

ORANGE GROVE ENERGY, L.P.

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

October 15, 2008

Ms. Felicia Miller
Project Manager
c/o Dockets Unit, 4th Floor
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET 08-AFC-4	
DATE	OCT 15 2008
RECD.	OCT 17 2008

Ref: Response to California Energy Commission Staff Data Request 12b for
for the Orange Grove Project (08-AFC-4)

Dear Ms. Miller:

Please find enclosed two electronic copies, one paper copy, and one original of the Orange Grove Energy L.P. cumulative air quality impact assessment for the Orange Grove Project. This assessment is submitted in response to the California Energy Commission staff's Data Request No. 12b. The enclosed copy is for your use. The enclosed original is for filing with the Docket office. An electronic copy of the response, along with a proof of service declaration, have been sent to each of the individuals on the attached proof of service list.

If you have questions regarding the enclosed materials, 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.

Enclosure:

Response to Data Request 12b for the Orange Grove Project

Attachment:

Proof of Service



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
ORANGE GROVE POWER
PLANT PROJECT**

**DOCKET NO. 08-AFC -4
PROOF OF SERVICE
Revised 8/25/08**

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

**CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-4
1516 Ninth Street, MS-15
Sacramento, CA 95814-5512
docket@energy.state.ca.us**

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DECLARATION OF SERVICE

I, Joshua D. Taylor, Declare that on October 16, 2008, I deposited copies of the attached Response to California Energy Commission (CEC) Data Request 12b for the Orange Grove Project (08-AFC-4), pursuant to CEC staff request, at the Federal Express Hub on Barranca Parkway in Irvine, California, with waybills fully prepaid and addressed to those individuals identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.


Joshua D. Taylor

Data Request

12. If the emissions are greater than 5 tons per year for any criteria pollutant, excepting CO, for either of these two projects then please provide:

- a. A cumulative modeling protocol for the completion of a cumulative modeling assessment.
- b. After approval of the cumulative modeling protocol please provide the cumulative modeling analysis including electronic files.

Response

The response to 12a, the modeling protocol, was provided with the Orange Grove Project (08-AFC-4) Responses to Data Requests 1-73 (August 29, 2008) and augmented with discussions at the workshop as documented in Orange Grove Energy AFC (08-AFC-4) Responses to Data Requests from the September 11, 2008 Workshop And Other Data Requests (October 1, 2008). This response implements the modeling protocol and responds to Data Request 12b. The purpose of the cumulative modeling is to demonstrate that emissions from Orange Grove Energy (OGE) and its contribution to other regional sources will not cause any modeled violations of ambient air quality standards in the area.

The cumulative modeling includes existing and proposed industrial sources within six miles of the OGE Project site; these sources consist of the Rosemary's Mountain Quarry (RMQ) and the Gregory Canyon Landfill (GCL). RMQ is a fully permitted quarry which is under construction. Emissions data for RMQ are available in the Air Quality Portion of Final Environmental Impact Report (November 30, 2000) as provided by the San Diego Air Pollution Control District (SDAPCD). GCL is a proposed project that is currently undergoing air permit application review. SDAPCD provided "Appendix D, Control of Fugitive Dust" from the Gregory Canyon Landfill Air Quality Permit Application (February 2008) which includes preliminary development plans and air emissions. Both of the aforementioned documents have been provided to the CEC staff in response to Data Requests 10 and 11.

SDAPCD indicated that the emission estimates for GCL contained in Appendix D are preliminary and undergoing revision: this was confirmed in discussions with GCL's air quality consultants. SDAPCD requiring GCL emissions to comply with ambient air quality standards is a premise of the cumulative impact modeling, and since the PM₁₀ non-point source emissions as presented in Appendix D are preliminary, adjustments were made to reflect the expected GCL compliance.

The results of the cumulative modeling are presented in Table 12-1. Model predicted concentrations are presented for nitrogen dioxide (NO₂), particulate matter less than ten microns in diameter (PM₁₀) and sulfur dioxide (SO₂). The first results column shows the highest

predicted concentrations for OGE, together with the contributions from RMQ and GCL to the same receptors and predicted events as well as the total predicted concentrations from all three sources for the highest predicted receptors and events for each regulatory averaging period. Also shown are the monitored background concentrations, the sums of the predicted and background concentrations, the most stringent ambient air quality standards applicable and the modeling significant impact levels (SILs). The final two columns show similar results for the highest predicted impacts from RMQ and GCL, respectively.

Table 12-1 shows that, where SILs exist, the highest predicted impacts from OGE are below the SILs. Further, OGE's contributions to the highest impacts attributable to RMQ and GCL are very small (fractions of a microgram per cubic meter, $\mu\text{g}/\text{m}^3$). Therefore, OGE is not shown to cause or significantly contribute to any modeled violations of ambient air quality standards.

Table 12-1 shows modeled compliance for all pollutants except PM_{10} . San Diego County does not meet the California Ambient Air Quality Standards for PM_{10} ($50 \mu\text{g}/\text{m}^3$ for 24 hours and $20 \mu\text{g}/\text{m}^3$ annual), but does meet the National Ambient Air Quality Standard for PM_{10} ($150 \mu\text{g}/\text{m}^3$ for 24-hours) as indicated by the monitored background concentrations shown in Table 12-1. The maximum cumulative predicted PM_{10} 24 hour concentration is $5.0 \mu\text{g}/\text{m}^3$. Table 12-2 shows an analysis of predicted source impacts on monitoring days with observed concentrations between 45 and $50 \mu\text{g}/\text{m}^3$. The table shows the dates of the high observed concentrations, the concentrations observed on each date, the highest modeled concentrations for each source on these dates (all below the Significant Impact Levels), the highest cumulative modeled concentrations, and the total predicted plus observed concentrations. Note that all total concentrations are below the air quality standard and thus these sources do not cause any additional exceedances. Table 12-1 also shows exceedances of the annual PM_{10} standard, but again the highest source contributions are below the SILs. SDAQMD is participating in the Carl Moyer Program and other pollution reduction programs to cut regional anthropogenic sources of particulate matter and work toward attaining all air quality standards.

In summary, this analysis has demonstrated that the Orange Grove Energy Project, either alone or through its contribution to cumulative impacts, is not expected to cause exceedances of the ambient air quality standards.

**Table 12-1
Cumulative Modeling Source Contribution
to Highest Predicted Concentrations**

		OGE Highest	RMQ Highest	GCL Highest
NO2 1-hour H1H Concentration (µg/m³)	Orange Grove	49.975	0.279	0.004
	Gregory Canyon	0.000	0.373	160.658
	Rosemary Mt.	0.000	86.989	0.000
	Total Predicted	49.975	78.074	160.104
	Background	143.100	143.100	143.100
	Pred+Background	193.075	221.174	303.204
	Standard	339.000	339.000	339.000
	Signif. Impact Level	None	None	None

		OGE Highest	RMQ Highest	GCL Highest
NO2 Annual Concentration (µg/m³)	Orange Grove	0.143	0.004	0.001
	Gregory Canyon	0.023	0.026	0.167
	Rosemary Mt.	0.026	0.361	0.018
	Total Predicted	0.192	0.391	0.186
	Background	33.900	33.900	33.900
	Pred+Background	34.092	34.291	34.086
	Standard	57.000	57.000	57.000
	Signif. Impact Level	1.000	1.000	1.000

		OGE Highest	RMQ Highest	GCL Highest
PM10 24-HR H1H Concentration (µg/m³)	Orange Grove	1.12914	0.00138	0.00420
	Gregory Canyon	0.00570	0.18968	4.62053
	Rosemary Mt.	0.02328	4.85019	0.13656
	Total Predicted	1.15812	5.04125	4.76128
	Background	68	68	68
	Pred+Background	69.158	73.041	72.761
	Standard	50.000	50.000	50.000
	Signif. Impact Level	5.000	5.000	5.000

		OGE Highest	RMQ Highest	GCL Highest
PM10 Annual Concentration (µg/m³)	Orange Grove	0.07249	0.00195	0.00071
	Gregory Canyon	0.01973	0.08027	0.33525
	Rosemary Mt.	0.01697	0.23239	0.01548
	Total Predicted	0.10920	0.31457	0.35141
	Background	26.9	26.9	26.9
	Pred+Background	27.009	27.215	27.251
	Standard	20.000	20.000	20.000

		OGE Highest	RMQ Highest	GCL Highest
SO2 1-hour H1H Concentration (µg/m ³)	Orange Grove	3.69762	0.00039	0.00023
	Gregory Canyon	0	0.32568	164.60887
	Rosemary Mt.	0	33.30411	0
	Total Predicted	3.69762	33.63018	164.6091
	Background	105	105	105
	Pred+Background	108.698	138.630	269.609
	Standard	655.000	655.000	655.000
	Signif. Impact Level	None	None	None

		OGE Highest 2nd-High	RMQ Highest 2nd-High	GCL Highest 2nd-High
SO2 3-hour H2H Concentration (µg/m ³)	Orange Grove	1.90716	0.00015	0.00597
	Gregory Canyon	0	1.98071	36.73581
	Rosemary Mt.	0	8.85462	0.05765
	Total Predicted	1.90716	10.83547	36.79943
	Background	78	78	78
	Pred+Background	79.907	88.835	114.799
	Standard	1300.000	1300.000	1300.000
	Signif. Impact Level*	25.000	25.000	25.000

* National Signif. Impact Level applies to H1H impact.

		OGE Highest	RMQ Highest	GCL Highest
SO2 24-hour H1H Concentration (µg/m ³)	Orange Grove	0.40080	0.00023	0.00241
	Gregory Canyon	0.00340	0.02254	0.19794
	Rosemary Mt.	0.02937	1.46902	0.0014
	Total Predicted	0.43357	1.49178	0.20137
	Background	23.6	23.6	23.6
	Pred+Background	24.034	25.092	23.801
	Standard	105.000	105.000	105.000
	Signif. Impact Level	5.000	5.000	5.000

		OGE Highest	RMQ Highest	GCL Highest
SO2 Annual Concentration (µg/m ³)	Orange Grove	0.02538	0.00056	0.00018
	Gregory Canyon	0.00415	0.00474	0.03006
	Rosemary Mt.	0.00944	0.10691	0.0088
	Total Predicted	0.03897	0.11220	0.03904
	Background	10.5	10.5	10.5
	Pred+Background	10.539	10.612	10.539
	Standard	80.000	80.000	80.000
	Signif. Impact Level	1.000	1.000	1.000

**Table 12-2 Modeled Impacts During
High Monitored Background Concentration Events**

Monitoring Date	Monitored PM10 Concentration ($\mu\text{g}/\text{m}^3$)	Highest Daily Modeled PM10 Concentration ($\mu\text{g}/\text{m}^3$) (Not Paired in Space)				Total PM10 Concentration ($\mu\text{g}/\text{m}^3$)
		OGE	RMQ	GCL	Cumulative	Cumulative
5/21/2003	47	0.269	0.318	0.507	0.589	47.589
6/26/2003	49	0.508	0.103	0.616	0.629	49.629
10/24/2003	47	0.073	0.016	0.293	0.302	47.302
11/29/2003	46	0.548	0.320	1.209	1.228	47.228