondary Fuel Fired As An Alternative to the Primary Fuel, But Annual Maximum Heat Input for the Secondary Fuel Is Less than the Total Maximum Annual Heat Input as Listed in Section 8. Maximum Annual Heat Input of Secondary Fuel: _____ BTU/yr.

[ ] Secondary Fuel Is Fired Simultaneously with the Primary Fuel *(Describe)* _____

[ ] Other *(Describe)* _____

16. INCINERATORS

a. Maximum Hourly Design Charge Rate _____ lbs/hr Max Annual Input _____ tons/year

b. Residence Time _____ seconds Combustion Temperature _____ °F

c. Total Horizontal Inside Cross-Sectional Area _____ ft^2

d. Does This Equipment Incinerate Medical Waste [ ] YES [ ] NO *(If yes, please provide detailed information which addresses compliance with Rule 340)*

e. Is the Equipment of the Multiple-Chamber Design [ ] YES [ ] NO *(If no, please provide detailed information supporting an equivalent design per Rule 308)*

EMISSION CALCULATIONS

17. EMISSION FACTOR[(a)] *(Contact APCD with any questions - If left blank, default APCD emission factors will be used)*

POLLUTANT	FUEL #1			FUEL #2		
	FACTOR	UNITS [(b)]	BASIS CODE[(c)]	FACTOR	UNITS[(b)]	BASIS CODE[(c)]
NOx (as NO_2)		lb/MMBtu			lb/MMBtu	
ROC		lb/MMBtu			lb/MMBtu	
CO		lb/MMBtu			lb/MMBtu	
SO_x[(d)] (as SO_2)		lb/MMBtu			lb/MMBtu	
PM		lb/MMBtu			lb/MMBtu	
PM_{10}		lb/MMBtu			lb/MMBtu	

NOTES:
(a) Emission factors are used to establish allowable emissions on your permit.
(b) Units "lb/MMBtu" based on the higher heating value. Incinerator applications must state the units used (e.g., lb/ton).
(c) Basis Codes:
1 Site specific source tests, CEMS or PEMS data *(attach copy)*
2 Specifications by manufacturer *(attach copy)*
3 Material balance (*attach copy of calculations*)
4 Taken from AP-42 (Compilation of Air Pollution Emission Factors, EPA, 5th Edition, Chapter 1)
5 Taken from Literature other than AP-42 *(attach copy)*
(d) SO_2 emission factors are based mass balance calculations:
for liquid Fuels: SO_x EF (lb SO_x/MMBtu) = [20,000] [wt % S] [density, lb/gal] / [HHV, Btu/gal]
for gases: SO_x EF [lb SO_x/MMBtu] = [0.169] [ppmv S] / [HHV, Btu/scf]
Ex: Low sulfur diesel #2 (0.05% S by wt) EF = 0.0504 lb SO_x/MMBtu
Ex: PUC Quality Natural Gas (85 ppmvd S) EF = 0.0137 lb SO_x/MMBtu

18. EMISSIONS *(Contact APCD with any questions)*

POLLUTANT	FUEL #1		FUEL #2	
	LB/DAY	TON/YEAR	LB/DAY	TON/YEAR
NO_x (as NO_2)				
ROC				
CO				
SO_x (as SO_2)				
PM				
PM_{10}				

NOTES:

(a) Emissions are calculated based on the emission factor used. For daily emissions, multiply the max firing rate times the emission factor and then times 24 (hr/day). For annual emissions, multiply the max annual heat input times the emission factor and then divide by 2000 (lb/ton).
(b) Report all emissions to two (2) decimal places (x.xx)

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VENT/STACK DATA

19. a. INSIDE DIAMETER _____ inch STACK EXIT TEMPERATURE _____ ºF

b. STACK HEIGHT _____ feet (above grade) STACK HEIGHT _____ feet (above the building)

c. MAXIMUM STACK GAS FLOW _____ dry scfm @ 3% 0_2

20. STACK SERVES [ ] This Equipment Only
[ ] Other Equipment Also *(Submit type and rating of all of all other equipment exhausted through this vent/stack)*

EMISSION CONTROL DEVICES

21. ARE EMISSION CONTROLS USED? ☐ YES ☐ NO (If yes, continue)

	MAKE	MODEL
[ ] Low-NOx Burners		
[ ] Exhaust-Gas Recirculation		
% Recirc _____		
[ ] Staged Combustion		
[ ] Ammonia/Urea Injection - SNCR		
[ ] Selective Catalytic Reduction		
[ ] Other		

(Describe) _____

Submit manufacturers' literature, catalog, or equivalent information for each control device.

PROCESS PARAMETER DEVICES

22. [ ] YES [ ] NO OXYGEN TRIM, TRIM SETTING _____ % O_2

[ ] YES [ ] NO CONTINUOUS EMISSION MONITOR(S), POLLUTANTS MONITORED _____

[ ] OTHER *(Describe)* _____

23. IS FUEL USE MONITORED? [ ] YES [ ] NO *(If yes, continue)*

a. [ ] Dedicated Meter
[ ] Shared Meter, List of Equipment Items Sharing This Meter _____

[ ] YES [ ] NO For Gaseous Fuels: Is the fuel meter pressure corrected?

b. Type of Fuel Meter *(type design, mfg and model no.)* _____

Submit manufacturer's literature, catalog, or equivalent information for each monitoring/metering device.