CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

November 6, 2009

DOCKET
08-AFC-13
DATE NOV 06 2009
RECD. NOV 09 2009

Felicia Bellows
Vice President of Development
Tessera Solar
4800 North Scottsdale, Road, Suite 5500
Scottsdale, AZ 85251

RE: STIRLING ENERGY SYSTEMS SOLAR ONE PROJECT (08-AFC-13) - DATA REQUESTS SET 2, PART 2 (#s 142-174)

Dear Ms. Bellows:

Pursuant to Title 20, California Code of Regulations, Section 1716, the Bureau of Land Management (BLM) and California Energy Commission (Energy Commission) staff seek the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

Part 2 of this second set of data requests (#142-174) is being made in the areas of Biological Resources (#142); Soil and Water Resources (#143-161); Visual Resources (#162-166), and Waste Management (#167-174). In order to address these issues in the BLM and Energy Commission joint environmental document, written responses to the enclosed data requests are due to the BLM and Energy Commission staff on or before December 5, 2009, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, Section 1716 (f)).

If you have any questions, please call me at (916) 653-1639 or email me at cmeyer@energy.state.ca.us.

Sincerely,

Christopher Meyer, Project Manager

Enclosure
cc: Docket (08-AFC-13)
Proof of Service List

PROOF OF SERVICE (REVISED 11/05/09) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON ~~11/09/09~~
KV

Technical Area: Biological Resources
Author: Joy Nishida

BACKGROUND

AFC Section 5.14.2.2 under Liquid Wastes states that localized channel grading will take place on a limited basis to improve channel hydraulics. Since the SunCatchers will be placed in ephemeral washes, staff assumes that grading will occur in the washes to improve the channel hydraulics. Grading would affect the functions of the existing drainages and their values to biological resources.

DATA REQUEST

142. a) Please provide the locations and extent of localized channel grading within the ephemeral drainages and describe how the values and functions of the existing drainage will be preserved.

b) Please describe mitigation should there be a loss of the drainage's function and value.

Technical Area: Soil & Water Resources
Author: Casey Weaver

Round one Data Requests were submitted to the applicant on June 17, 2009. However, several Data Requests remain unanswered. Specifically, the applicant has stated that responses to Soil and Water Data Requests 71-73, 76-79 and 85 will not be provided until November 21, 2009. These Data Requests generally addressed information related to onsite groundwater conditions and onsite groundwater wells that will be necessary to complete staff analysis.

Based on the responses to the initial round of Data Requests, additional information provided by the applicant, and the expected responses to the outstanding data requests listed above, the following constitute the second set of Data Requests.

BACKGROUND:

In the response to data request #70, the applicant indicated there are two proposed locations for construction and development of an onsite well.

DATA REQUESTS

143. a) Please provide information on why those locations were selected.

b) Please provide the expected groundwater depth.

c) Please provide the expected total well depth at those locations.

144. a) Please provide information on what methods will be used to construct the proposed wells.

b) Please provide detail on how the capacity of the wells to provide water to the project will be determined.

c) Please provide the dimensions of the groundwater cone of depression that would be created by pumping the proposed well(s).

145. a) Please provide the results of aquifer testing in these areas showing aquifer properties and characteristics.

b) Please demonstrate the aquifer is capable of providing the volume of water needed for project construction and operation.

146. Please provide information and location on any known springs or seeps that may be affected by groundwater pumping at the new well locations.

147. Please provide the results of groundwater modeling that shows there will be no impacts to springs and seeps or to other users or environmental resources resulting from project pumping from the new well locations.

148. Please provide information on the existing site groundwater quality and what changes to that water quality could result from project pumping.

149. Please provide information regarding the location, method of conveyance and distribution of the groundwater for storage, treatment and project use.

150. Please provide information on how conveyance of onsite groundwater will be accomplished without creating erosion/sedimentation impacts.

BACKGROUND:

Treatment of water supplied to the site will be required to attain a quality suitable for potable and mirror washing uses. Disposal of the wastewater generated by onsite water treatment will be required. The AFC indicated that disposal of onsite generated waste water will be accomplished by conveying the waste water to two, 3-million gallon evaporation ponds.

DATA REQUESTS

151. Please provide information on the expected quality and quantity of site generated wastewater.

152. Please provide all information that describes how the on-site disposal method would be protective to the environment in accordance with Lahontan Regional Water Quality Control Board requirements.

153. Please provide all information regarding on-site waste water disposal that the Lahontan Regional Water Quality Control Board needs to develop Requirements of Waste Discharge.

BACKGROUND:

In the Liquid Wastes section of the AFC (p 5.14-12), the first sentence of the last paragraph on the page appears to be truncated. The sentence reads “w will be used for major drainage patterns where the channel cross-section exceeds 8 feet in width and 3 feet in depth or exceeds 20 feet in width and 2 feet in depth.”

DATA REQUEST

154. Please correct or clarify the information provided in that sentence.

BACKGROUND:

In the Liquid Wastes section of the AFC (p 5.14-13), it is stated that roadway maintenance will be required following rainfall events and that unpaved roadway sections may need to be bladed to remove soils deposition, along with sediment removal from stem pipe risers at the culvert locations. For major storm events, in addition to the aforementioned maintenance, roadway repairs may be required due to possible damage to pavement where the roadways cross the channels and where flows exceed the culvert capacity.

DATA REQUESTS

155. Please describe where and how the removed sediment will be disposed.

156. Please explain why the roadway culvert design allows flows to exceed the capacity of the designed culverts.

157. Please explain why the design of the roadway accounts for pavement damage following major storm events.

158. Please explain the collection and disposal methods to be used for removal of the damaged pavement and other roadway debris from the drainage channel.

BACKGROUND:

SunCatcher foundation elements (driven steel piles) are proposed to be placed in active ephemeral stream channels. The volume of these piles will decrease the channels' capacity to convey flows within the banks of the channels which could lead to overbank flooding.

DATA REQUESTS

159. Please explain the measures proposed to address the reduction in the channels' carrying capacities of flood waters.

160. Please re-evaluate and present a map showing the expected area of inundation caused by the 100-year storm that accounts for all of the SunCatcher foundations constructed in the drainage channels.

161. Please provide the analysis used to determine adequate SunCatcher foundation depth to account for expected drainage scour.

Technical Area: Visual Resources
Author: James Jewell, William Kanemoto

BACKGROUND

Staff is concerned about any possible off-site visibility of the heated face of the Stirling Engines/PCUs (power conversion units).

DATA REQUESTS

162. Please describe any conditions under which the heated face of the PCUs might be visible to viewers.

163. Please provide the expected luminance of the face of a PCU in photometric terms (candela per square meter).

BACKGROUND

Staff is concerned about potential levels of glare to off-site viewers of diffuse reflection from visible mirror faces. Although applicant has characterized the mirror efficiency to be 95%, the remaining 5% of energy has the potential to result in substantial levels of diffuse glare, which would be visible off-site and multiplied by the number of visible units. For example, in early morning and late afternoon, a high proportion of the mirror surface of each unit would be visible to off-site viewers due to the low angle of the mirrors and sun. Toward noon, the proportion of mirror surface visible to off-site viewers on the ground would be reduced to a minimum.

DATA REQUESTS

164. Please describe the maximum possible luminance of the mirror surfaces of a unit due to diffuse reflection in candela per square meter.

165. Please characterize the times of day in which the entire mirror surface would be visible to a) eastbound motorists on I-40, b) westbound motorists on I-40, c) BNSF staff, d) and train passengers. This description may be described in terms of representative seasonal days, e.g., solstices and equinox.

BACKGROUND

Staff is concerned about the potential for direct reflections of the sun to be visible to air traffic during periods of transition from wind stow or overcast positions to focused condition.

DATA REQUEST

166. Please describe the potential luminance of the off-axis focal point created in the transition from cloud-cover to full solar brightness and indicate the safe viewing distance for passing aircraft.

Technical Area: Waste Management
Author: Ellie Townsend-Hough

BACKGROUND

The Stirling Energy Systems (SES) Solar One project will consist of approximately 34,000 solar dish Stirling systems/SunCatchers. Each solar Stirling engine includes an oil tank. It is unclear how much each oil tank holds, whether there will be storage of significant amounts of oil on site, and what the plans are for management and treatment of potential spills. Staff is concerned that leaking oil tanks could adversely impact the environment.

DATA REQUESTS

167. Please provide information on the size of the oil tank associated with the solar Stirling engines.

168. Please provide information on any proposed oil storage tanks or storage systems that will be used to refill and maintain SunCatcher oil tanks.

169. Please provide information on the best management practices used to contain oil leakage from around the oil tanks.

170. Please explain if the project will or will not require a Spill Prevention, Control and Countermeasure Plan.

171. If a Spill Prevention, Control and Countermeasure Plan is required please provide a copy to staff.

BACKGROUND

Three buildings (each 170 feet wide by 211 feet long by 78 feet tall) would be constructed for on-site SunCatcher assembly. The buildings will later be decommissioned and salvaged after installation of all project SunCatchers (p. 3-21). Also, a new 34.5-kV to 230-kV substation would be constructed in the center of the project site (p. 3-27). Waste streams from the SunCatcher assembly buildings and the substation are not discussed in Section 5.14 (Waste Management) of the AFC.

DATA REQUESTS

172. Please list and quantify any waste streams expected from the construction and decommissioning of the SunCatcher assembly buildings.

173. Please list and quantify any waste streams expected from the construction of the substation.

174. Please discuss how these wastes will be managed and disposed.

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 SES SOLAR ONE PROJECT

Docket No. 08-AFC-13

PROOF OF SERVICE
(Revised 11/5/09)

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DECLARATION OF SERVICE

I, Kimberly VanVorst , declare that on November 9, 2009, I served and filed copies of the attached, Data Requests Set 2, Part 2 (#s 142-174), dated, November 6, 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: [www.energy.ca.gov/sitingcases/solarone].

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 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. 08-AFC-13
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 VanVorst