



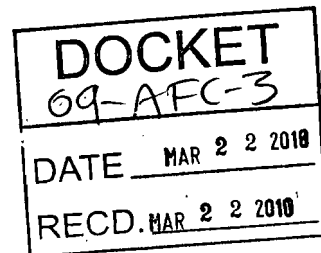
CH2MHILL

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Sacramento, CA 95833
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March 22, 2010

382914

Mr. Craig Hoffman
Project Manager
California Energy Commission
1516 Ninth Street, MS 15
Sacramento, CA 95814-5512



Subject: Mariposa Energy Project (09-AFC-03)
Additional Modeling Files Submitted to the Bay Area Air Quality Management
District for Comparison to the New Federal 1-Hour NO₂ Standard

Dear Mr. Hoffman:

Attached please find one hard copy of the correspondence submitted to the BAAQMD regarding the additional dispersion modeling conducted for the Mariposa Energy Project. Five electronic copies of the dispersion modeling files are also included on CD-ROM.

If you have any questions about this matter, please contact me at (916) 286-0348.

Sincerely,

CH2M HILL

Doug Urry
AFC Project Manager

Attachment

cc: B. Buchynsky, Mariposa Energy, LLC.



Mariposa Energy, LLC

333 S. Grand Ave., Suite 1570, Los Angeles, CA 90071

Tel: (213) 473-0080 Fax: (213) 620-1170

March 16, 2010

Madhav Patil
Permitting Engineer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Subject: Mariposa Energy Project (09-AFC-03) Additional Dispersion Modeling Files for Comparison to the New Federal 1-Hour NO₂ Standard

Dear Mr. Patil:

Per your request, Mariposa Energy LLC has prepared the attached dispersion modeling files for the Mariposa Energy Project (MEP). The additional dispersion modeling was conducted to show compliance with the new federal 1-hour NO₂ ambient air quality standard, which becomes effective April 12, 2010. According to the Federal Register, the new 1-hour 100 ppb (188 µg/m³) NO₂ standard is based on the 3-year average of the 98th percentile of the annual distribution of daily maximum 1-hour concentrations.

Modeling Approach

The AERMOD dispersion model (Version 09292) was used to predict the 1-hour ground-level concentrations of NO₂ associated with operation of MEP. The AERMOD settings, meteorological data, and source definition for the risk assessment were similar to the air quality impact analysis methodology outlined in the AFC. The 1-hour NO₂ modeling was further refined by using the AERMOD ozone limiting method group function.

The 1-hour NO₂ turbine emission rates were adjusted to match the maximum 1-hour turbine emission rate identified in the MEP permit revision submittal to the Bay Area Air Quality Management District (BAAQMD) on January 27, 2010. As described in the January 27, 2010, submittal, the maximum 1-hour NO_x emission rate conservatively assumes each turbine will complete one startup and one shutdown within the same hour with the balance of the hour at full load, steady-state operation with the air inlet chillers operating.

The 1-hr NO₂ dispersion modeling analysis incorporated the modeling guidance presented in the EPA's "Notice Regarding Modeling for New Hourly NO₂ NAAQS" (Version 02/25/2010). Per the EPA guidance, the Air Quality Modeling Group will be developing an AERMOD post-processor to determine the 8th-highest daily 1-hour maximum concentration from the distribution of 365 or 366 daily 1-hour maximum concentrations at each receptor over 3 years. However, because no such regulatory tool is available at this time, Mariposa Energy LLC combined the 3-year average of the 8th highest 1-hour modeled NO₂ concentration with the 98th percentile background data compiled for the Tracy Airport monitoring station and compared the resulting concentration to the new 1-hour NO₂ standard.

Mariposa Energy, LLC

Madhav Patil
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Results

The results of the 1-hour NO₂ dispersion modeling analysis are presented in Table 1. The total predicted concentration represents the maximum 3-year average of the 8th highest modeled concentrations for each turbine operating scenario combined with the 3-year average 98th percentile background concentration compiled for the Tracy Airport monitoring station. The results are presented for all sources (i.e., the four turbines in startup mode and fire pump) and for the turbines only. Based on the results of the modeling analysis, the predicted impacts are below the new federal 1-hour NO₂ standard. A copy of the dispersion modeling files is attached on CD-ROM.

TABLE 1
MEP Operation Impacts Analysis—Maximum Modeled Impacts Compared to the New Federal 1-Hour NO₂ Ambient Air Quality Standard

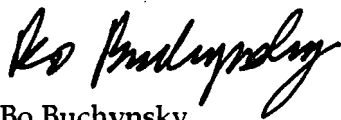
Source Group	3-Year Average 8 th High 1-Hour Modeled Impact (µg/m ³)	98 th Percentile 1-Hour NO ₂ Background Concentration (µg/m ³)*	Total Predicted 1-Hour NO ₂ Concentration (µg/m ³)	98 th Percentile 1-Hour Federal NO ₂ Standard (µg/m ³)
All Sources	108.7	77.99	186.7	188
Turbines Only	69.4	77.99	147.4	188

*Reference: San Joaquin Valley Air Pollution Control District. 2010. "Draft Modeling Procedure to Address the New Federal 1-hour NO₂ Standard". March 10.

If you have any questions regarding this information, please contact me at (213) 473-0092, Jerry Salamy (CH2M HILL) at (916) 286-0270 or Keith McGregor (CH2M HILL) at (916) 286-0221.

Sincerely,

Mariposa Energy LLC



Bo Buchynsky
Executive Director

Attachment



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
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APPLICATION FOR CERTIFICATION
FOR THE **MARIPOSA ENERGY PROJECT**
(MEP)

Docket No. 09-AFC-3

PROOF OF SERVICE
(Revised 2/8/2010)

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DECLARATION OF SERVICE

I, Mary Finn, declare that on March 22, 2010, I served and filed copies of the attached Additional Dispersion Modeling Files for Comparison to the New Federal 1-Hour NO2 Standard. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[<http://www.energy.ca.gov/sitingcases/mariposa/index.html>]**.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

sent electronically to all email addresses on the Proof of Service list;

by personal delivery or by depositing in the United States mail at Sacramento, California, with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

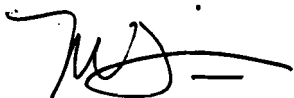
Attn: Docket No. 09-AFC-3

1516 Ninth Street, MS-4

Sacramento, CA 95814-5512

docket@energy.state.ca.us

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



Mary Finn