August 11, 2009

SES Solar Two, LLC
Informal Data Responses to Air Quality Questions from Will Walters, CEC

Question 1) I am not a pavement specialist and did ask in this data request for some comparison of the stabilized soils in comparison to asphalt pavement in DR 128. The response provides a compressive strength of 400-500 PSI, however, I don't know how that compares with asphalt. Concrete can have much higher compressive strengths, more than 3,000 PSI, but I can't find compressive strength information for asphalt roads. Of course this all has to be taken in context of the proposed road maintenance program and the generally low road use in comparison with highly traveled public asphalt roads. **But I would like some context to compare what 400-500 PSI means, both in comparison with asphalt roads, and in general in regards to road surface durability given the proposed road use.** (FYI, I did my own little drop test on the "pill" onto concrete from a height of about 4 feet and while I wasn't surprised that a small chunk came out of one edge, I was surprised to see that the material that did break off was crushed down to the original fine material size, totally broke down, rather than breaking into larger clods that would have a much reduced fugitive dust potential.)

Response 1)
The staff at Soilworks, the maker of Soiltac™, have provided the following information to answer your question. In regards to compressive strength and what that means for the stabilization process on the Solar Two site, compressive strength is defined as "The maximum compressive stress a material can withstand without failure." When we test compressive strength, we do so with dry samples and wet samples. Wet samples have been soaked 3 dimensionally for 24 hours before compressed. The compressive strength is measured by a machine and will tell us what different % admixes when incorporated with specific soil samples will withstand in terms of psi before collapsing under weight or failing. This is important when talking about material that has a small, naturally occurring compressive strength and requires incorporation of a stabilizer in order to gain load bearing capacity.

The compressive strength of asphalt typically ranges from 700-800 psi, but it also has to be put over a sub-base that has a psi of 400 or better. With asphalt, testing is performed using the Marshall test rather than the Unconfined Compressive Strength tests that soils labs typically perform. Concrete typically has a psi of 3,000 and up (dependent on materials used to create concrete), but has little flexural strength. Although the Soiltac™ has a lower compressive strength than either asphalt or concrete, approximately 400-500 psi, it has good flexural strength, thus with proper maintenance will ensure strong enough roads for the small amount of traffic anticipated and minimal dust emissions.

Question 2) For the Alternatives DR 133 no revised total construction emissions, criteria or GHG emissions, were provided. I probably will need to provide this level of detail for NEPA level alternatives analysis. So, I would appreciate your thoughts on how to create those emissions, perhaps using various proposed project emissions levels with ratios. For example the main admin/maintenance facility emissions might be identical, but perhaps the total suncatcher installation emissions could be a ratio of the total amount of suncatcher units, or would active acreage comparison be a better comparison for fugitive dust emissions? So, any thoughts on reasonable methods to obtain the project alternative construction emission totals would be appreciated.

Response 2)
It is expected that in the first 24 months of construction, the main service complex, road construction and all ancillary equipment will be constructed, along with 12,000 SunCatchers, which equate to 300 MW of power generation. As a conservative estimate, it can be assumed that all construction activities during these months are needed for the construction of a 300 MW project. In reality, some construction activities will be reduced during the first 24 months if the project was reduced to 300 MW. Emissions can then be estimated for the first 24 months of construction. Thus the peak daily, monthly and annual emissions would not change from the emissions presented in the Responses to Data Requests. The total project related construction emissions would be reduced to approximately 60% (24 months / 40 months) of the emissions presented in the Responses to Data Requests.

Submitted by Julie Mitchell
Air Quality Scientist
URS Corporation

DECLARATION OF SERVICE

I, Kimberly S Whitney, declare that on Aug. 13, 2009, I served and filed copies of the attached, Informal DR's dated, August 11, 2009. 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/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:

X sent electronically to all email addresses on the Proof of Service list;

X by personal delivery or by depositing in the United States mail at Phoenix, AZ 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:

X 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
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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

Kimberly S Whitney

*indicates change

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APPLICATION FOR CERTIFICATION
For the SES SOLAR TWO PROJECT

Docket No. 08-AFC-5

PROOF OF SERVICE
(Revised 8/10/09)

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