



DOCKET

08-AFC-5

DATE MAR 31 2010

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March 31, 2010

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Imperial Valley Solar (formerly Solar Two) (08-AFC-5)
Modeling Analysis for Federal NO₂-1 Hour Standard
URS Project No. 27657106.00801

Dear Mr. Meyer:

On behalf of Imperial Valley Solar (formerly Solar Two), LLC, URS Corporation Americas (URS) hereby submits the Modeling Analysis for Federal NO₂-1 Hour Standard.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit on behalf of Imperial Valley Solar, LLC.

Sincerely,

Angela Leiba
Project Manager

AL: ml



Memorandum

Date: March 31, 2010

To: Will Walters, CEC

From: Julie Mitchell

CC: Jaime Hernandez, ICAPCD, Richard Knox, Tessera Solar

Subject: **Modeling Analysis for Federal NO₂ 1-hour Standard for Imperial Valley Solar**

On April 12, 2010, the new federal NO₂ 1-hour ambient air quality standard will become effective. The concentration level of the new 1-hour standard is 100 ppb (188.68 µg/m³) and compliance with this level will be based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour concentrations.

On February 25, 2010, EPA provided guidance on how to use the AERMOD model to show compliance with the new standard. Unfortunately EPA does not provide guidance on how to incorporate the background NO₂ concentrations with the modeling. On March 10, 2010, SJVAPCD published draft guidelines for modeling procedures to address the new federal 1-hour standard. These guidelines which have been approved by USEPA, describe a tiered approach for incorporating background air quality data with the AERMOD modeling results. Because the SJVAPCD guidelines reasonably account for the contributions of both modeled NO₂ sources and background NO₂ levels in a manner that is consistent with the statistical form of the new federal NO₂ 1-hour standard, this method has been selected for evaluating the compliance of the IVS project with the standard.

To determine the 3-year average of the annual 98th percentile of the daily maximum 1-hour concentrations for the background concentration, EPA and SJVAPCD guidance was followed. Data from 2005-2007 from the El Centro 9th Street monitoring station were processed. This monitoring record meets the EPA requirement for completeness for each of the three years, as outlined in the SJVAPCD guidelines. The 3-year average of the 98th percentile of daily maximum 1-hour NO₂ concentrations for this dataset was determined to be 54.3 ppb or 102.5 µg/m³, and this value was selected to represent the background concentration for purposes of this analysis. The background data are on the modeling file CD which is provided with this memo.

In the Applicant's Response to CEC and BLM Data Requests (Set 1, Parts 1 and 2, and Set 2, Parts 1 and 2), modeling was conducted for both construction and operations. The peak 1-hour NO₂ concentration from operational activities was predicted to be 69.18 µg/m³. This value plus the 98th percentile background of 102.5 µg/m³ adds to 171.68 µg/m³, which is below the new standard of 188.68 µg/m³. Therefore, operational impacts from the IVS project are predicted to be in compliance with the new federal NO₂ 1-hour standard. This analysis constitutes a SJVAPCD Tier I modeling analysis.

For the construction impacts, it was determined that a Tier II (SJVAPCD) modeling analysis was required. The construction modeling files used for the Applicant's Responses to CEC and BLM Data Requests (Set 1, Parts 1 and 2, and Set 2, Parts 1 and 2), were changed to

provide separate runs to determine the 8th highest hourly concentration due to project sources for each year of the meteorological input data. The highest 8th high NO₂ concentration among the results for five years of meteorology was added to the 98th percentile background value described above to obtain a total concentration of 168.8 µg/m³. This concentration is below the new federal NO₂ 1-hour standard, thus construction emissions from the IVS project do not cause a violation of the federal 1-hour NO₂ standard. Construction modeling files will accompany this memo.

Using the EPA-approved, SJVAPCD modeling procedures for addressing the new federal NO₂ 1-hour standard, it was demonstrated that during both construction and operations, the IVS project will comply with this standard.



**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
IMPERIAL VALLEY SOLAR PROJECT
(formerly known as SES Solar Two Project)
IMPERIAL VALLEY SOLAR, LLC***

**Docket No. 08-AFC-5
PROOF OF SERVICE
(Revised 3/9/10)**

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DECLARATION OF SERVICE

I, Corinne Lytle, declare that on March 31, 2010, I served and filed copies of the attached Applicant's Submittal of Modeling Analysis of Federal NO2 - 1 Hour Standard. The original document, filed with the Docket Unit, is accompanied most recent by a copy of the Proof of Service list, located on the web page for this project at:

[\[http://www.energy.ca.gov/sitingcases/solartwo/index.html\]](http://www.energy.ca.gov/sitingcases/solartwo/index.html).

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 _____ 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. 08-AFC-5
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.

Original signed by

Corinne Lytle