



Mariposa Energy, LLC

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DOCKET

09-AFC-3

DATE SEP 27 2010

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September 27, 2010

Ms. Brenda Cabral
Supervising Air Quality Engineer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco CA 94109

Subject: Mariposa Energy LLC's Comments on the Mariposa Energy Project Preliminary Determination of Compliance - Application 20737

Ms. Brenda Cabral:

Mariposa Energy LLC (Mariposa Energy) appreciates the Bay Area Air Quality Management District's (District) efforts to prepare the Preliminary Determination of Compliance (PDOC) for the Mariposa Energy Project (MEP) and appreciates the opportunity to provide these clarifying comments. Our comments focus primarily on the permit conditions presented in Section 9 of the PDOC. Additionally we have provided general comments to assist the District in preparing the Final Determination of Compliance. Any proposed changes have been provided in an underline/strike-through format for your convenience.

General Comments

Section 1, Page 1, 3rd Paragraph, 2nd Sentence - Please correct the statement regarding the facility's electrical production "..., providing a power output from a low of 25 MW to a high of a nominal 200 MW (194 MW net at 59 F)." These values are referenced on Page 2-2 in Volume 1 of the AFC. These corrections should also be made in Sections 3.2 of the PDOC.

Section 1, Page 1, 3rd Paragraph, 5th Sentence - The turbines have a net rated generation rate of 48.5 MW and a nominal rated generation rate of 50 MW. Please correct the references to turbine production in Sections 3.6, 9 and 10 of the PDOC to reflect the nominal generation rate of 50 MW.

Section 1, Page 1, 4th Paragraph, 3rd and 4th Sentences - Please make the following edits to the statement regarding ownership: "The Mariposa Energy Project will be constructed, owned, and operated by Mariposa Energy LLC, which is owned by Diamond Generating Corporation, a wholly owned subsidiary of Mitsubishi Corporation." These corrections should also be made in Section 3.2 of the PDOC.

Section 3.1, Page 3, 1st Paragraph, 4th Sentence - The MEP will be dispatched by Pacific Gas and Electric Company, not the California Independent System Operator. Suggest the following text "The Pacific Gas and Electric Company (PG&E), through dispatch orders from the California Independent System Operator (CAISO), would be responsible for dispatching the plant to meet electrical demand."



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Section 3.1, Page 4, 1st Paragraph, 2nd Sentence – The MEP natural gas pipeline should be corrected to 580 feet in length.

Section 3.2, Page 4, 4th Paragraph, 4th Sentence – This sentence states that the hydrocarbon emissions rates are higher for the DLE models over all temperature considered, please remove the phrase “hydrocarbon and” from this sentence as it is not consistent with data presented in Table 1. This change should also be reflected in the text on last paragraph of page 33 of the PDOC.

Section 3.4, Page 11, 6th Paragraph, 4th Sentence – Suggest the following clarification edit “Since each turbine will be limited to 4,000 hours of steady-state operation per year, this plant is not considered a base-loaded plant under the definitions of California Code of Regulations, Title 20, sections 2900, et seq.”

Section 4.3.3, Page 17, 1st Paragraph, 2nd Sentence – Mariposa Energy will not be conducting more than one phase of commissioning for each of the turbines. Therefore, Mariposa Energy suggests the following change to the text “Because Mariposa Energy will only conduct one phase of commissioning per turbine per day, the following commissioning emission estimates for each turbine are based on the maximum daily emissions from 4 hours of gas turbine testing at 10% load, 8 hours of Pre-Catalyst Initial tuning at 100% load or 8 hours of Post-Catalyst tuning at 100% load.”

Section 4.1.3, Page 17, Table 5 – Based on the previous comment, Mariposa Energy suggests the following revisions to the values in Table 5. These revisions should also be incorporated in Tables 32.

TABLE 5. COMMISSIONING PERIOD EMISSION LIMITS FOR ONE GAS TURBINE		
Air Pollutant	Proposed Commissioning Period Emissions Limits for One Gas Turbine	
	lb/hr	lb/day
NO2	51	408
CO	45	360
POC		36
PM10		20
SO2		10.8

Section 4.1.3, Page 17, Table 6 – The emission rates (lb/hr) for SOx should be revised to reflect 1.0 grain of sulfur per 100 dry standard cubic feet of natural gas to be consistent with the assumptions used for the steady state operations. This revision should also be incorporated in Tables 7, 33, 34, and Appendix A.

Section 4.1.4, Page 21, Tables 8 and 9 – These tables present the California Air Resources Board (ARB) certified engine emission rates for the fire pump engine but do not reflect the engine manufacturer’s lower emission rates (Document 2 of the May 26, 2010 email materials on your



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website). Furthermore, the project will be mandated to use ARB compliant ultra low sulfur diesel fuel (i.e., 15 ppm sulfur). Therefore, Mariposa Energy proposes the use of the engine manufacturer's emission factors for 15 ppm sulfur diesel fuel.

Section 5.5, Page 50, 1st Paragraph, 2nd Sentence – The reference to a PM₁₀ emission rate on a lb/MMBtu basis appears inappropriate as the District concludes on page 55 that “Since the combustion process by itself creates a very small amount of PM₁₀ emissions, ...”. Mariposa Energy requests all references to the PM₁₀ emission rate of 0.0052 lb/MMBtu be removed from this page and pages 52, 53, 55, and Appendix A.

Section 6.5, Page 68, 2nd Paragraph, 1st Sentence - Diamond Generating Corporation is in possession of the valid emission reduction credits to offset the emission increases from the permitted sources for the Mariposa Energy Project. Please update the text and Tables 35 and 36, accordingly.

Appendix B – Although Mariposa Energy believes that the analysis conducted by the District accurately characterizes the potential health risk associated with the MEP, the health risk screening analysis indicates that actual meteorological data was not available. For clarification, the meteorological data used to prepare the air dispersion modeling results in the Application for Certification (AFC) were submitted with a copy of the MEP permit application to the District on June 16, 2009.

Comments on Permit Conditions (Section 9)

Page 84, Definition of Commissioning Activity – This definition includes references to heat recovery steam generators and a steam turbine. Please remove these references as MEP does not include this equipment.

Page 86, Condition 9 – The first sentence of the condition indicates the emission limits are for each turbine but the emission limits presented below the text represent the facility limits. Please revise the commissioning emission rates in this condition to reflect the limits for each turbine in Table 5 (see general comment above).

Page 87, Condition 10 – The first sentence of this condition refers to a “startup” when discussing the timing requirements for source testing after the initiation of the commissioning period. Mariposa Energy requests the replacement of “Within 90 days after startup,...” with “Within 90 days of initiation of the Commissioning Period,...” as the term Commissioning Period is defined in the permit. This suggested change should also be made in Conditions 25, 26, 28, and 30.

Page 87, Condition 15a – This condition specifies an annual operational limit of 4,000 hours for each turbine. The discussion on page 74 states “A permit condition limiting operation of any single turbine for more than 5,200 hours/any consecutive 12 months has been added to part 15b of Condition. Although 15b appears to have been omitted from the PDOC, Mariposa Energy requests the following changes to Condition 15a to incorporate the language on page 74:



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15a. The owner operator shall not operate any turbine S-1, S-2, S-3, or S-4 such that the hours of operation for any of the four units exceeds 4,225,200 hours per year or a combined 16,000 for all four units (excluding operations necessary for maintenance, tuning, testing, startup and shutdown). (Basis: Offsets, Cumulative Increase)

Page 88, Condition 17(g) – Mariposa Energy suggests revising the sulfur dioxide emission rate from 1.347 pounds per hour to 1.35 pounds per hour consistent with Table 2 of the PDOC.

Page 88, Condition 18 – The maximum hourly carbon monoxide (CO) and precursor organic compound (POC) emission rates and the shutdown CO and POC emission rates do not reflect the lower operational BACT emission levels of 2 parts per million by volume at 15 percent oxygen (ppmvdc) CO and 1 ppmvdc POC required in the PDOC. Mariposa Energy proposes the revised Table 40 below. These changes should also be reflected in Appendix A, Tables 3, 4, 12, 14, 28, 29, 30, 31, and the discussion of 40 CFR 64, Compliance Assurance Monitoring (CAM) starting on page 76.

TABLE 40. STARTUP AND SHUTDOWN			
Pollutant	Maximum Emissions Per Startup (lb/startup)	Maximum Emissions During Hour with Startup and/or Shutdown(lb/hr)	Maximum Emissions Per Shutdown (lb/shutdown)
NOx (as NO2)	14.2	18.5	3.2
CO	14.1	<u>17.3</u> 18.1	<u>2.7</u> 2.9
POC (as CH4)	1.1	<u>1.4</u> 1.7	<u>0.1</u> 0.2

Page 90, Condition 19 – Mariposa Energy proposes the following revisions to the daily emission rates in Condition 19 to maintain consistency with the comments on Condition 18 above. These changes should also be reflected in Appendix A and Table 12.

19. The owner/operator shall not allow total combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, and shutdowns to exceed the following limits during any calendar day:
 - (a) 1098~~1129.7~~ pounds of NO_x (as NO₂) per day (Basis: Cumulative Increase)
 - (b) 934~~1171.5~~ pounds of CO per day (Basis: Cumulative Increase)
 - (c) 95.1~~120.82~~ pounds of POC (as CH₄) per day (Basis: Cumulative Increase)
 - (d) 240~~241.44~~ pounds of PM₁₀ per day (Basis: Cumulative Increase)
 - (e) 130~~178.26~~ pounds of SO₂ per day (Basis: Cumulative Increase)

Page 90, Condition 20 – Mariposa Energy proposes the following revisions to the annual emission rates in Condition 20 to maintain consistency with the comments on Condition 18 above. These changes should also be reflected in Appendix A and Table 14.

20. The owner/operator shall not allow cumulative combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-



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ups, shutdowns, and malfunctions to exceed the following limits during any consecutive twelve-month period:

- (a) 45.6 tons of NO_x (as NO₂) per year (Basis: Offsets)
- (b) ~~27.229~~.98 tons of CO per year (Basis: Cumulative Increase)
- (c) ~~5.65~~.90 tons of POC (as CH₄) per year (Basis: Cumulative Increase)
- (d) ~~21.213~~ tons of PM₁₀ per year (Basis: Cumulative Increase)
- (e) ~~2.987~~ tons of SO₂ per year (Basis: Cumulative Increase)

Page 90, Condition 21 - The formaldehyde emissions presented in Condition 21 do not appear to be based on a California Air Toxic Emission Factors (CATEF) presented on page 117 of the PDOC. Please provide a reference to the formaldehyde emission factor was used.

Page 95, Diesel Fire Pump Condition 1 - Mariposa Energy requested a 4 hour per year operating limit for the fire pump in the AFC based on actual operating experience at other company-owned plants. Please revise the operating hour limit to 4 hours.

Page 96, Diesel Fire Pump Condition 4(e) - The MEP only has one diesel engine so the reference to each engine is inappropriate. Please replace the word "each" with "the" and "engines" with "engine".

If you have any questions regarding our comments, please contact either me or Mr. Jerry Salamy at 916-286-0207.

Sincerely,
Mariposa Energy LLC

Gary B. Normoyle
Director Engineering & Construction

cc: Craig Hoffman/CEC
Doug Urry/CH2M HILL
Jerry Salamy/CH2M HILL
Keith McGregor/CH2M HILL



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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 September 28, 2010, I served and filed copies of the attached Mariposa Energy LLC's (09-AFC-3) Mariposa Energy Plant's Preliminary Determination of Compliance – Application 20737. 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:

[\[http://www.energy.ca.gov/sitingcases/mariposa/index.html\]](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
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docket@energy.state.ca.us

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



Mary Finn