

CALIFORNIA ENERGY COMMISSION

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



July 30, 2012

California Energy Commission

DOCKETED

11-AFC-4

TN # 66394

JUL 30 2012

Mr. Todd Stewart
 Senior Director of Project Development
 BrightSource Energy, Inc.
 1999 Harrison Street, Ste. 2150
 Oakland, CA 94612

**RIO MESA SOLAR ELECTRIC GENERATING FACILITY (11-AFC-4)
 PALEONTOLOGICAL RESOURCES EVALUATION PHASE EXCAVATION AND
 STAFF COMMENTS TO APPLICANT RESPONSE TO DATA REQUESTS NO. 126 –
 130, PALEONTOLOGICAL RESOURCES DELINEATION PLAN**

Dear Mr. Stewart:

The Energy Commission Committee for the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF) has set milestones for the licensing process. These include specific dates for publication of the Preliminary and Final Staff Assessments (PSA/FSA). Because the applicant has not provided the paleontological information requested in Data Requests Set 1B (Nos.126-130), the delineation of the paleontological resource in the project area will be incomplete in the PSA. The absence of this data will also preclude staff's ability to adequately assess, in the PSA, the potential effects that the proposed project would have on paleontological resources buried beneath the present surface of the project area or to include a construction monitoring plan appropriate to the project.

While we understand the applicant initially filed objections¹ to the data requests referenced above, your provision of some of the information requested subsequent to the objections and engagement with staff on the topic, as indicated in the data responses and through follow-up discussions, led us to believe that you were willing to find a way to provide staff with sufficient information to complete the required analysis, obviating the need for a motion to compel. Staff has provided guidance in discussions and data requests to assist the applicant in developing plans to address the location of the paleontological resource at the project site². This letter is intended to encapsulate staff's recommendations for how the delineation should be conducted and identify the timeframe by which staff will need the information in order to complete its analysis for the Final Staff Assessment.

¹ Applicant's Response to Data Request Set 1B TN-64486

² Report of Conversation Re Delineation of Areas with Paleo Resources TN-66264

Paleontological Resources Delineation Phase Excavation (Delineation Plan)

1. Energy Commission staff must receive from the applicant a Delineation Plan for paleontological resources on the project site as soon as possible. Staff has committed to a two-week review. However, the applicant will need to expedite submission of the plan, requiring no further substantive revisions, for final staff approval.
2. Once staff approves the Delineation Plan, fieldwork can begin immediately. However, the applicant will need to complete the paleontological resources delineation fieldwork in time to return the results to staff, in a form consistent with the approved plan, no later than **August 24, 2012**. The results of the delineation fieldwork must be provided in a Paleontological Resources Delineation Report that includes a recommendation on whether further delineation activities are required to adequately delineate the resource.
3. Upon review of the Paleontological Resources Delineation Report, staff will determine whether additional delineation efforts are required or not and advise the applicant of the need for further efforts by September 4, 2012.

Should this be necessary, the applicant will need to:

- a. prepare, submit, and receive approval of a supplemental Paleontological Resources Delineation Plan;
- b. execute the related fieldwork; and
- c. interpret collected data and prepare a Supplemental Paleontological Resources Delineation Report.

Energy Commission staff must receive from the applicant the Supplemental Paleontological Resources Delineation Report, if necessary, no later than **December 3, 2012**.

As a basis for developing the schedule above, staff provides the following comments on your recent paleontological resource submittals.

Energy Commission staff has reviewed the Rio Mesa Application for Certification (AFC), the Confidential Paleontological Technical Report (Confidential Appendix 5.8a of the AFC), the Paleontology Literature and Records Review (AFC, Appendix 5.8B), the Geoarchaeological Sensitivity Analysis, the Addendum to the Paleontological Technical Report, the applicant's objection to Data Requests Nos. 126-130, information in the applicant's Response to Data Requests Nos. 126-127c, and participated in workshops, teleconferences, phone calls and email transmissions with applicant representatives and the applicant's consultants.

Mr. Todd Stewart

July 30, 2012

Page 3

As presented in the AFC, the project owner's paleontological consultant discovered a previously unknown paleontological resource that, since discovery, has yielded nearly 800 vertebrate fossils. The applicant's paleontological consultant indicated that the fossils recently discovered on the project site are classified using the Bureau of Land Management's (BLM) Potential Fossil Yield Classification system as Class 4a, which is considered to be a high value paleontological resource.

The areal extent and thickness of this deposit containing the paleontological resources is unknown. The average density of fossils within this unit is also unknown. In order to address project impacts to this recently discovered resource, its location within and around the project must be determined. Staff concluded that it is likely that subsurface excavation will be required to determine the thickness and lateral extent of this deposit.

While the AFC provided proposed mitigation measures related to the discovery of fossils during construction excavations, there was no discussion regarding the potential significant impact to existing paleontological resources caused by heliostat pedestal installation. The insertion of heliostat pedestals using vibratory techniques will not allow the discovery and recovery of in-place fossils. Where encountered by this construction method, the fossils will be destroyed and no scientific value of these resources realized. Staff provided the project owner with data requests (Set 1B, Nos. 126 - 130) in an attempt to understand the areal extent, thickness and fossil density of the fossil bearing unit. The applicant objected to the data requests. The applicant argued that the information requested by staff was not reasonably available to the applicant. The applicant stated that further delineation of the paleontological resource could not be reasonably done without significant excavations, which would be extremely time consuming and expensive.

Staff continues to conclude that it will be necessary to excavate a number of trenches in the proposed project area to delineate the horizontal and vertical extent of the fossiliferous strata and evaluate the density of fossils within the strata to determine the significance of this resource. Staff has repeatedly emphasized this position with the applicant on numerous occasions and requested that the applicant provide an excavation plan to assure excavations will yield the information necessary to adequately delineate the resource. Staff provided the applicant with some guidance on the type of elements that should be addressed in an excavation plan.

Specifically staff identified the following as the type of elements required in an excavation plan to adequately delineate the paleontological resource:

- 1) Provide a revised excavation map (Figure 1, Combined Paleosol and 2011/2012 Geotechnical Points, Rio Mesa Solar Electrical Generating Facility, prepared by URS, dated 4/11/2012), that shows the proposed and previous (geotechnical) excavations on the amended site.
- 2) Provide the sequence of the proposed exploration. Will excavation start at one location and logically progress across the site?

- 3) Describe the specific equipment planned to perform the excavations.
- 4) Describe the excavation methodology. How will the excavations be advanced?
- 5) Discuss the final proposed depth of excavations. What are the contingencies for addressing conditions that prevent attaining final proposed depth.
- 6) Provide the sample collection and curation methodologies and sample depth intervals planned.
- 7) Provide the method planned for recording subsurface conditions.
- 8) Provide a description of the analyses to be performed on collected samples.
- 9) Provide a description of how the results of the analyses will be reported.
- 10) Describe the content of the resulting report.
- 11) Provide the schedule for conducting the field work, analyzing samples, interpreting resulting data and providing a report documenting findings.

Staff understands that subsurface excavations will be performed for additional geotechnical evaluation and geoarcheology exploration. Staff recommended that these additional excavations be incorporated into a "site wide excavation plan" that would include the paleontological resources delineation excavations to consolidate resources and minimize expenses while obtaining site wide subsurface information suitable for use by multiple resource disciplines.

The applicant's consultant assured staff that the Geoarchaeological Research Design (*Geoarchaeological Research Design, BrightSource Energy, Inc., Rio Mesa Solar Project, Riverside County, California* (Research Design) dated May 2012) incorporated the elements previously discussed that are necessary to adequately delineate the paleontological resource. However, staff found that these elements were not addressed for paleontological resources in the referenced document.

On June 28, 2012, staff provided applicant with a letter providing comments on the Geoarchaeological Research Design. Many of the comments provided to applicant for the Geoarchaeological Research Design are applicable for the development of a Paleontological Resources Delineation Plan. Especially the description of the protocol for logging excavated trenches.

The field methods protocol for the observation and documentation of each trench, as described in the Geoarchaeological Research Design, will be to:

- a. produce a measured profile drawing of one sidewall from each excavated trench, where the drawings are produced on the basis of in-trench observation and the cleaning of trench sidewalls, as necessary, to accurately trace out stratigraphic contacts;
- b. produce reasonably detailed written descriptions, appropriate to the character of each type of stratigraphic unit, of each lithostratigraphic and pedostratigraphic unit down a one meter-wide, shaved profile section along the sidewall for which the measured profile drawing is made;

Mr. Todd Stewart

July 30, 2012

Page 5

- c. produce a photograph of the measured profile sidewall, with a metric scale and north arrow;
- d. for every five linear meters of trench edge, screen a small (3, 5 gallon buckets) sample of sediment from the major lithostratigraphic units in the measured profile, or, where lithostratigraphic units are not apparent, from arbitrary levels in each measured profile, every 0.5 meters of depth, through 1/4 inch hardware cloth; and
- e. collect enough soil humate samples, in the absence of other reliable chronometric data, to reliably assay and radiocarbon date the master stratigraphic column for each landform and each major landform feature, where the total number of such samples for the entirety of the subject phase of Paleontological resource delineation will not exceed 75.

Staff requests that this information be incorporated into the Delineation Plan. Staff believes that the incorporation of the above comments into the plan, and the execution of the resultant plan, would provide the data necessary to adequately delineate the lateral and vertical extent of the paleontological resource and adequately assess the potential impacts of the proposed project's construction and operation on paleontological resources buried beneath the surface of the proposed project area; and refine the extent of construction monitoring that would be necessary, should the project be approved. The U.S. Bureau of Land Management's "Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources" supports this approach and also be viewed at:

http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2009.Par.38537.File.dat/IM2009-011_att1.pdf

Staff also requests that the applicant provide to staff regular, but at least monthly, status updates on the progress of these data requests. Please confirm the applicant's intent to provide staff with the information requested in this letter no later than **August 10, 2012**. Because this information is absolutely critical to staff's analysis, any objection to providing the requested information in the timeframe noted above will necessitate staff bringing the matter before the Rio Mesa SEGF Committee with a motion to compel. If you have any questions, please call me at (916) 651-3765 or e-mail me at pierre.martinez@energy.ca.gov.

Sincerely,

Pierre Martinez, AICP
Project Manager

cc: Docket 11-AFC-4
Casey Weaver, Energy Commission



**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 *RIO MESA SOLAR*
*ELECTRIC GENERATING FACILITY***

**DOCKET NO. 11-AFC-04
PROOF OF SERVICE
(Revised 7/11/12)**

APPLICANTS' AGENTS

BrightSource Energy, Inc.
Todd Stewart, Senior Director
Project Development
1999 Harrison Street, Suite 2150
Oakland, CA 94612
tstewart@brightsourceenergy.com

BrightSource Energy, Inc.
Michelle Farley
1999 Harrison Street, Suite 2150
Oakland, CA 94612
mfarley@brightsourceenergy.com

BrightSource Energy, Inc.
Brad DeJean
1999 Harrison Street, Suite 2150
Oakland, CA 94612
e-mail service preferred
bdejean@brightsourceenergy.com

APPLICANTS' CONSULTANTS

Grenier and Associates, Inc.
Andrea Grenier
1420 E. Roseville Parkway
Suite 140-377
Roseville, CA 95661
e-mail service preferred
andrea@agrenier.com

URS Corporation
Angela Leiba
4225 Executive Square, Suite 1600
La Jolla, CA 92037
angela_leiba@urscorp.com

COUNSEL FOR APPLICANTS

Ellison, Schneider, & Harris
Christopher T. Ellison
Brian S. Biering
2600 Capitol Avenue, Suite 400
Sacramento, CA 95816-5905
cte@eslawfirm.com
bsb@eslawfirm.com

INTERESTED AGENCIES

Mojave Desert AQMD
Chris Anderson, Air Quality Engineer
14306 Park Avenue
Victorville, CA 92392-2310
canderson@mdaqmd.ca.gov

California ISO
e-mail service preferred
e-recipient@caiso.com

Bureau of Land Management
Cedric Perry
Lynnette Elser
22835 Calle San Juan De Los Lagos
Moreno Valley, CA 92553
cperry@blm.gov
lenser@blm.gov

Katherine Lind
Tiffany North
Office of Riverside County Counsel
County of Riverside
3960 Orange Street, Suite 500
Riverside, CA 92501
e-mail service preferred
klind@co.riverside.ca.us
tnorth@co.riverside.ca.us

INTERVENORS

Center for Biological Diversity
Lisa T. Belenky, Senior Attorney
351 California Street, Suite 600
San Francisco, CA 94104
e-mail service preferred
lbelenky@biologicaldiversity.org

Center for Biological Diversity
Ileene Anderson
Public Lands Desert Director
PMB 447, 8033 Sunset Boulevard
Los Angeles, CA 90046
e-mail service preferred
ianderson@biologicaldiversity.org

**ENERGY COMMISSION –
DECISIONMAKERS**

CARLA PETERMAN
Commissioner and Presiding Member
carla.peterman@energy.ca.gov

KAREN DOUGLAS
Commissioner and Associate Member
e-mail service preferred
karen.douglas@energy.ca.gov

*Kenneth Celli
Hearing Adviser
e-mail service preferred
[*ken.celli@energy.ca.gov](mailto:ken.celli@energy.ca.gov)

Jim Bartridge
Advisor to Presiding Member
jim.bartridge@energy.ca.gov

Galen Lemei
Advisor to Associate Member
e-mail service preferred
galen.lemei@energy.ca.gov

Jennifer Nelson
Advisor to Associate Member
e-mail service preferred
jennifer.nelson@energy.ca.gov

ENERGY COMMISSION STAFF

Pierre Martinez
Project Manager
pierre.martinez@energy.ca.gov

Lisa DeCarlo
Staff Counsel
lisa.decarlo@energy.ca.gov

Eileen Allen
Commissioners' Technical
Advisor for Facility Siting
e-mail service preferred
eileen.allen@energy.ca.gov

**ENERGY COMMISSION –
PUBLIC ADVISER**

Jennifer Jennings
Public Adviser's Office
e-mail service preferred
[*publicadviser@energy.ca.us](mailto:publicadviser@energy.ca.us)

DECLARATION OF SERVICE

I, Cenne Jackson, declare that on July 30, 2012, I served and filed a copy of the attached document dated July 30, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: <http://www.energy.ca.gov/sitingcases/riomesa/index.html>.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

- Served electronically to all e-mail addresses on the Proof of Service list;
- Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

AND

For filing with the Docket Unit at the Energy Commission:

- by sending electronic copies to the e-mail address below (preferred method); **OR**
- by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-04
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

- Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Originally Signed By Cenne Jackson