South Coast
Air Quality Management District
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Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Staff Assessment and Draft Environmental Impact Statement for the Palen Solar Power Project (09-AFC-7)

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document, including with an extended review period. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Revised or Final SA/EIS.

SCAQMD staff appreciates the air quality benefits of solar powered electricity generation, especially in comparison to traditional fossil fuel power generation. However, SCAQMD staff is concerned that the air quality analysis does not present all of the data necessary to assess all of the impacts from the project. These deficiencies can be remedied in the Revised or Final SA/EIS by quantifying total facility NOx and VOC emissions, comparing project impacts to SCAQMD recommended significance thresholds, presenting additional clarification of fugitive emissions from the HTF piping system, and revising mitigation measures to ensure their effectiveness. In general, the lead agency should evaluate all feasible mitigation measures to reduce any identified significant adverse impacts to a less than significant level. Detailed comments regarding the Draft SA/EIS are attached.

Please provide the SCAQMD with written responses to all comments contained herein within the Revised or Final SA/EIS. The SCAQMD staff is available to work with the Lead Agency to address these issues and any other questions that may arise. Please contact Ian MacMillan at (909) 396-3244 if you have any questions regarding these comments.

Sincerely,

Ian MacMillan
Program Supervisor, Inter-Governmental Review
Planning, Rule Development & Area Sources

Attachment
cc: Mohsen Nazemi

MN:SN:IM
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Control Number

Thresholds of Significance

In order to determine the significance of air quality impacts, the lead agency compares project emissions to Ambient Air Quality Standards (AAQS). By comparing project operational emissions to the state and federal AAQS for PM10, PM2.5, NO2, SO2, and CO, the lead agency determines that air quality impacts are less than significant. However, this criteria pollutant analysis is incomplete because it did not quantify NOx or VOC emissions that are precursors to ozone. As stated in Air Quality Table 3 of the SA/Draft EIS, the project area is in moderate nonattainment status for ozone. In order to address air quality impacts from ozone, the SCAQMD has established regional air quality significance thresholds[1], including for NOx and VOC's. SCAQMD staff therefore recommends that the lead agency compare project construction and operation emissions to the SCAQMD thresholds prior to finalizing the SA/EIS. If impacts are found to be significant, all mitigation measures should be considered to reduce these impacts to the extent feasible.

1) **HTF Fugitive Emissions**

a) *Heavy Oil vs. Light Liquid*

As stated on page C.1-18, the fugitive emissions associated with the HTF piping system is based on Heavy Oil leakage rate factors from EPA. In a comment letter from Matt Leyton of CEC to Mike Mills of SCAQMD, dated March 24, 2010, CEC has indicated that the SCAQMD should consider the applicability and use of Light Liquid emission factors in light of the HTF being heated to elevated temperatures during project operations. SCAQMD staff is presently working with the applicant and CEC staff to resolve this issue. As fugitive emission rates may vary with the volatility of the liquid in the piping system, the Revised or Final SA/EIS should use the most appropriate fugitive emission factor. Based on whichever emission factors ultimately are used, mitigation measures should be considered that would reduce the severity of any significant impacts.

b) HTF Speciation

Page C.5-12 of the Draft SA/EIS states that 99.99% of the fugitive HTF emissions are modeled as benzene; however the HARP files received by SCAQMD staff present the following emission rates for the HTF ullage system.

Compound	Emission Rate	Percent of Total
Benzene	7.21E-5	0.11%
Formaldehyde	2.57E-3	4.09%
Hexane	6.00E-2	95.51%
Naphthalene	2.09E-5	0.03%
PAH's	2.05E-6	0.00%
Dichlorobenzene	4.12E-5	0.07%
Toluene	1.17E-4	0.19%

[1] Available here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf

The Revised or Final SA should either provide further explanation in the text that explains the rationale for the chemical speciation in the HRA modeling, or revise the modeling to represent all HTF emissions as benzene.

c) *Inspection and Maintenance Program*
The lead agency states that fugitive HTF losses will be reduced through the implementation of an Inspection and Maintenance (I&M) program. This program is outlined in Mitigation Measure AQ-SC9. The lead agency does not indicate in this measure if the I&M program will be conducted while the piping system is running at elevated temperatures typical of operations. SCAQMD staff recommends that the project applicant commit to conducting the I&M program when fugitive emissions are anticipated to be at their peak rate, such as when the system is hot, and the HTF volatility is elevated.

2) **Emergency Generators**
In Air Quality Table 8, the emission totals for the Tier 2 emergency generators assumes that both generators will be operated for one hour each on the same day. The emissions from these generators in combination with other sources on- and off-site exceed the SCAQMD regional significance threshold for NOx. The lead agency should consider additional mitigation measures in order to reduce these project emissions to the extent feasible. This could include limiting the regular maintenance and testing of the two emergency generators to separate days, reducing the allowable operating time per day for each engine, and/or committing to using Tier 4 Interim engines (beyond current BACT requirements) if they are available at the time of purchase.

3) **Background Criteria Pollutant Concentrations**
In Air Quality Table 5 of the SA/Draft EIS, the lead agency used the Palm Springs monitoring station to determine the ambient air concentrations for PM10 and PM2.5. SCAQMD staff recommends that particulate matter data from the Indio monitoring station (located approximately 20 miles closer to the project site than the Palm Springs station) be presented in the Revised or Final SA/EIS.