

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street, San Francisco, CA 94109
Engineering Division (415) 749-4990
www.baaqmd.gov fax (415) 749-5030

020798

Form P-101B
Authority to Construct/
Permit to Operate

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1. Application Information

BAAQMD Plant No. 19771 Company Name Contra Costa Generating Station, LLC
Equipment/Project Description 2x1 COMBINED CYCLE POWER PLANT

2. Plant Information *If you have not previously been assigned a Plant Number by the District or if you want to update any plant data that you have previously supplied to the District, please complete this section.*

Equipment Location 6000 BRIDGEHEAD RD.
City OAKLEY, CA. Zip Code 94561
Mail Address 145 TOWN AND COUNTRY DRIVE, SUITE 107
City DANVILLE State CA Zip Code 94526
Plant Contact SIM MCLUCAS Title _____
Telephone 925 820-5222 Fax 925 820-2522 Email SEE BELOW
NAICS (North American Industry Classification System) see www.census.gov/epcd/naics02/naico602.htm 22112

3. Proximity to a School (K-12)

The sources in this permit application (check one) Are Are not within 1,000 ft of the outer boundary of the nearest school.

4. Application Contact Information *All correspondence from the District regarding this application will be sent to the plant contact unless you wish to designate a different contact for this application.*

Application Contact SIM MCLUCAS Title _____
Mail Address 145 TOWN AND COUNTRY DRIVE, SUITE 107
City DANVILLE State CA Zip Code 94526
Telephone 925 820-5222 Fax 925 820-2522 Email JIM.MCLUCAS@RADBACK.COM

5. Additional Information *The following additional information is required for all permit applications and should be included with your submittal. Failure to provide this information may delay the review of your application. Please indicate that each item has been addressed by checking the box. Contact the Engineering Division if you need assistance.*

- If a new Plant, a local street map showing the location of your business
- A facility map, drawn roughly to scale, that locates the equipment and its emission points SEE AFC
- Completed data form(s) and a pollutant flow diagram for each piece of equipment. (See www.baaqmd.gov/pmt/forms/)
- Project/equipment description, manufacturer's data
- Discussion and/or calculations of the emissions of air pollutants from the equipment

6. Trade Secrets *Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to a third party. If you wish to keep certain items separate as specified in Regulation 2, Rule 1, Section 202.7, please complete the following steps.*

- Each page containing trade secret information must be labeled "trade secret" with the trade secret information clearly marked.
- A second copy, with trade secret information blanked out, marked "public copy" must be provided.
- For each item asserted to be trade secret, you must provide a statement which provides the basis for your claim.

7. Small Business Certification You are entitled to a reduced permit fee if you qualify as a small business as defined in Regulation 3. In order to qualify, you must certify that your business meets all of the following criteria:

- The business does not employ more than 10 persons and its gross annual income does not exceed \$600,000.
- And the business is not an affiliate of a non-small business. (Note: a non-small business employs more than 10 persons and/or its gross income exceeds \$600,000.)

8. Accelerated Permitting The Accelerated Permitting Program entitles you to install and operate qualifying sources of air pollution and abatement equipment **without waiting for the District to issue a Permit to Operate**. To participate in this program you must certify that your project will meet all of the following criteria: Please acknowledge each item by checking each box.

- Uncontrolled emissions of any single pollutant are each less than 10 lb/highest day, or the equipment has been precertified by the BAAQMD. 020798
- Emissions of toxic compounds do not exceed the trigger levels identified in Table 2-5-1 (see Regulation 2, Rule 5).
- The project is not subject to public notice requirements (the source is either more than 1000 ft. from the nearest school, or the source does not emit any toxic compound in Table 2-5-1).
- For replacement of abatement equipment, the new equipment must have an equal or greater overall abatement efficiency for all pollutants than the equipment being replaced.
- For alterations of existing sources, for all pollutants the alteration does not result in an increase in emissions.
- Payment of applicable fees (the minimum permit fee to install and operate each source). See Regulation 3 or contact the Engineering Division for help in determining your fees.

9. CEQA Please answer the following questions pertaining to CEQA (California Environmental Quality Act).

- A. Has another public agency prepared, required preparation of, or issued a notice regarding preparation of a California Environmental Quality Act (CEQA) document (initial study, negative declaration, environmental impact report, or other CEQA document) that analyzes impacts of this project or another project of which it is a part or to which it is related? YES NO If no, go to section 9B.

Describe the document or notice, preparer, and date of document or expected date of completion:

APPLICATION FOR CERTIFICATION - CALIFORNIA ENERGY COMMISSION

- B. List and describe any other permits or agency approvals required for this project by city, regional, state or federal agencies:

SEE VOLUME 1 OF THE AFC

- C. List and describe all other prior or current projects for which either of the following statements is true: (1) the project that is the subject of this application could not be undertaken without the project listed below, (2) the project listed below could not be undertaken without the project that is the subject of this application:

N/A

10. Certification I hereby certify that all information contained herein is true and correct. (Please sign and date this form)

Bryan Bertacchi

Name of person certifying (print)

CEO

Title of person certifying

B. Bertacchi

Signature of person certifying

6/22/05

Date

Send all application materials to the BAAQMD Engineering Division, 939 Ellis Street, San Francisco, CA 94109.

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 Website: www.baaqmd.gov

**Data Form C
 FUEL COMBUSTION SOURCE**

(for District use only)

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New Modified Retro

Form C is for all operations which burn fuel except for internal combustion engines (use Form ICE unless it is a gas turbine; for gas turbines use this form). If the operation also involves evaporation of any organic solvent, complete Form S and attach to this form. If the operation involves a process which generates any other air pollutants, complete Form G and attach to this form.

Check box if this source has a secondary function as an abatement device for some other source(s); complete lines 1, 2, and 7-1 (abatement Device No.) and attach to this form.

1. Company Name: <u>Contra Costa Generating Station, LLC</u>	(If unknown, leave blank) Plant No: _____ Source No. <u>1</u>
2. Equipment Name & Number, or Description: <u>GE 7 FA TURBINE W/HRSG</u>	
3. Make, Model: <u>7 FA</u>	Maximum firing rate: <u>~2150, 3-8000 MMBTU/HR</u>
4. Date of modification or initial operation: _____ (if unknown, leave blank)	
5. Primary use (check one): <input checked="" type="checkbox"/> electrical generation <input type="checkbox"/> space heat <input type="checkbox"/> waste disposal <input type="checkbox"/> testing <input type="checkbox"/> abatement device <input type="checkbox"/> cogeneration <input type="checkbox"/> resource recovery <input type="checkbox"/> other <input type="checkbox"/> process heat; material heated _____	
6. SIC Number: <u>4911</u> (If unknown leave blank)	
7. Equipment type (check one) Internal combustion Use Form ICE (Internal Combustion Engine) unless it is a gas turbine <input checked="" type="checkbox"/> gas turbine <input type="checkbox"/> other _____ hp 020798	
Incinerator <input type="checkbox"/> salvage operation <input type="checkbox"/> pathological waste Temperature _____ °F <input type="checkbox"/> liquid waste <input type="checkbox"/> other _____ Residence time _____ Sec	
Others <input type="checkbox"/> boiler <input type="checkbox"/> dryer <input type="checkbox"/> afterburner <input type="checkbox"/> oven <input type="checkbox"/> flare <input type="checkbox"/> furnace Material dried, baked, or heated: <input type="checkbox"/> open burning <input type="checkbox"/> kiln <input type="checkbox"/> other _____	
8. Overfire air? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, what percent _____ %	
9. Flue gas recirculation? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, what percent _____ %	
10. Air preheat? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Temperature _____ °F	
11. Low NO_x burners? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Make, Model _____	
12. Maximum flame temperature _____ °F	
13. Combustion products: Wet gas flowrate _____ acfm at _____ °F Typical Oxygen Content _____ dry volume % or _____ wet volume % or _____ % excess air	
14. Typical Use <u>24</u> hours/day <u>7</u> days/week _____ weeks/year <u>8521 HRS/YR</u>	
15. Typical % of annual total: Dec-Feb _____ % Mar-May _____ % Jun-Aug _____ % Sep-Nov _____ %	
16. With regard to air pollutant flow, what source(s) or abatement device(s) are immediately UPSTREAM? S _____ S _____ S _____ S _____ S _____ S _____ A _____ A _____ A _____ With regard to air pollutant flow, what source(s) or abatement device(s), and/or emission points are immediately DOWNSTREAM? S _____ S _____ A <u>1</u> A <u>2</u> P <u>1</u> P _____	

Person completing this form: R. Booth Date: 6-16-09

(revised 4/05)

FUELS

INSTRUCTIONS: Complete one line in Section A for each fuel. Section B is OPTIONAL. Please use the units at the bottom of each table. N/A means "Not Applicable."

SECTION A: FUEL DATA

SEE AFC APPENDIX 5.1A, TABLE 5.1A-2.

	Fuel Name	Fuel Code**	Total Annual Usage***	Maximum Possible Fuel Use Rate	Typical Heat Content	Sulfur Content	Nitrogen Content (optional)	Ash Content (optional)
1.	NAT GAS	189						
2.								
3.								
4.								
5.								

<i>Use the appropriate units for each fuel</i>	Natural Gas	therm*	Btu/hr	N/A	N/A	N/A	N/A
	Other Gas	MSCF*	MSCF/hr	Btu/MSCF	ppm	N/A	N/A
	Liquid	m gal*	m gal/hr	Btu/m gal	wt%	wt%	wt%
	Solid	ton	ton/hr	Btu/ton	wt%	wt%	wt%

SECTION B: EMISSION FACTORS (optional)

	Fuel Name	Fuel Code**	Particulates		NOx		CO	
			Emission Factor	**Basis Code	Emission Factor	**Basis Code	Emission Factor	**Basis Code
1.								
2.								
3.								
4.								

Use the appropriate units for each fuel:
 Natural Gas = lb/therm*
 Other Gas = lb/MSCF*
 Liquid = lb/m gal*
 Solid = lb/ton

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Note: * MSCF = thousand standard cubic feet

* m gal = thousand gallons

* therm = 100,000 BTU

** See tables below for Fuel and Basis Codes

*** Total annual usage is: - Projected usage over next 12 months if equipment is new or modified.
 - Actual usage for last 12 months if equipment is existing and unchanged.

**Fuel Codes				**Basis Codes	
Code	Fuel	Code	Fuel	Code	Method
25	Anthracite coal	189	Natural Gas	0	Not applicable for this pollutant
33	Bagasse	234	Process gas - blast furnace	1	Source testing or other measurement by plant (attach copy)
35	Bark	235	Process gas - CO	2	Source testing or other measurement by BAAQMD (give date)
43	Bituminous coal	236	Process gas - coke oven gas	3	Specifications from vendor (attach copy)
47	Brown coal	238	Process gas - RMG	4	Material balance by plant using engineering expertise and knowledge of process
242	Bunker C fuel oil	237	Process gas - other	5	Material balance by BAAQMD
80	Coke	242	Residual oil	6	Taken from AP-42 (compilation of Air Pollutant Emission Factors, EPA)
89	Crude oil	495	Refuse derived fuel	7	Taken from literature, other than AP-42 (attach copy)
98	Diesel oil	511	Landfill gas	8	Guess
493	Digester gas	256	Solid propellant		
315	Distillate oil	466	Solid waste		
392	Fuel oil #2	304	Wood - hogged		
551	Gasoline	305	Wood - other		
158	Jet fuel	198	Other - gaseous fuels		
160	LPG	200	Other - liquid fuels		
165	Lignite	203	Other - solid fuels		
167	Liquid waste				
494	Municipal solid waste				

(revised: 6/01)

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**Data Form C
 FUEL COMBUSTION SOURCE**

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New Modified Retro

Form C is for all operations which burn fuel except for internal combustion engines (use Form ICE unless it is a gas turbine; for gas turbines use this form). If the operation also involves evaporation of any organic solvent, complete Form S and attach to this form. If the operation involves a process which generates any other air pollutants, complete Form G and attach to this form.

Check box if this source has a secondary function as an abatement device for some other source(s); complete lines 1, 2, and 7-13 on Form A (using the source number below for the Abatement Device No.) and attach to this form.

1. Company Name: Contra Costa Generating Station, LLC		Plant No: _____	Source No. 2
2. Equipment Name & Number, or Description: GE7FA TURBINE W/HRSG			
3. Make, Model: 7FA		Maximum firing rate: ~2150.3 Btu/hr MMBTU/hr	
4. Date of modification or initial operation: _____ (if unknown, leave blank)			
5. Primary use (check one): <input checked="" type="checkbox"/> electrical generation <input type="checkbox"/> space heat <input type="checkbox"/> waste disposal <input type="checkbox"/> testing <input type="checkbox"/> abatement device <input type="checkbox"/> cogeneration <input type="checkbox"/> resource recovery <input type="checkbox"/> other <input type="checkbox"/> process heat; material heated _____			
6. SIC Number 4911 <small>If unknown leave blank</small>			
7. Equipment type (check one) Internal combustion Use Form ICE (Internal Combustion Engine) unless it is a gas turbine <input checked="" type="checkbox"/> gas turbine _____ hp 020798 <input type="checkbox"/> other _____			
Incinerator		<input type="checkbox"/> salvage operation <input type="checkbox"/> pathological waste	Temperature _____ °F
		<input type="checkbox"/> liquid waste <input type="checkbox"/> other _____	Residence time _____ Sec
Others		<input type="checkbox"/> boiler <input type="checkbox"/> dryer	Material dried, baked, or heated: _____
		<input type="checkbox"/> afterburner <input type="checkbox"/> oven	
		<input type="checkbox"/> flare <input type="checkbox"/> furnace	
		<input type="checkbox"/> open burning <input type="checkbox"/> kiln	
		<input type="checkbox"/> other _____	
8. Overfire air? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, what percent _____%			
9. Flue gas recirculation? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If yes, what percent _____%			
10. Air preheat? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Temperature _____°F			
11. Low NO _x burners? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Make, Model _____			
12. Maximum flame temperature _____°F			
13. Combustion products: Wet gas flowrate _____ acfm at _____°F Typical Oxygen Content _____ dry volume % or _____ wet volume % or _____ % excess air			
14. Typical Use 24 hours/day 7 days/week - weeks/year 8521 HRS/YR			
15. Typical % of annual total: Dec-Feb _____% Mar-May _____% Jun-Aug _____% Sep-Nov _____%			
16. With regard to air pollutant flow, what source(s) or abatement device(s) are immediately UPSTREAM? S _____ S _____ S _____ S _____ S _____ S _____ A _____ A _____ A _____ With regard to air pollutant flow, what source(s) or abatement device(s), and/or emission points are immediately DOWNSTREAM? S _____ S _____ A 3 A 4 P 2 P _____			

Person completing this form: **R. Booth** Date: **6-16-09**

(revised 4/05)

FUELS

INSTRUCTIONS: Complete one line in Section A for each fuel. Section B is OPTIONAL. Please use the units at the bottom of each table. N/A means "Not Applicable."

SECTION A: FUEL DATA *SEE AFC APPENDIX 5.1A, TABLE 5.1A-2.*

	Fuel Name	Fuel Code**	Total Annual Usage***	Maximum Possible Fuel Use Rate	Typical Heat Content	Sulfur Content	Nitrogen Content (optional)	Ash Content (optional)
1.	NAT GAS	189						
2.								
3.								
4.								
5.								

Use the appropriate units for each fuel	Natural Gas	therm*	Btu/hr	N/A	N/A	N/A	N/A
	Other Gas	MSCF*	MSCF/hr	Btu/MSCF	ppm	N/A	N/A
	Liquid	m gal*	m gal/hr	Btu/m gal	wt%	wt%	wt%
	Solid	ton	ton/hr	Btu/ton	wt%	wt%	wt%

SECTION B: EMISSION FACTORS (optional)

	Fuel Name	Fuel Code**	Particulates		NOx		CO	
			Emission Factor	**Basis Code	Emission Factor	**Basis Code	Emission Factor	**Basis Code
1.								
2.								
3.								
4.								

Use the appropriate units for each fuel: Natural Gas = lb/therm*
 Other Gas = lb/MSCF*
 Liquid = lb/m gal*
 Solid = lb/ton

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- Note:**
- * MSCF = thousand standard cubic feet
 - * m gal = thousand gallons
 - * therm = 100,000 BTU
 - ** See tables below for Fuel and Basis Codes
 - *** Total annual usage is: - Projected usage over next 12 months if equipment is new or modified.
 - Actual usage for last 12 months if equipment is existing and unchanged.

**Fuel Codes				**Basis Codes	
Code	Fuel	Code	Fuel	Code	Method
25	Anthracite coal	189	Natural Gas	0	Not applicable for this pollutant
33	Bagasse	234	Process gas - blast furnace	1	Source testing or other measurement by plant (attach copy)
35	Bark	235	Process gas - CO	2	Source testing or other measurement by BAAQMD (give date)
43	Bituminous coal	236	Process gas - coke oven gas	3	Specifications from vendor (attach copy)
47	Brown coal	238	Process gas - RMG	4	Material balance by plant using engineering expertise and knowledge of process
242	Bunker C fuel oil	237	Process gas - other	5	Material balance by BAAQMD
80	Coke	242	Residual oil	6	Taken from AP-42 (compilation of Air Pollutant Emission Factors, EPA)
89	Crude oil	495	Refuse derived fuel	7	Taken from literature, other than AP-42 (attach copy)
98	Diesel oil	511	Landfill gas	8	Guess
493	Digester gas	256	Solid propellant		
315	Distillate oil	466	Solid waste		
392	Fuel oil #2	304	Wood - hogged		
551	Gasoline	305	Wood - other		
158	Jet fuel	198	Other - gaseous fuels		
160	LPG	200	Other - liquid fuels		
165	Lignite	203	Other - solid fuels		
167	Liquid waste				
494	Municipal solid waste				

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**Data Form C
 FUEL COMBUSTION SOURCE**

(for District use only)

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New Modified Retro

Form C is for all operations which burn fuel except for internal combustion engines (use Form ICE unless it is a gas turbine; for gas turbines use this form). If the operation also involves evaporation of any organic solvent, complete Form S and attach to this form. If the operation involves a process which generates any other air pollutants, complete Form G and attach to this form.

Check box if this source has a secondary function as an abatement device for some other source(s); complete lines 1, 2, and 7-13 on Form A (using the source number below for the Abatement Device No.) and attach to this form.

1. Company Name:	Contra Costa Generating Station, LLC	Plant No:	Source No. 3
2. Equipment Name & Number, or Description:	Aux BOILER		
3. Make, Model :	Maximum firing rate: 50.6 Btu/hr/MMBTU/hr		
4. Date of modification or initial operation:	(if unknown, leave blank)		
5. Primary use (check one):	<input type="checkbox"/> electrical generation <input type="checkbox"/> space heat <input type="checkbox"/> waste disposal <input type="checkbox"/> testing <input type="checkbox"/> abatement device <input type="checkbox"/> cogeneration <input type="checkbox"/> resource recovery <input type="checkbox"/> other <input checked="" type="checkbox"/> process heat; material heated GE FAST START SYSTEM		
6. SIC Number	4911 <small>If unknown leave blank</small>		
7. Equipment type (check one)	Internal combustion Use Form ICE (Internal Combustion Engine) unless it is a gas turbine <input type="checkbox"/> gas turbine 020798 <input type="checkbox"/> other _____ hp		
Incinerator	<input type="checkbox"/> salvage operation <input type="checkbox"/> pathological waste Temperature _____ °F <input type="checkbox"/> liquid waste <input type="checkbox"/> other _____ Residence time _____ Sec		
Others	<input checked="" type="checkbox"/> boiler <input type="checkbox"/> dryer <input type="checkbox"/> afterburner <input type="checkbox"/> oven <input type="checkbox"/> flare <input type="checkbox"/> furnace Material dried, baked, or heated: _____ <input type="checkbox"/> open burning <input type="checkbox"/> kiln		
8. Overfire air?	<input type="checkbox"/> yes <input type="checkbox"/> no	If yes, what percent _____%	
9. Flue gas recirculation?	<input type="checkbox"/> yes <input type="checkbox"/> no	If yes, what percent _____%	
10. Air preheat?	<input type="checkbox"/> yes <input type="checkbox"/> no	Temperature _____ °F	
11. Low NO _x burners?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Make, Model _____	
12. Maximum flame temperature	_____ °F		
13. Combustion products:	Wet gas flowrate _____ acfm at _____ °F Typical Oxygen Content _____ dry volume % or _____ wet volume % or _____ % excess air		
14. Typical Use	8 hours/day _____ days/week _____ weeks/year 403 HRS/YR.		
15. Typical % of annual total:	Dec-Feb _____% Mar-May _____% Jun-Aug _____% Sep-Nov _____%		
16. With regard to air pollutant flow, what source(s) or abatement device(s) are immediately UPSTREAM?	S _____ S _____ S _____ S _____ S _____ S _____ A _____ A _____ A _____		
With regard to air pollutant flow, what source(s) or abatement device(s), and/or emission points are immediately DOWNSTREAM?	S _____ S _____ A 5 A 6 P 3 P _____		

Person completing this form: **R. BOOTH** Date: **6-16-09**

(revised 4/05)

FUELS

INSTRUCTIONS: Complete one line in Section A for each fuel. Section B is OPTIONAL. Please use the units at the bottom of each table. N/A means "Not Applicable."

SECTION A: FUEL DATA *SEE AFC APPENDIX 5.1A, TABLE 5.1A-2.*

	Fuel Name	Fuel Code**	Total Annual Usage***	Maximum Possible Fuel Use Rate	Typical Heat Content	Sulfur Content	Nitrogen Content (optional)	Ash Content (optional)
1.	NAT GAS	189						
2.								
3.								
4.								
5.								

<i>Use the appropriate units for each fuel</i>	Natural Gas	therm*	Btu/hr	N/A	N/A	N/A	N/A
	Other Gas	MSCF*	MSCF/hr	Btu/MSCF	ppm	N/A	N/A
	Liquid	m gal*	m gal/hr	Btu/m gal	wt%	wt%	wt%
	Solid	ton	ton/hr	Btu/ton	wt%	wt%	wt%

SECTION B: EMISSION FACTORS (optional)

	Fuel Name	Fuel Code**	Particulates		NOx		CO	
			Emission Factor	**Basis Code	Emission Factor	**Basis Code	Emission Factor	**Basis Code
1.								
2.								
3.								
4.								

Use the appropriate units for each fuel: Natural Gas = lb/therm*
 Other Gas = lb/MSCF*
 Liquid = lb/m gal*
 Solid = lb/ton

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Note: * MSCF = thousand standard cubic feet

* m gal = thousand gallons

* therm = 100,000 BTU

** See tables below for Fuel and Basis Codes

*** Total annual usage is: - Projected usage over next 12 months if equipment is new or modified.
 - Actual usage for last 12 months if equipment is existing and unchanged.

**Fuel Codes				**Basis Codes	
Code	Fuel	Code	Fuel	Code	Method
25	Anthracite coal	189	Natural Gas	0	Not applicable for this pollutant
33	Bagasse	234	Process gas - blast furnace	1	Source testing or other measurement by plant (attach copy)
35	Bark	235	Process gas - CO	2	Source testing or other measurement by BAAQMD (give date)
43	Bituminous coal	236	Process gas - coke oven gas	3	Specifications from vendor (attach copy)
47	Brown coal	238	Process gas - RMG	4	Material balance by plant using engineering expertise and knowledge of process
242	Bunker C fuel oil	237	Process gas - other	5	Material balance by BAAQMD
80	Coke	242	Residual oil	6	Taken from AP-42 (compilation of Air Pollutant Emission Factors, EPA)
89	Crude oil	495	Refuse derived fuel	7	Taken from literature, other than AP-42 (attach copy)
98	Diesel oil	511	Landfill gas	8	Guess
493	Digester gas	256	Solid propellant		
315	Distillate oil	466	Solid waste		
392	Fuel oil #2	304	Wood - hogged		
551	Gasoline	305	Wood - other		
158	Jet fuel	198	Other - gaseous fuels		
160	LPG	200	Other - liquid fuels		
165	Lignite	203	Other - solid fuels		
167	Liquid waste				
494	Municipal solid waste				

(revised: 6/01)



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Form ICE
 Internal Combustion Engines

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Form ICE is to be completed for all internal combustion engines except turbines. (For turbines, submit Form C). Submit one form for each engine. If this is a new engine or a modification to an existing engine, you must also complete Form HRSA Health Risk Screen Analysis. Additional forms and all District regulations and rules are available on the District's web site. Contact your assigned permit engineer or the Engineering Division at the above telephone number if you need assistance completing this form. Please include the engine manufacturer's equipment specifications.

1. SUMMARY New Construction Modification Loss of Exemption

Company Name Contra Costa Generating Station, LLC Plant No.* _____

Source Description FIRE PUMP ICE Diesel Engine Source No.* 4
*(If unknown leave blank)

Initial Date of Operation _____ (Not required for modification of an existing permitted source)

Operating Schedule Typical hrs/day 1 Days/week 1 Weeks/yr 50 Maximum hrs/day 1

2. ENGINE INFORMATION Check here if applying for a portable equipment permit. (See Reg. 2.1413 for requirements)

Engine Type: (Check one) 4 Stroke 2 Stroke Compression Ignition (Diesel) or 4 Stroke 2 Stroke Spark Ignition

Engine Manufacturer CLARKE Model JW6H-UFAD80 Model Year _____

EPA/CARB Engine Family Name _____ Engine Serial No. _____

Engine Displacement _____ (cu in) Maximum rated output (bhp) 400 Typical load as % of bhp rating _____

Is this an emergency/standby engine? Yes No

(Complete and check all that apply)

Certification: EPA Certified CARB Certified CARB Executive Order No. U-R-004-0369

None (If None is checked, please indicate below the items applicable to this engine.)

- Naturally aspirated Supercharged Turbocharged Inter-cooled After-cooled
 Timing retard $\geq 4^\circ$ Lean-burn Rich-burn

Primary Use: Electrical generation Cogeneration Pump driver Fire pump driver
 Compressor driver Tub grinder driver Other: _____

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3. ABATEMENT DEVICE INFORMATION Complete this section only if the engine exhausts to an add-on abatement device.

Check here if the engine has more than one add-on abatement device and complete a separate Form A for each additional abatement device.

Abatement device number A (If unknown leave blank) New Existing

Device type: Diesel catalyzed particulate filter Oxidation catalyst Selective catalytic reduction (SCR)
 Non-selective catalytic reduction (NSCR or 3-way catalyst) Other: _____

Make, Model, and Rated Capacity _____

Abatement device control efficiencies at typical operation (Use the basis codes listed below. If unknown leave blank)

Control Efficiency/Emission Factor Basis Codes: (Submit supporting documentation if available)

- (1) Source testing or other measurement by plant (8) Guess
 (2) Source testing or measurement by BAAQMD (District use only) (9) EPA/CARB Certification
 (3) Specification from vendor
 (4) Material balance by plant using knowledge of process
 (5) Material balance by BAAQMD (District use only)
 (6) EPA Document AP-42 Emission Factors
 (7) Taken from literature other than AP-42

SEE AFC
APP 5.1A
==

Pollutant Name	Wt % Reduction	Basis Code
Particulates		
Organics		
Nitrogen Oxides		
Sulfur Dioxide		
Carbon Monoxide		
Others - <input type="checkbox"/> Check here and attach a separate list of pollutants. Include the basis code and the control efficiency.		

Continued on reverse side

P-4
==

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Form ICE
Internal Combustion Engines

4. EMISSION POINT/STACK INFORMATION Check here if the engine has more than one stack or has a continuous pollutant emission monitor and complete one Form P for each emission point.

Emission point number P 4 (If unknown leave blank) New Existing
 Stack outlet height from ground level (ft) 16
 Diameter of stack outlet (inches) 8 or Outlet cross-section area (square inches) _____
 Direction of outlet (check one) Horizontal Vertical End of outlet (check one) Open/hinged flap Rain cap
 Exhaust rate at typical operation (acfm) 2214 Exhaust temperature at typical operation (°F) 826

5. RISK ASSESSMENT INFORMATION

Distance from engine to the property line of the nearest residence (ft) _____ or (check if) Greater than one mile
 Distance from engine to the property line of the nearest school¹ (ft) _____ or (check if) Greater than 1000 ft
 Describe the nearest non-residential, non-school site (check one) Industrial Commercial Hospital
SEE AFC RISK SECTION Day care center Other _____

Distance from engine to the property line of the nearest non-residential, non-school site(ft) _____ or Greater than one mile
 1. K-12 and more than twelve children only.

6. FUEL DATA Complete the table below for each fuel burned. If you are using a fuel other than those listed in the fuel code table, attach a fuel analysis indicating the higher heating value, sulfur content, and nitrogen content. Please clearly indicate the measurement unit that corresponds to the information you are submitting. Check here if you are using more than two fuels, and attach a copy of this page listing the additional fuels.

Primary Fuel					Secondary Fuel				
Fuel Code ¹	Name				Fuel Code ¹	Name			
<u>98</u>	<u>DIESEL</u>								
Maximum Fuel Use Rate ²	gall/hr or SCF/hr				Maximum Fuel Use Rate ²	gall/hr or SCF/hr			
<u>20</u>	<u>20</u>								
Annual Fuel Usage ³	gall/yr or therm/yr or SCF/yr				Annual Fuel Usage ³	gall/yr or therm/yr or SCF/yr			
<u>1000</u>	<u>1000</u>								
Typical Heat Content ⁴	BTU/gal or BTU/SCF				Typical Heat Content ⁴	BTU/gal or BTU/SCF			
<u>139,000</u>	<u>139,000</u>								
Sulfur Content ⁴	wt% liquids or ppmv gases				Sulfur Content ⁴	wt% liquids or ppmv gases			
Emission Factors (Optional)					Emission Factors (Optional)				
Pollutant Name	Emission Factor	Units ⁵	Basis Code ⁶	Abated Factor (✓) ⁷	Pollutant Name	Emission Factor	Units ⁵	Basis Code ⁶	Abated Factor (✓) ⁷
Particulates				<input type="checkbox"/>	Particulates				<input type="checkbox"/>
Organics				<input type="checkbox"/>	Organics				<input type="checkbox"/>
Nitrogen Oxides				<input type="checkbox"/>	Nitrogen Oxides				<input type="checkbox"/>
Carbon Monoxide				<input type="checkbox"/>	Carbon Monoxide				<input type="checkbox"/>
Others - <input type="checkbox"/> Check here and attach a separate list under each fuel used.					Others - <input type="checkbox"/> Check here and attach a separate list under each fuel used.				

- Fuel Codes: Diesel (98) Bio Diesel B100 (815) Bio Diesel B20 Blend (816) Gasoline (551)
 Natural Gas (189) Landfill Gas (511) Digester Gas (493) Liquid Petroleum Gas (LPG) (160)
- Maximum fuel use rate units: gallon/hr for liquid fuels and SCF/hr for gaseous fuels. (SCF = Standard Cubic Foot)
- The annual fuel usage is the actual or projected engine fuel consumption over a rolling 12-month time period. Annual usage units: gallons for liquid fuel, therms for natural gas, and SCF for other gaseous fuels. (therm = 100,000 BTUs, BTU = British Thermal Unit)
- If you are using diesel, natural gas, or gasoline, you may skip this entry. Heat content units: BTU/gallon for liquid fuels, BTU/SCF for gaseous fuels. Sulfur content units: weight % for liquid fuels, ppmv for gaseous fuels. (ppmv = parts per million by volume)
- Emission factors may be reported as gram/brakehp-hr, or as lb per gallon, or as lb per therm, or as lb per SCF.
- See the Control Efficiency/Emission Factor Basis Code table under Section 3 on page 1 of this form.
- Place a check in this column if the emission factor applies to emissions after abatement by an add-on abatement device.

7. CERTIFICATION I hereby certify that all information contained herein is true and correct. (Please sign and date this form)

Bryan Bertuchi CEO [Signature] 6/22/10
 Name of person certifying (print) Title of person certifying Signature of person certifying Date

Approved By: _____ Date: _____ Entered By: _____ Date: _____
 (District Use Only) Form ICE Rev 03/02/06 Page 2 of 2

020798



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street San Francisco, CA 94109 (415) 749-4990 FAX (415) 749-5030 www.baaqmd.gov

Form G is for general air pollution sources. Use specific forms when applicable. If this source burns fuel, then also complete Form C.

1. Business Name: Contra Costa Generating Station, LLC Plant No: _____
 2. SIC No.: 4911 Date of Initial Operation _____ (if unknown, leave blank)
 3. Name or Description: EVAPORATIVE CONDENSER Source No.: S- 5
 4. Make, Model, and Rated Capacity of Equipment: 3 CELL UNIT
 5. Process Code¹ G-8/ Material Code² 7104 Usage Unit² GPM
 6. Total throughput, last 12 mos. _____ usage units² Maximum operating rate: 5880 usage units² / HR MIN
 7. Typical % of total throughput: Dec-Feb _____ % Mar-May _____ % Jun-Aug _____ % Sep-Nov _____ %
 8. Typical operating times: 11 hrs/day _____ days/week _____ weeks/year 1500 HRS/YR.
 9. For batch or cyclic processes: _____ minutes/cycle _____ minutes between cycles
 10. Exhaust gases from source: Wet gas flowrate 190600 cfm at ~88 °F
 (at maximum operation) Approximate water vapor content _____ volume%

EMISSION FACTORS (at maximum operating rate)

If this form is being submitted as part of an application for an authority to construct, completion of the following table is mandatory. If not, and the Source is *already in operation*, completion of the table is requested but not required.

If this source also burns fuel, do not include those combustion products in the emission factors below; they are accounted for on Form C. If source test or other data are available for composite emissions only, estimate from those data the emissions attributable to just the general process and show below.

Check box if factors apply to emissions *after* Abatement Device(s).

	Emission Factors lb/Usage Unit²	Basis Code³
11. Particulate <u>(PM₁₀)</u>	<u>0.132 lbs / HR</u>	<u>4</u>
12. Organics.....		
13. Nitrogen Oxides (as NO ₂).....		
14. Sulfur Dioxide.....		
15. Carbon Monoxide.....		
16. Other:.....		
17. Other:.....		

020798

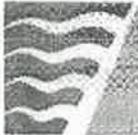
18. With regard to air pollutant flow from this source, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ S- _____ S- _____ A- 7 A- 8 A- 9
 P- _____ P- _____ P- 5 P- 6 P- 7

¹See Tables G-1 through G-7 for code
³See Basis Code Table below

²See Table G5 or the Material Codes Table (available upon request)

Person completing this form: <u>R. BOOTH</u>	Date: <u>6-16-09</u>
--	----------------------



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . FAX (415) 749-5030

for office use only

Abatement Device:
to the atmosphere.

Contra Costa Generating Station, LLC

to reduce the quantity of pollutant(s) emitted

1. Business Name: _____ Plant No: _____
(If unknown, leave blank)

2. Name or Description SCR/TURBINE #1 Abatement Device No: A- 1

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 66 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are immediately upstream?

S- 1 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F SEE AFC DATA

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

020798

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)	<u>SEE AFC DATA</u>	
10.	Sulfur Dioxide		
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are **immediately** downstream?

S- _____ A- 2 A- _____ A- _____ P- 1 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

P:www/FormA (revised: 7/99)



DATA FORM G
General Air Pollution Source

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street San Francisco, CA 94109 (415) 749-4990 FAX (415) 749-5030 www.baaqmd.gov

Form G is for general air pollution sources. Use specific forms when applicable. If this source burns fuel, then also complete Form C.

1. Business Name: RADBACK ENERGY- CCGS Plant No: _____ (if unknown, leave blank)
2. SIC No.: 4911 Date of Initial Operation _____
3. Name or Description: OIL/WATER SEPARATOR Source No.: S-6
4. Make, Model, and Rated Capacity of Equipment: _____
5. Process Code¹ 5017 Material Code² 427 Usage Unit² 1000 GALS.
6. Total throughput, last 12 mos. 0 usage units² Maximum operating rate: 0.12 usage units²/hr
7. Typical % of total throughput: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %
8. Typical operating times: 24 hrs/day 7 days/week 52 weeks/year
9. For batch or cyclic processes: N/A minutes/cycle N/A minutes between cycles
10. Exhaust gases from source: Wet gas flowrate N/A cfm at N/A °F
(at maximum operation) Approximate water vapor content N/A volume%

EMISSION FACTORS (at maximum operating rate)

If this form is being submitted as part of an application for an authority to construct, completion of the following table is mandatory. If not, and the Source is already in operation, completion of the table is requested but not required.

If this source also burns fuel, do not include those combustion products in the emission factors below; they are accounted for on Form C. If source test or other data are available for composite emissions only, estimate from those data the emissions attributable to just the general process and show below.

Check box if factors apply to emissions after Abatement Device(s).

	Emission Factors lb/Usage Unit ²	Basis Code ³
11. Particulate		
12. Organics	0.2	6 (AP-42, SECTION 5.1, 1/95.) TABLE 5.1-2
13. Nitrogen Oxides (as NO ₂)		
14. Sulfur Dioxide		
15. Carbon Monoxide		
16. Other: _____		
17. Other: _____		

18. With regard to air pollutant flow from this source, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ S- _____ S- _____ A _____ A- _____ A- _____
P- _____ P- _____ P- _____ P- _____ P- _____

¹See Tables G-1 through G-7 for code ²See Table G5 or the Material Codes Table (available upon request)
³See Basis Code Table below

Person completing this form: GREG DARVIN Date: 8-27-09



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: _____ Plant No: _____
(If unknown, leave blank)

2. Name or Description CO CATALYST / TURBINE #1 Abatement Device No: A- Z

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 72 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what source(s) and/or abatement device(s) are immediately upstream?

S- 1 S- _____ S- _____ S- _____ S- _____
S- _____ A- 1 A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

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	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)	<u>SEE AFC DATA</u>	
10.	Sulfur Dioxide		
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ A- _____ A- _____ A- _____ P- 1 P- _____

Person completing this form: R. BOOTH Date: 6-16-09



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . FAX (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: _____ Plant No: _____
(If unknown, leave blank)

2. Name or Description SCR / TURBINE #2 Abatement Device No: A- 3

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 66 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what source(s) and/or abatement device(s) are immediately upstream?

S- 2 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)	<u>SEE AFC DATA</u>	
10.	Sulfur Dioxide		
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

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14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ A- 4 _____ A- _____ A- _____ P- 2 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

P:www/FormA (revised: 7/99)



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: _____ Plant No: _____
(if unknown, leave blank)

2. Name or Description CO CATALYST / TURBINE #2 Abatement Device No: A- 4

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 72 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what source(s) and/or abatement device(s) are immediately upstream?

S- 2 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

020798

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)	<u>SEE AFC DATA</u>	
10.	Sulfur Dioxide		
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ A- 3 _____ A- _____ A- _____ P- 2 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

P:wwwFormA (revised: 7/99)



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: _____ Plant No: _____
(If unknown, leave blank)

2. Name or Description SCR / Aux Boiler Abatement Device No: A- 5

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 66 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are immediately upstream?

S- 3 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

020798

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)	<u>SEE AFC DATA</u>	
10.	Sulfur Dioxide		
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ A- 6 A- _____ A- _____ P- 3 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

P:www/FormA (revised: 7/99)



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: _____ Plant No: _____
(If unknown, leave blank)

2. Name or Description CO CATALYST / Aux BOILER Abatement Device No: A- 6

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 72 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what source(s) and/or abatement device(s) are immediately upstream?

S- 3 S- _____ S- _____ S- _____ S- _____
S- _____ A- 5 A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

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	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)		
10.	Sulfur Dioxide	<u>SEE AFC DATA</u>	
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what source(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- _____ A- _____ A- _____ A- _____ P- 3 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

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**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

Contra Costa Generating Station, LLC

1. Business Name: EVAP. CONDENSER CELL # 2 Plant No: _____
(If unknown, leave blank)

2. Name or Description DRIFT ELIMINATOR Abatement Device No: A- 8

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 41 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what source(s) and/or abatement device(s) are immediately upstream?

S- 5 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)		
10.	Sulfur Dioxide	<u>SEE AFC DATA</u>	
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what source(s), abatement device(s) and/or emission point(s) are *immediately* downstream?

S- _____ A- _____ A- _____ A- _____ P- 6 P- _____

Person completing this form: R. BOOTH Date: 6-16-09



**Data Form A
ABATEMENT DEVICE**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA 94109 . . . (415) 749-4990 . . . FAX (415) 749-5030

for office use only

Abatement Device: Equipment/process whose primary purpose is to reduce the quantity of pollutant(s) emitted to the atmosphere.

1. Business Name: Contra Costa Generating Station, LLC Plant No: _____
(If unknown, leave blank)

2. Name or Description EVAP. CONDENSER CELL # 3 Abatement Device No: A- 9
DRIFT ELIMINATOR

3. Make, Model, and Rated Capacity SEE AFC DATA

4. Abatement Device Code (See table*) 41 Date of Initial Operation _____

5. With regard to air pollutant flow into this abatement device, what sources(s) and/or abatement device(s) are immediately upstream?
S- 5 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

6. Typical gas stream temperature at inlet: _____ °F

If this form is being submitted as part of an application for an **Authority to Construct**, completion of the following table is mandatory. If not, and the Abatement Device is *already in operation*, completion of the table is requested but not required.

	Pollutant	Weight Percent Reduction (at typical operation)	Basis Codes (See Table**)
7.	Particulate		
8.	Organics		
9.	Nitrogen Oxides (as NO ₂)		
10.	Sulfur Dioxide	<u>SEE AFC DATA</u>	
11.	Carbon Monoxide		
12.	Other:		
13.	Other:		

14. Check box if this Abatement Device burns fuel; complete lines 1, 2 and 15-36 on Form C (using the Abatement Device No. above for the Source No.) and attach to this form.

15. With regard to air pollutant flow from this abatement device, what sources(s), abatement device(s) and/or emission point(s) are **immediately** downstream?
S- _____ A- _____ A- _____ A- _____ P- 7 P- _____

Person completing this form: R. BOOTH Date: 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street . . . San Francisco, CA . . . 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Business Name: Contra Costa Generating Station, LLC Plant No: _____

TURBINE / HSG #1

Emission Point No: P- 1

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are immediately upstream?

S- 1 S- _____ S- _____ S- _____ S- _____
 S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~265 sq. ft. Height above grade: 155 ft.

*** SEE AFC FOR OPS / LOAD CASE DATA**
Effluent Flow from Stack

	<i>Typical Operating Condition</i>	<i>Maximum Operating Condition</i>
<i>Actual Wet Gas Flowrate</i>	cfm	cfm
<i>Percent Water Vapor</i>	Vol %	Vol %
<i>Temperature</i>	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

020798

Is monitoring continuous? yes no

What pollutants are monitored? NO_x, CO, O₂

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street ... San Francisco, CA ... 94109 ... (415) 749-4990 ... Fax (415) 749-5030

Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Business Name: Contra Costa Generating Station, LLC Plant No: _____

TURBINE / HRSG #2

Emission Point No: P- 2

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are immediately upstream?

S- 2 S- _____ S- _____ S- _____ S- _____
 S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~265 sq. ft. Height above grade: 155 ft.

* SEE AFC FOR OPS / LOAD CASE DATA.

020798

Effluent Flow from Stack

	<i>Typical Operating Condition</i>	<i>Maximum Operating Condition</i>
<i>Actual Wet Gas Flowrate</i>	cfm	cfm
<i>Percent Water Vapor</i>	Vol %	Vol %
<i>Temperature</i>	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

Is monitoring continuous? yes no

What pollutants are monitored? NOx, CO, O2

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 Ellis Street ... San Francisco, CA ... 94109 ... (415) 749-4990 ... Fax (415) 749-5030

Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Contra Costa Generating Station, LLC

Business Name: _____ Plant No: _____

Aux Boiler

Emission Point No: P- 3

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are **immediately** upstream?

S- 3 S- _____ S- _____ S- _____ S- _____
 S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: 24.91 sq. ft. Height above grade: 50 ft.

* SEE AFC FOR OPS/LOAD DATA.
 Effluent Flow from Stack

020798

	Typical Operating Condition	Maximum Operating Condition
Actual Wet Gas Flowrate	cfm	cfm
Percent Water Vapor	Vol %	Vol %
Temperature	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

Is monitoring continuous? yes no

What pollutants are monitored? NOx, CO, O2

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Business Name: Contra Costa Generating Station, LLC Plant No: _____

FIRE Pump ICE

Emission Point No: P- 4

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are **immediately** upstream?

S- 4 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~0.35 sq. ft. Height above grade: 16 ft.

* SEE AFC FOR Ops/EMISSIONS DATA.

Effluent Flow from Stack

020798

	Typical Operating Condition	Maximum Operating Condition
Actual Wet Gas Flowrate	cfm	cfm
Percent Water Vapor	Vol %	Vol %
Temperature	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

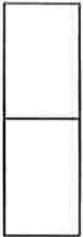
Is monitoring continuous? yes no

What pollutants are monitored? _____

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Business Name: Contra Costa Generating Station, LLC Plant No: _____

**EVAPORATIVE CONDENSER
CELL #1**

Emission Point No: P- 5

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are immediately upstream?

S- 5 S- _____ S- _____ S- _____ S- _____
 S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~95 sq. ft. Height above grade: _____ ft.

*** SEE AFC FOR OPS DATA.**

Effluent Flow from Stack

	<i>Typical Operating Condition</i>	<i>Maximum Operating Condition</i>
<i>Actual Wet Gas Flowrate</i>	cfm	cfm
<i>Percent Water Vapor</i>	Vol %	Vol %
<i>Temperature</i>	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

020798

Is monitoring continuous? yes no

What pollutants are monitored? _____

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 Ellis Street . . . San Francisco, CA . . . 94109 . . . (415) 749-4990 . . . Fax (415) 749-5030

Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Contra Costa Generating Station, LLC

Business Name: _____ Plant No: _____

**EVAPORATIVE CONDENSER
CELL #2**

Emission Point No: P- 6

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are immediately upstream?

S- 5 S- _____ S- _____ S- _____ S- _____
S- _____ A- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~95 sq. ft. Height above grade: _____ ft.

*** SEE AFC FOR OPS DATA.**

Effluent Flow from Stack

	<i>Typical Operating Condition</i>	<i>Maximum Operating Condition</i>
<i>Actual Wet Gas Flowrate</i>	cfm	cfm
<i>Percent Water Vapor</i>	Vol %	Vol %
<i>Temperature</i>	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

020798

Is monitoring continuous? yes no

What pollutants are monitored? _____

Person completing this form R. BOOTH Date 6-16-09

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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Form P is for well-defined emission points such as stacks or chimneys only; do not use for windows, room vents, etc.

Business Name: Contra Costa Generating Station, LLC Plant No: _____
EVAPORATIVE CONDENSER Emission Point No: P- 7
CELL # 3

With regard to air pollutant flow into this emission point, what source(s) and/or abatement device(s) are **immediately** upstream?

S- 5 S- _____ S- _____ S- _____ S- _____
 S- _____ A- _____ A- _____ A- _____ A- _____

Exit cross-section area: ~95 sq. ft. Height above grade: _____ ft.

*** SEE AFC FOR OPS DATA.**

Effluent Flow from Stack

	<i>Typical Operating Condition</i>	<i>Maximum Operating Condition</i>
<i>Actual Wet Gas Flowrate</i>	cfm	cfm
<i>Percent Water Vapor</i>	Vol %	Vol %
<i>Temperature</i>	°F	°F

If this stack is equipped to measure (monitor) the emission of any air pollutants,

Is monitoring continuous? yes no

020798

What pollutants are monitored? _____

Person completing this form R. BOOTH Date 6-16-09