ORANGE GROVE ENERGY, L.P.

1900 East Golf Road, Suite 1030, Schaumburg, IL 60173 (847) 908-2800



November 6, 2008

Ms. Camqui Nguyen Air Pollution Control Engineer 10124 Old Grove Road San Diego, CA 92131

Ref: Comments to the Orange Grove Project Preliminary Determination of Compliance (Application No. 985708; CEC Docket No. 08-AFC-4)

Dear Ms. Nguyen:

Please find attached comments from Orange Grove Energy, L.P. regarding the October 8, 2008 San Diego County Air Pollution Control District (SDAPCD) Preliminary Determination of Compliance for the Orange Grove Project. Please note that none of these comments affect the SDAPCD conclusion that the project will comply with all applicable District rules and regulations. Orange Grove Energy, L.P. concurs with this assessment.

If you have questions regarding the attached comments, please call Joe Stenger at (805) 528-6868, or me at the phone number in the letterhead.

Sincerely.

Stephen Thome Vice President of Development Orange Grove Energy, L.P.

Attachment

cc. Docket Unit, California Energy Commission Felicia Miller, California Energy Commission Will Walters, Aspen Environmental Group

Orange Grove Energy, L.P. Comments to the Preliminary Determination of Compliance Orange Grove Project

The San Diego County Air Pollution Control District (SDAPCD) issued a Preliminary Determination of Compliance (PDOC) for the Orange Grove Project (Application Number 985708) on October 8, 2008. Orange Grove Energy, L.P. (Orange Grove Energy) has the following comments to the PDOC:

1. Pg. 7, Table 1a: In this table and throughout the PDOC, SDAPCD used a steady state PM10 emission rate of 3 lbs/hr for the turbines, which is slightly higher than the 2.7 lbs/hr shown in Table 6.2C-12 in Appendix 6.2-C of the AFC. Orange Grove Energy concurs with the 3 lbs/hr PM10 emission rate used by SDAPCD. Some additional emissions identified in this table are higher than the expected project emissions as identified in Table 6.2C-12 in Appendix 6.2-C of the AFC. The table below provides the correct values for use in Table 1a based on AFC Table 6.2C-12, with SDAPCD's increased steady state PM10 emission rate for the turbines (3 lbs/hr) retained.

Table 1a - Turbine Emission Rates for Different Operating Modes						
	Startup	Warm Up	Shut Down			
	Lbs/event	Lbs/event	Lbs/event	Steady State		
Pollutant	(10 minutes) (30 minutes) (8 minutes) (Lbs/hour					
NOx	3	10.9	2.2	4.3		
СО	5.6	7.5	3.7	6.1		
VOC	1.1	1.1	0.6	1.3		
PM10	0.67 1.5 0.53 3					
SOx	0.14	0.41	0.11	1		

2. Pg. 8, Table 1c: Based on the corrected emissions rates shown for Table 1a in Comment 1 above, and the daily time durations given in PDOC Table 1c, some of the daily emissions values shown in PDOC Table 1c need to be corrected. The table below provides corrected values shown in bold font.

Table 1c-Single Turbine Maximum Daily Emissions							
Operating Mode Time Duration Daily Time Daily Emissions, lbs/day Per Event, Duration							
	Minutes/event	Hours/day	NOx	со	voc	PM10	SOx
Startup	10	0.5	9	16.8	3.3	2.01	0.42
Warm Up	30	1.5	32.7	22.5	3.3	4.5	1.23
Shut Down	8	0.4	6.6	11.1	1.8	1.59	0.33
Steady State	1296	21.6	92.9	131.8	28.1	64.8	21.6
otal 24 141.2 182.2 36.5 72.9 23.58							

3. Pg. 9, Table 1d: The annual emissions in this table do not include the requested 20 hours of tuning per turbine. Table 1d should be corrected to include the 20 hours of tuning per turbine as shown below (revised values shown in bold font).

Table 1d-Single Turbine Maximum								
	Annual Emissions							
	Time		Annual I	Emissions, t	ons/year			
	Duration,							
Operating Mode	Hours/year	NOx	со	voc	PM10	SOx		
Startup	41.7	0.4	0.7	0.1	0.1	0.02		
Warm Up	125.0	1.4	0.9	0.1	0.2	0.1		
Shut Down	33.3	0.3	0.5	0.08	0.07	0.014		
Steady State	2980.0	6.4	9.1	1.9	4.5	1.5		
Tuning	20.0	0.4 0.2 0.01 0.03 0.01						
Total	3200.0	8.8	11.4	2.3	4.8	1.6		

- 4. Pg. 11: On-site paved road emissions calculations assume that each water delivery truck travels 2 miles of paved road on-site for each water delivery. The actual total roadway distance onsite for each water delivery will be approximately 1,300 feet (1/4 mile) from entering the site to exiting the site, assuming each water truck drives the full loop-road surrounding the plant. The calculated emissions are small and likely not worth correcting, but it is worth noting that they represent a very conservative over-estimate.
- 5. Pg. 12, Table 3b: The turbine emissions in this table should be revised to carry forward the corrected emission rates from Table 1c (see Comment 2). The table below provides corrected values shown in bold font.

Table 3b - Project Daily Emissions							
	Emissions, Lbs/day						
Equipment	NOx CO VOC PM10 SOx						
Two Turbines	282.4	364.3	73.0	145.8	47.2		
Black Start Engine	3.2	4.3	0.7	0.07	0.02		
Emergency Fire Pump Engine	3.2	0.6	3.2	0.08	0.2		
Cooling Tower				4.7			
On-Site Fugitive Paved Road				3.6			
Total	288.8	369.2	76.9	154.3	47.4		

6. Pg. 13, Table 3c: The calculated project annual emissions in this table do not include turbine tuning (See Comment 3, above). The table below provides corrected values shown in bold font to reflect turbine tuning.

Table 3c-Project Annual Emissions							
		Emis	ssions, tons	/year			
Equipment	NOX CO VOC PM10 SOX						
Two Turbines	17.7	22.7	4.6	9.7	3.2		
Black Start Engine	0.08	0.1	0.02	0.002	0.0004		
Emergency Fire Pump Engine	0.08	0.02	0.08	0.002	0.004		
Cooling Tower				0.3			
On-Site Fugitive Paved Road	0.2						
Total	17.9	22.9	4.7	10.2	3.2		

7. Pg 15, Table 4c – Single Turbine Daily Commissioning Emissions: This table is mislabeled as Table 4d. In addition, the "Daily hours" column incorrectly uses the "Planned" (total) hours column from Table 6.2C-11 in Appendix 6.2-C of the AFC. Any of the commissioning modes in Table 4c could occur for up to 12 hours in a given day. The table below provides corrected hours and emissions to reflect this, with corrected values shown in bold font.

4c-Single Turbine Daily Commissioning Emissions							
		Emissions, lbs/day					
Commissioning Mode	Daily Hours	NOx	СО	voc	PM10	SOx	
First fire-Uncontrolled	12	362.4	64.8	4.8	36	12	
Synchronization-Uncontrolled	12	361.2	64.8	4.8	36	12	
Low load-water injection-No SCR	12	247.2	151.2	7.2	36	12	
Low load-water injection-SCR	12	25.2	52.8	7.2	36	12	
Full load-water injection-SCR	12	52.8	184.8	14.4	36	12	

8. Pg 15, Table 4d – Single Turbine Total Commissioning Emissions: The "Full load – water injection –SCR" calculation for PM10 should be corrected to 120 lb/yr (= 3 lb/hr X

40 hr) and the calculation for SOx should be corrected to 40 lb/yr (=1 lb/hr X 40 hr), based on the projected hours and the emission rates from PDOC Table 4b. The table below provides corrected emissions to reflect this, with corrected values shown in bold.

4d-Single Turbine Total Commissioning Emissions							
		Emissions, lbs/year					
	Projected						
Commissioning Mode	Hours	NOx	со	voc	PM10	SOx	
First fire-Uncontrolled	40	1208	216	16	120	40	
Synchronization-Uncontrolled	80	2408	432	32	240	80	
Low load-water injection-No SCR	20	412	252	12	60	20	
Low load-water injection-SCR	20	42	88	12	60	20	
Full load-water injection-SCR	40	176	616	48	120	40	
Total	200	4246	1604	120	600	200	

9. Pg. 16, Table 4e – Total Commissioning Emissions from Both Turbines: The table below provides corrected emissions to reflect the changes to Table 4d pursuant to Comment 8, above, with changes shown in bold font.

Table 4e - Total Commissioning Emissions from Both Turbines					
	Emissions, tons/year				
Pollutant	One Turbine	Both Turbines			
NOx	2.1	4.2			
СО	0.8	1.6			
voc	0.06	0.1			
PM10	0.3	0.6			
SOx	0.10	0.2			

10. Pg 16, Table 4f – Total Project Emissions During Year With Commissioning: The table below provides corrected emissions to reflect the changes to Table 4d pursuant to Comment 8, above, with changes shown in bold font.

Table 4f- Total Project Emissions During Year						
	With Com	missioning				
	Commisioning	Normal Operation	Total Annual			
	Emissions, Emissions, Emission					
Pollutants	ollutants tons/year tons/year tons/y					
NOx	4.2	16.2	20.5			
СО	1.6	21.4	23.0			
VOC	0.1	4.4	4.6			
PM10	PM10 0.6 9.6 10.2					
SOx	0.2	3.0	3.2			

- 11. Pg 33, Condition 7: EPA Region IX has no program authority for the Federal Acid Rain Program. Furthermore, both the Certificate of Representation and the Acid Rain Permit Application have been filed with the jurisdictional agencies. This condition should be modified to read "Pursuant to 40 CFR 72.30(b)(2)(ii) of the Federal Acid Rain Program, the applicant shall submit to the district and provide a copy to the U.S. Environmental Protection Agency Clean Air Markets Division in Washington, DC. EPA Region IX, an application for a Title IV Operating Permit at least 24 months prior to commencement of operation, unless otherwise directed in writing by EPA region IX.
- 12. Pg 35, Condition 18: To be consistent with Condition 54, the second sentence of this condition should be modified to read "Compliance with these limits shall be demonstrated on a continuous rolling 3-hour average periodeontinuously based on the CEMs data and at the time of the initial source test calculated as the average of three subtests."
- 13. Pg 36, Condition 21: Please change to read "The emissions from each turbine shall not exceed the following emission limits, except during the initial commissioning period startup, and shutdown and tuning conditions, as determined by the continuous emission monitoring system (CEMs), continuous monitor and /or District approved emission testing, calculated as the average of three subtests."
- 14. Pg 36, Condition 22: The "Limit, lbs/day" should be revised as shown below to be consistent with the corrected emission rates from Table 1c (See Comment 2, above).

Oxides of Nitrogen (NOx), calculated as NO2	141.2
Carbon Monoxide (CO)	182.2
Volatile Organic Compounds (VOC)	36.5

15. Pg 37, Condition 23: The "Limit, tons/yr" should be revised as shown below to allow for requested turbine tuning hours consistent with the corrected emission rates from Table 1d (See Comment 3, above).

Oxides of Nitrogen (NOx), calculated as NO2

8.8

Carbon Monoxide (CO)

11.4

Volatile Organic Compounds (VOC)

2.3

- 16. Pg 38, Conditions 26 and 27: Please change "...emissions from the turbine..." to "...emissions from each turbine..."
- 17. Pg 44, Condition 52: This Condition has a typo in the third line and should be corrected to read "...required certification tests shall be performed and completed...".
- 18. Pg 46, Condition 62: This second sentence of this Condition unnecessarily limits the commissioning period to 120 days after initial start-up with no benefit to air quality. This elapsed time limit does not allow for potential severe commissioning problems, and bears no relevance to either emissions or ambient concentrations. Accordingly, the phrase "120 days after initial startup or" should be deleted from the second sentence of this permit condition.
- 19. Pg 47, Condition 65: This second sentence of this Condition should be modified to read "Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and with the exception of periods during startup, shutdown and tuning and shutdown, shall be in full operation at all times when the turbine is in stable operation."
- 20. Pg 48, Condition 67: The purpose of this condition is to protect air quality by limiting commissioning operations such that uncontrolled emissions do not occur simultaneously from both turbines. This condition should be deleted and replaced with a condition that reads "Both turbines may not be fired simultaneously in turbine commissioning mode."
- 21. Pg 52, Condition 7A: This Condition contains a typo and should be corrected to read "...where the engine...".