

ATTACHMENT B
California Energy Commission
Air Quality Self-Certification Checklist for Simple-Cycle Gas Turbine Generation Units
License Application for:
 New Emissions Unit(s) at a New Stationary Source
 New Emissions Unit(s) at an Existing Stationary Source

DISTRICT: San Diego County APCD	DATE: March 7, 2001
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FACILITY INFORMATION

License to be Issued to: Wildflower Energy LP - Larkspur Energy Facility		
Mailing Address: 909 Fannin, Suite 2222		
City: Houston	State: Texas	Zip Code: 77010
Address Where Equipment Will be Operated: Corner of Harvest Rd. and Otay Mesa Rd.		
City: San Diego	State: CA	Zip Code:
Nature of Business: Electric Generation Facility	SIC Code: 4911	
Facility Contact Person: John Jones	Phone Number: (713) 374-3919	
	Fax Number: (713) 374-3901	
	Email: jjones@intergen.com	
Application Information Contact Person (if different from above): Mark Turner	Phone Number: (713) 374-3914	
	Fax Number: (713) 374-3901	
	Email: mturner@intergen.com	
Will the facility be under contract to sell its power within California? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If Yes, state the entity contracted with and the percentage of power that will be sold: ___ Cal ISO, CDWR and Coral Energy LLC; 100% _____		
What is the maximum total electrical output of the new power generation equipment at International Standards Organization (ISO) conditions?		MW
Estimated construction start date: <u> 04 </u> / <u> 15 </u> / <u> 01 </u> Estimated completion date: <u> 05 </u> / <u> 30 </u> / <u> 01 </u>		
Length of commissioning period (from date of initial startup): <u> 30 </u> – <u> 90 </u> days _____		

NEW EQUIPMENT INFORMATION

TURBINE #1	If multiple identical units, indicate number of units of this type: <u>2 (two)</u>		
		49.7MW	MW
	Manufacturer: General Electric		
	Model: LM6000 Enhanced Sprint		
	Maximum Heat Input (based on HHV of fuel): 463.5		MMBtu/hr
TURBINE #2	If multiple identical units, indicate number of units of this type: _____		
		MW	MW
	Manufacturer:		
	Model:		
	Maximum Heat Input (based on HHV of fuel):		MMBtu/hr

Suggested Best Available Control Technology (BACT)		Emission Level	Control Technology
	NOx	5 ppmvd @ 15% O ₂ (1-hr rolling average)	Selective catalytic reduction or other equivalent control device
	CO	N/A	No BACT required for SDAPCD trigger.
	VOC	≤ 10 ppm @ 15% O₂ (THC)	Good combustion practices.
	PM10	Emission limit corresponding to natural gas firing (PUC quality natural gas)	Natural gas firing (PUC quality natural gas)
	SO₂	Emission limit corresponding to natural gas firing (PUC quality natural gas)	Natural gas firing (PUC quality natural gas)
	If applicable, NH₃	10 ppmvd @ 15% O ₂ (1-hr rolling average)	None required.

Selective Catalytic Reduction Information, if applicable	If not indicated, please specify units of measurement:			
	Ammonia Storage Tank(s):	Tank type: Vertical storage tank		
		Number of tanks: 1		
		Tank size: 10,000 gallons		
		Reactant type: [] Anhydrous ammonia [X] Aqueous ammonia [] Urea If aqueous ammonia, indicate ammonia concentration: <u>less than 20% by weight</u>		
		Turnover rate:		
	SCR Manufacturer:	Turner Corporation		
	SCR Make:			
	SCR Model:			
	Catalyst dimensions:	Length: _____ ft	Width: _____ ft	Height: _____ ft
	Pressure drop across SCR unit: 3" to 3.9" WG			
	Pressure drop across ammonia injection grid: Not known			
	Space velocity (gas flow rate/catalyst volume): Varies between 18,900/hr and 15,200/hr depending on ambient and operating conditions			
Area velocity (gas flow rate/wetted catalyst surface area): approximately 0.01 ft/sec				

NEW EQUIPMENT INFORMATION (continued)

Selective Catalytic Reduction Information, if applicable (continued)	Manufacturer's guarantee:	Control efficiency: 80 %	Catalyst life: 3-3.5 yrs	
	Ammonia injection rate: 95 lbs/hr aqueous solution (less than 20% strength by weight)			
	NOx concentration into SCR unit:		25 Ppmvd @ 15% O2	
	SO ₂ oxidation rate: 4% max	SO ₃ emissions: 0.078 lbs/hr		
	Operating temperature range of catalyst: Not available			°F
	Temperature at which ammonia injection will begin: Not available			°F

Oxidation Catalyst Information, if applicable	If not indicated, please specify units of measurement:			
	Manufacturer:	Not applicable		
	Make:			
	Model:			
	Catalyst dimensions:	Length: ft	Width: ft	Height: ft
	Pressure drop across catalyst:			
	Manufacturer's guarantee:	CO control efficiency: %	Catalyst life: yrs	
		VOC control efficiency: %		
	Space velocity (gas flow rate/catalyst volume):			
	Area velocity (gas flow rate/wetted catalyst surface area):			
	Catalyst cell density (cells per square inch):			
	CO concentration into catalyst:			Ppmvd @ 15% O2
	VOC concentration into catalyst:			Ppmvd @ 15% O2
	Operating temperature range of catalyst:			°F

Fuel Data	Fuel Type: Natural gas	Specify sulfur content if other than 5 gr/100 scf	
	Higher Heating Value: 1,047 (based on GE) Btu/scf	Sulfur Content:	1 gr/100 scf
	Maximum Fuel Consumption Rate: 0.442		MMscf/hr
	Exhaust Data:	Flow: 550,920 ACFM	M/sec or m ³ /sec or acfm

On-line Normalized Emission Rate	(If corrected to other than 15% O2, indicate at right)			%O ₂
	Specify by units listed below or indicate other values and units at right:			
	NOX	5.0 ppmvd on a 3-hr rolling avg.	0.018 lb/MMBtu	(Controlled)
	CO	ppmvd on a 1-hr rolling avg.	0.0578 lb/MMBtu	(Based on 60 deg)
	VOC	10.0 ppmvd on a 1-hr rolling avg.	0.0252 lb/MMBtu	(Based on Total HC)
	PM10	ppmvd on a 1-hr rolling avg.	0.0065 lb/MMBtu	(GE guidelines)
	SO ₂	ppmvd on a 1-hr rolling avg.	0.0334 lb/MMBtu	(EPA AP-42)
If applicable, NH ₃	10.0 ppmvd on a 1-hr rolling avg.	lb/MMBtu		

NEW EQUIPMENT INFORMATION (continued)

On-line Mass Emission Rate (each turbine)		Hourly [lbs/hr]	Daily [lbs/day]	Quarterly [lbs/qtr]	Annual [tons/yr]
	NOX	8.40	201.6	Variable	17.98
	CO	26.81	643.44	Variable	57.38
	VOC (as THC)	11.68	280.32	Variable	25.00
	PM10	3.00	72.00	Variable	6.42
	SO ₂	1.58	37.82	Variable	3.37
	If applicable, NH ₃	N/A	N/A	Variable	N/A

Startup and Shutdown Mass Emission Rate (each turbine)		Startup Emissions Hourly [lbs/hr]	Shutdown Emissions Hourly [lbs/hr]
	NOX	13.49	Similar to startup
	CO	7.42	
	VOC (as THC)	0.36	
	PM10	3.0	
	SO ₂	1.53	

Commissioning Period Mass Emission Rate (each turbine)		Hourly [lbs/hr]	Daily [lbs/day]
	NOx	42.00	1,008.00
	CO	26.81	643.44
	VOC (as THC)	11.68	280.32
	PM10	3.00	72.00
	SO ₂	1.58	37.82

Operating Parameters	Operating Hours: (per turbine)	[hrs/day]	[hrs/qtr]	[hrs/yr]	
		24	N/A	5,950	
	Startup Data:	Number of startups per day: 10			
		Number of startups per year: 365			
		Startup duration: 16 minutes			
	Shutdown Data:	Number of shutdowns per day: 10			
		Number of shutdowns per year: 365			
		Shutdown duration: 16 minutes			

NEW EQUIPMENT INFORMATION (continued)

Facility Annual Emissions and Emissions to be Offset	Facility Annual Emissions [tons/yr]	Emissions That Need to be Offset				
		Q1 [lbs/qtr]	Q2 [lbs/qtr]	Q3 [lbs/qtr]	Q4 [lbs/qtr]	Annual [tons/yr]
NOx	44.08	No offsets required. Not applicable.				
CO	114.75					
VOC	49.99 (as THC)					
PM10	12.84					
SO ₂	6.74					

Offsets to be Provided (If Necessary)	Offset Ratio	Offsets Required				Source of Offsets
		Q1 [lbs/qtr]	Q2 [lbs/qtr]	Q3 [lbs/qtr]	Q4 [lbs/qtr]	
NOx	No offsets required. Not applicable.					[] State bank*
						[] District bank
						[] Other, specify: _____
CO						[] State bank
						[] District bank
	[] Other, specify: _____					
VOC	[] State bank					
	[] District bank					
	[] Other, specify: _____					
PM10	[] State bank					
	[] District bank					
	[] Other, specify: _____					
SO ₂	[] State bank					
	[] District bank					
	[] Other, specify: _____					

Monitoring and Reporting	What is the make/model of the continuous emissions monitoring system (CEMS), if known? Make: <u>not specified</u> Model: _____
	The following parameters will be continuously monitored: [X] NOx [X] CO [X] O ₂ [X] Fuel flow rate [] Ammonia injection rate [X] Other, please specify: <u>Per San Diego APCD Permit Conditions</u>
	Will the CEMS be used to measure both on-line and startup/shutdown emissions? [X] Yes [] No

*Note: The initial amount of NOx offsets that can be acquired from the State bank is 21 tons/yr x the applicable offset ratio for each 50 MW of new generating capacity.

ADDITIONAL INFORMATION

1. **Facility Location:** [] Urban (area of dense population) [**X**] Rural (area of sparse population)

Will the facility be located within 1,000 feet of a school? [] Yes [**X**] No

(Note: Per Section 42301.9 of the California Health and Safety Code, a "school" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.)

2. **Nearest Receptor:**

Distance to nearest residence _____ **3,025** _____ feet

Distance to nearest business _____ **865** _____ feet

Air Dispersion Modeling Input Data

3. **Stack Parameters:**

Height _____ **60** _____ feet Inside diameter _____ **144.0** _____ inches

Is a rain cap present on the exhaust stack? [] Yes [**X**] No

Direction of exhaust from structure or device: [**X**] Vertical [] Horizontal

Building Dimension Data for Downwash Calculations:

a) Building Height _____ **40 ft** _____

b) Minimum horizontal building dimension _____ **32 ft** _____

c) Maximum horizontal building dimension _____ **86 ft** _____

4. Was an ambient air quality impact analysis required for this project? [**X**] Yes [] No

If Yes, was an ambient air quality impact analysis conducted as required by District rules? [**X**] Yes [] No

If Yes, please attach the analysis and provide an electronic version on disk or CD.

5. Was a health risk assessment required for this project? [**X**] Yes [] No

If Yes, was a health risk assessment conducted as required by District rules? [**X**] Yes [] No

If Yes, please attach the analysis and provide an electronic version on disk or CD.

6. Please attach a site map for the project.

CERTIFICATION

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are, true, accurate, and complete.

John Jones, Vice President
Responsible Official (Please Print Name)

Signature of Responsible Official

Date

