



TETRA TECH EC, INC.

DOCKET

09-AFC-8

DATE MAR 10 2010

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March 10, 2010

California Energy Commission
Docket No. 09-AFC-8
1516 9th St.
Sacramento, CA 95814

Genesis Solar Energy Project - Docket Number 09-AFC-8

Docket Clerk:

Included with this letter is one hard copy and one electronic copy of the ***Comments on the Mojave Desert Air Quality Management District's Preliminary Determination of Compliance.***

Sincerely,

A handwritten signature in cursive script that reads "Emily Festger".

Emily Festger (for Tricia Bernhardt)
Project Manager/Tetra Tech EC

cc: Mike Monasmith /CEC Project Manager





TETRA TECH EC, INC.

March 10, 2010

Mr. Alan J. De Salvio
Supervising Air Quality Engineer
Mojave Desert Air Quality Management District
14306 Park Avenue
Victorville, CA 92392

**Subject: Comments on MDAQMD Preliminary Determination of Compliance (PDOC)
for the Genesis Solar Project**

Dear Mr. De Salvio:

Attached please find Genesis Solar LLC's comments on the Mojave Desert Air Quality Management District's PDOC. Please feel free to contact me should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Emily Festger".

Emily Festger (for Tricia Bernhardt)
Tetra Tech EC, Inc.

Cc: Meg Russell (Genesis Solar, LLC)
Mike Monosmith (California Energy Commission)

Attachment



Comment #1

Section 11 (Permit Conditions)

Auxiliary Boiler Authority to Construct, Condition 3.

The applicant believes the emissions rates for operating at 25% load as stated in this condition (subsections a. through e.) are inappropriate for the following reasons:

- The MDAQMD has misinterpreted the heater information as found on page 5 of the heater proposal provided by Rentech. Footnote 8 states “Emissions guarantees are from 25% to 100% MCR.” This statement does not indicate that a different emissions rate applies at just the 25% MSR level, it states that the emissions guarantees are applicable for the MCR load range of 25% to 100%.
- The MDAQMD has made an unsupportable assumption that the emissions rate at 25% MCR is exactly 25% of the full load (100% MCR) emissions rate. There is no data in the boiler proposal or specification sheet to support such an assumption, and the statement in the unit specification sheet noted above clearly contradicts this assumption.
- The applicant is not aware of any combustion data on this unit that would allow the conclusion to be made that emissions of the five (5) stated criteria pollutants are linear with unit load. If the emissions guarantees apply at loads ranging from 25% to 100%, then a linear relationship is not implied by the unit designer/manufacturer, therefore such a relationship should not be implied by the AQMD.
- Lastly, the text portion of the condition states that the emissions limits apply “at any firing rate”, which contradicts the individual conditions which follow.

The applicant requests that the condition be amended to read as follows:

3. Emissions from this equipment shall not exceed the following hourly emission limits at any firing rate, verified by fuel use and annual compliance tests:
 - a. NO_x as NO_2 :
 1. 0.330 lb/hr (based on 9.0 ppmvd corrected to 3% O_2 and averaged over one hour),
 - b. CO:
 1. 0.563 lb/hr (based on 50 ppmvd corrected to 3% O_2 and averaged over one hour),
 - c. VOC as CH_4 :
 1. 0.088 lb/hr,
 - d. SO_x as SO_2 :
 1. 0.008 lb/hr,
 - e. PM_{10} :
 1. 0.150 lb/hr.

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Comment #2

Section 11 (Permit Conditions)

Auxiliary Boiler Authority to Construct, Condition 4.

The applicant believes that the requirement for CEMS for SO₂, NO_x, and CO on such small units which will be operated on a limited basis (less than or equal to 1000 hours per year per unit) is onerous and without justification, especially for units firing natural gas.

The applicant is requesting that Condition 4 be removed and replaced with a requirement, consistent with Condition 3 (which requires that compliance be verified via fuel use tracking and annual compliance tests). The applicant suggests the following language for Condition 4.

Condition 4. – Compliance with the emissions limits stated in Condition 3 shall be verified through monitoring and recordkeeping of the following parameters: (1) hourly, daily, and annual fuel use, (2) annual compliance testing per condition 3, (3) calculation of emissions and operational parameters per condition 6, (4) strict adherence to the operational limits imposed by condition 5, (5) strict adherence to the source testing requirements and methods per conditions 7 and 8. In addition, the applicant shall work with the MDAQMD staff to establish a verifiable set of parametric values that can be used to further track and predict emissions on an hourly, daily, and annual basis.

Comment #3

Section 4 – Control Technology Evaluation/BACT Determination

The applicant questions the basis for the AQMD assertion that the proposed IC engines trigger BACT. The AQMD has made the assumption that the four (4) engines are all operated on the same day which is not the case. The AFC document as well as the responses to comments indicates that multiple engines will NOT be operated on the same calendar day. The short term modeling and health impacts for the engines are based on this premise, and as such, the AQMD should evaluate the daily emissions based upon this assumption, and place an appropriate condition in the ATC to achieve this outcome. The applicant suggests that a condition be added to the PDOC analysis for the engines to limit daily operations as follows:

“This condition applies to the four (4) proposed IC engines, i.e., the two (2) emergency generator engines, and the two (2) fire pump system engines. Multiple engines will not be readiness tested on the same calendar day. No more than one (1) of the four (4) engines will be allowed to be readiness tested on any discrete calendar day.

Comment #4

The applicant notes that the footnotes in the tables contained in Appendix A of the PDOC were revised per the AQMD comments dated on or about 2-16-10.

Comment #5

Section 9

Regulation XI-Source Specific Standards

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Rule 1134 only applies to stationary gas turbines, and as such is not applicable to the Genesis Solar project.

Comment #6

Section 9

Regulation XIII- New Source Review

The applicant is assuming that the reference in the Rule 1302 text to the AVAQMD should read MDAQMD.

Comment #7

Section 9

The Rule 1303 text which states that BACT is only required for the internal combustion engines is incorrect. See Comment #3 above.

Comment #8

Section 3-Description of Project

Sentence 1 should read as follows: “The proposed facility will consist of two 125 MW (gross) solar thermal units.”

The second paragraph should read as follows:

“Each of the two facilities will consist of a solar array field, auxiliary low pressure steam boiler for HTF freeze protection system and plant start-up, steam turbine, emergency generator set, emergency fire pump system, an HTF ullage/expansion system with a nitrogen blanket, wet cooling tower, electrical interconnections, control room, water treatment, maintenance and warehouse facility, a parking lot, and several small adjacent buildings for support services. The two facilities share a main office building, storage facilities, a central switchyard, access roads and a land treatment unit to treat HTF contaminated soil.”

The first bullet item should read as follows:

- “two (2) auxiliary natural gas fired low pressure steam boilers for maintaining the HTF temperature and provide start-up steam each rated at - 30 MMBtu/hr”

Comment #9

Ullage Vent System –ATC Conditions

“HTF ullage expansion tank” should read “HTF ullage expansion tanks”, there are multiple tanks in the ullage process and expansion tank network, all of which will be vented to a single vent and control system.

Condition 5 which requires inspection of the tanks and distribution system on a daily basis is not feasible or practical. To accomplish such a task on a daily basis would require a huge crew of inspection staff. The applicant is proposing that a dedicated visual inspection of such components be undertaken on a monthly basis, with any identified leaks being repaired as soon as they are identified. There will be maintenance staff in various portions of the solar field each

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day, and as such, as they move through the field on the daily activities, the field components will be visually inspected and any leaks will be identified and repaired.

Comment #10

Ullage Vent System –ATC Conditions

Condition 4 – “VOX” should read “VOC”.

Comment #11

Cooling Tower ATC Conditions

The applicant is requesting that Condition 4 be amended to read as follows:

“The operator shall perform weekly specific conductivity tests of the blow-down water to indirectly measure total dissolved solids (TDS). Quarterly tests of the blow-down water will be done to confirm the relationship between conductance and TDS. The TDS shall not exceed 5,000 ppmv on a calendar monthly basis.”

Comment #12

Emergency Fire Suppression Water Pump Authority to Construct Conditions

Sentence 1 should read as follows:

“This unit shall be limited to use for emergencies, defined as in response to a fire or due to low fire water pressure.”

Comment #13

Emergency Fire Suppression Water Pump Authority to Construct Conditions

Conditions 6 and 7 do not apply to the diesel based fire pump system and should be removed.

Comment #14

Emergency Generator Authority to Construct Conditions

The Applicant is requesting that Conditions 4, 6, and 7 be amended to read as follows. The proposed language describes the use of the emergency generator sets in the context of the solar facility operations.

Condition 4. This unit shall be limited to use for emergency power, defined as in response to a fire or when utility back-feed power is not available. In addition, this unit shall be operated no more than 50 hours per year for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 50 hour per year limit.

Condition 6. This unit shall not be used to provide power to the interconnecting utility and shall be isolated from the interconnecting utility when operating.

Condition 7. This engine may operate in response to notification of impending loss of utility back-feed power if the interconnected utility has ordered an outage to the plant or expects to order such outages at a particular time, the engine is operated no more than 30 minutes prior to the forecasted outage, and the engine is shut down immediately after the utility advises that the outage is no longer imminent or in effect.



**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 FOR THE
*GENESIS SOLAR ENERGY PROJECT***

Docket No. 09-AFC-8

**PROOF OF SERVICE
(Revised 2/22/10)**

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*indicates change

I, Emily Festger, declare that on March 10, 2010, I served and filed copies of the attached *Comments on the MDAQD Preliminary Determination of Compliance*, dated March 10, 2010. 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/genesis_solar].

The documents have 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-8
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.

Original Signed By:


