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March 20, 2012

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VIA EMAIL

Mr. Eric Solorio, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

DOCKET	
11-AFC-1	
DATE	<u>MAR 20 2012</u>
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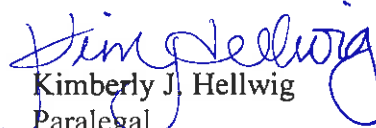
**Re: Pio Pico Energy Center Project (11-AFC-01)
PSD Permit Application, Supplemental Information (Visibility Analysis)**

Dear Mr. Solorio:

On March 19, 2012, Applicant Pio Pico Energy Center LLC provided supplemental information to the United States Environmental Protection Agency, Region 9, as such relates to the visibility analysis conducted for the Pio Pico Energy Center Project ("PPEC"). To that end, Applicant submits such information herein for docketing in the PPEC Application for Certification proceeding.

If you have any questions concerning this filing, please do not hesitate to contact our office.

Respectfully submitted,


Kimberly J. Hellwig
Paralegal

KJH:jmw
Enclosures
cc: Proof of Service List

From: Steve Hill

Sent: Monday, March 19, 2012 12:10 PM

To: Gerardo Rios (rios.gerardo@epa.gov); Kohn.Roger@epamail.epa.gov; Holladay.Cleveland@epamail.epa.gov; 'lapka.joseph@epa.gov'

Cc: 'Dave Jenkins'; 'grchandler@apexpowergroup.com'; 'Craig Kebodeaux'; McKinsey, John A.; Gary Rubenstein; Moore, Steve

Subject: RE: Pio Pico PSD Application Visibility Analysis

As requested by EPA, PPEC is providing the attached letter, which provides additional information requested by EPA . This letter is provided as an addition to the record supporting PPEC's PSD permit application.

Please let me know if you have any questions.

Steve Hill

March 19, 2012



**sierra
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Mr. Gerardo Rios
Chief, Permits Office
U.S. EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

Subject: Pio Pico Energy Center PSD Permit Application
Response to EPA Supplemental Information Request

Dear Mr. Rios:

As requested by EPA on March 8, 2012¹, we are submitting this additional information on behalf of Applicant.

Applicant submitted the PSD permit application on April 1, 2011. The original PSD permit application included a visibility screening analysis.

Following guidance from Federal Land Managers (FLMs)² on assessing visibility impacts, the PSD application included the determination that the project would have no significant adverse impact on Class I areas.³

In the PSD permit application, Applicant also prepared a visibility analysis for the two Class II areas within 50 km of the project. This analysis was prepared following EPA procedures for evaluating the potential for visibility impairment on Class I areas.⁴ This procedure involves a series of screening analyses of increasing complexity. Based on EPA guidance⁵, if the results of the Level 1 screening analysis are below the screening threshold, no further analysis is required.

The Class I threshold is the level at which the FLM is likely not to object to the issuance of the PSD permit based on near field visibility impacts to a Class I area⁶. EPA has not yet established quantitative visibility thresholds for Class II areas. Consequently, in the PSD permit application, Applicant proposed to use a Class II threshold that was

¹ Email from Cleveland Holladay to Steve Hill, March 8, 2012.

² U.S. Forest Service et al., "Federal Land Managers' Air Quality Related Values Work Group (FLAG), Phase I Report—Revised (2010)," October 2010, p. 18

³ Resubmitted PSD Application, p. PSD-4.57

⁴ U.S. EPA, *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-454/R-92-023, October 1992

⁵ U.S. EPA, *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-454/R-92-023, October 1992, p. 1

⁶ U.S. EPA, *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-454/R-92-023, October 1992, p. 1

extrapolated from the Class I thresholds using the ratio of Class II PM₁₀ increment to Class I PM₁₀ increment. A threshold less-stringent than the Class I area threshold for triggering the much more complex Level 2 analysis was proposed for the Class II area analysis because (a) there is a distinction between the degrees of protection applicable to Class I and Class II areas; (b) Class I areas can be protected through AQRV analysis, whereas protection of Class II areas can be achieved using BACT requirements; and (c) the results of the Class II visibility analysis are for informational, not regulatory, purposes.

As shown in the PSD application, the results of the Level 1 screening analysis exceeded the Class I threshold, but were below the proposed Class II threshold. On March 8, 2012, more than 11 months after the original analysis was submitted to EPA, Region 9 staff has requested a Level 2 screening analysis for Class II areas, despite the fact that EPA has not yet established significance thresholds for such an analysis.

The results of the requested Level 2 screening analysis are presented for Cleveland National Forest and Cabrillo National Monument in Tables 1 and 2 below, respectively. Tables 1 and 2 show that the maximum visual impacts inside these two Class II areas are below the Class I significance criteria. Visual impacts outside the Class II areas are “integral vistas” that are not protected.⁷ Consequently, per EPA guidance,⁸ the VISCREEN results for plume parcels outside the Class II area are ignored. Because the visual impacts inside the Class II areas are below the significance criteria, this completes the visibility analysis.⁹

⁷ National Park Service, *Visibility Protection* <http://www.nature.nps.gov/air/regs/visibility.cfm> (accessed 3/14/2012)

⁸ U.S. EPA, *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-454/R-92-023, October 1992, p. 27

⁹ U.S. EPA, *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-454/R-92-023, October 1992, p. 1

TABLE 1
PPEC IMPACTS ON VISIBILITY IN CLEVELAND NATIONAL FOREST
(LEVEL 2 SCREENING ANALYSIS)

Background Ozone: 0.04 ppm					Emission Density Diameter			
Background Visual Range: 95 km ^b					Particulate:	2.08 g/s	2.5	1
Source-Observer Distance: 23 km					NOx:	4.54 g/s		
Min. Source-Class II Distance: 23 km					Primary NO2	0.00 g/s		
Max. Source-Class II Distance: 50 km					Soot	0.00 g/s	2.0	1
Plume-source-observer angle: 11.25 degrees					Sulfate	0.00 g/s	1.5	4
Stability: 6								
Wind Speed: 2.00 m/s								
Maximum Visual Impacts INSIDE Class II Area ^a								
					Delta E		Contrast	
Background	Theta	Azi	Dist	Alpha	Class I Criterion	Plume	Class I Criterion	Plume
Sky	10	145	32.8	24	2.0	0.642	0.05	-0.005
Sky	140	145	32.8	24	2.0	0.458	0.05	-0.003
Terrain	10	159	50	9	2.0	0.703	0.05	0.008
Terrain	140	159	50	9	2.0	0.314	0.05	0.009
Maximum Visual Impacts OUTSIDE Class II Area ^{a,c}								
					Delta E		Contrast	
Background	Theta	Azi	Dist	Alpha	Class I Criterion	Plume	Class I Criterion	Plume
Sky	10	1	1	168	N/A	1.581	N/A	-0.025
Sky	140	1	1	168	N/A	1.346	N/A	-0.011
Terrain	10	1	1	168	N/A	3.247	N/A	0.038
Terrain	140	1	1	168	N/A	1.449	N/A	0.043

^a Impacts based on 4 startups and 4 shutdowns of each turbine in a single day, remainder of day at peak operation.

^b National Park Service, Visibility Monitoring Data, <http://www.nature.nps.gov/air/monitoring/vismon.cfm#data> (accessed 3/17/2011)

^c VISCREEN results for plume parcels outside the Class II area are ignored.

**TABLE 2
PPEC IMPACTS ON VISIBILITY IN CABRILLO NATIONAL MONUMENT
(LEVEL 2 SCREENING ANALYSIS)**

Background Ozone: 0.04 ppm					Emission Density Diameter			
Background Visual Range: 95 km ^b					Particulate:	2.08 g/s	2.5	1
Source-Observer Distance: 32 km					NOx:	4.54 g/s		
Min. Source-Class II Distance: 32 km					Primary NO2	0.00 g/s		
Max. Source-Class II Distance: 33 km					Soot	0.00 g/s	2.0	1
Plume-source-observer angle: 11.25 degrees					Sulfate	0.00 g/s	1.5	4
Stability: 6								
Wind Speed: 2.00 m/s								
Maximum Visual Impacts INSIDE Class II Area ^a								
Background	Theta	Azi	Dist	Alpha	Delta E		Contrast	
					Class I Criterion	Plume	Class I Criterion	Plume
Sky	10	93	33	75	2.0	0.379	0.05	-0.003
Sky	140	93	33	75	2.0	0.264	0.05	-0.002
Terrain	10	84	32	84	2.0	0.303	0.05	0.002
Terrain	140	84	32	84	2.0	0.117	0.05	0.003
Maximum Visual Impacts OUTSIDE Class II Area ^{a,c}								
Background	Theta	Azi	Dist	Alpha	Delta E		Contrast	
					Class I Criterion	Plume	Class I Criterion	Plume
Sky	10	0	1	168	N/A	1.027	N/A	-0.018
Sky	140	0	1	168	N/A	0.729	N/A	-0.008
Terrain	10	0	1	168	N/A	2.030	N/A	0.028
Terrain	140	0	1	168	N/A	0.884	N/A	0.031

^a Impacts based on 4 startups and 4 shutdowns of each turbine in a single day, remainder of day at peak operation.

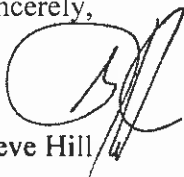
^b National Park Service, Visibility Monitoring Data, <http://www.nature.nps.gov/air/monitoring/vismon.cfm#data> (accessed 3/17/2011)

^c VISCREEN results for plume parcels outside the Class II area are ignored.

As requested by EPA, the above analysis is submitted only for informational purposes.

Please do not hesitate to call me if you have any questions.

Sincerely,



Steve Hill

cc: John McKinsey, Stoel Rives LLP
David Jenkins, Apex Power Group
Steve Moore, SDAPCD

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APPLICATION FOR CERTIFICATION
FOR THE *PIO PICO ENERGY CENTER, LLC*

Docket No. 11-AFC-1
PROOF OF SERVICE
(Revised 3/19/12)

Pio Pico Energy Center, LLC

**Letter to Eric Solorio, California Energy Commission, dated March 20, 2012
Re PSD Permit Application, Supplemental Information (Visibility Analysis)**

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DECLARATION OF SERVICE

I, Judith M. Warmuth, declare that on March 20, 2012:

I deposited copies of the aforementioned document and, if applicable, a disc containing the aforementioned document in the United States mail at 500 Capitol Mall, Suite 1600, Sacramento, California 95814, with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list herein and consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210.

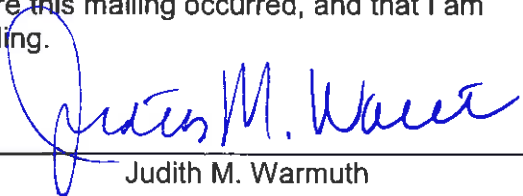
AND/OR

I transmitted the document(s) herein via electronic mail only pursuant to California Energy Commission Standing Order re Proceedings and Confidentiality Applications dated November 30, 2011. All electronic copies were sent to all those identified on the Proof of Service list herein and identified as those who prefer email only, consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210.

OR

On the date written above, I placed a copy of the attached document(s) in a sealed envelope, with delivery fees paid or provided for, and arranged for it/them to be delivered by messenger that same day to the office of the addressee, as identified on the Proof of Service list herein and consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



Judith M. Warmuth