

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512

May 27, 2010

DOCKET**09-AFC-6**DATE MAY 27 2010RECD. MAY 27 2010

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

**Re: Comments on Preliminary Determination of Compliance (PDOC)
Blythe Solar Power Project (09-AFC-6)**

Dear Mr. De Salvio,

Energy Commission staff appreciates the District's consideration of staff's comments on the two PDOCs originally prepared for the Blythe Solar Power Project and has reviewed the Mojave Desert Air Quality Management District's Revised PDOC for the Blythe Solar Power Project. We have the following minor comments for your consideration for inclusion in the Final Determination of Compliance (FDOC).

Comments on PDOC Engineering Evaluation

Auxiliary Boiler Natural Gas SO₂ Emissions

The SO₂ emission factor (0.0003 lbs/MMBTU), and resultant SO₂ emissions for the auxiliary boiler, developed based on a fuel sulfur content of 0.2 grains per 100 scf appears to be a factor of two too low as shown below:

$$\begin{aligned} \text{Lbs SO}_2/\text{MMBtu} &= 1,000,000 \text{ Btu}/1,050 \text{ Btu/scf} \times 0.2 \text{ grain sulfur}/100 \text{ scf} \times \\ &1 \text{ lb}/7000 \text{ grains} \times 2 \text{ SO}_2/\text{Sulfur molecular weight} = \\ &0.00054 \text{ lb/MMBTU} \end{aligned}$$

Comments on PDOC Conditions

Auxiliary Boiler Conditions

Condition 5.b. revised the maximum daily fuel use to a basis that is not supported in the emission calculations. The revised value is 524,995 scf/day, while the maximum daily emissions calculations are based on 441,552 scf/day. The higher value seems to be based on a maximum daily boiler use provided in condition 6 (see comment on condition 6 below). Staff believes the lower of the two fuel use values should be used in this condition.

Condition 6 provides a confusing basis for maximum daily boiler use. The boiler cannot operate 12 hours per day at 100 percent load and also 15 hours per day at 25 percent load, since this exceeds 24 hours per day. Considering the fuel limits provided in Condition 5, it is not clear that condition 6 is necessary, but if it is considered necessary then staff suggests it be clarified and the 27 hour/day use basis should not be used to determine the maximum daily fuel use as given in Condition 5.b.

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Additionally, staff believes that the emission limits provided in auxiliary boiler condition 4.d. need to be revised consistently per any revisions made to address staff's comment on the engineering evaluation's SO₂ emission factor basis and emissions estimate.

HTF Piping Inspection and Maintenance Condition

Staff has no specific issues with the District's revised condition requiring HTF piping system inspection and maintenance, but we understand that additional revisions to this condition are likely based on applicant comments. Staff would like to make sure that such revisions are made in a manner that is consistent across the several HTF-using large thermal solar projects currently being permitting by MDAQMD, and also as consistent as possible with the other HTF-using large thermal solar projects currently being permitted by other air districts (Ridgecrest Solar and Palen Solar projects).

If you have any questions, please contact Gerry Bemis of my staff at (916) 654-4960. Thank you for the opportunity to comment on the Blythe Solar Power Project's Preliminary Determinations of Compliance.

Sincerely,

MATT LAYTON, Manager
Engineering & Corridor Designation Office
Siting, Transmission and Environmental
Protection Division

cc: Docket