

CALIFORNIA ENERGY COMMISSION

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SACRAMENTO, CA 95814-5512



December 6, 2011

Clay Jensen, Senior Director
BrightSource Energy, Inc.
1999 Harrison Street, Ste. 2150
Oakland, CA 94612

DOCKET	
11-AFC-2	
DATE	Dec. 06 2011
RECD.	Dec. 06 2011

RE: HIDDEN HILLS SOLAR ELECTRIC GENERATING SYSTEM (11-AFC-2), DATA REQUESTS, SET 1D (#'s 97-135)

Mr. Jensen:

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks 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.

This set of data requests (Set 1D, #'s 97-135) is being made in the areas of Cultural Resources (#'s 97-134), and Waste Management (# 135). Written responses to the enclosed data requests are due to the Energy Commission staff on or before January 6, 2012, or at such a 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, Sec.1716 (f)). If you have any questions, please call me at (916) 654-4894 or email me at mike.monasmith@energy.state.ca.us.

Sincerely,

Mike Monasmith
Project Manager

cc: Docket (11-AFC-2)
Proof of Service List

Technical Area: Cultural Resources

Authors: Kathleen Forrest and Michael D. McGuirt

Where the disclosure of information on the location or the character of cultural resources may create a substantial risk of harm, theft, or destruction, one must submit such information under cover of an application for confidential designation pursuant to title 20, California Code of Regulations, section 2505.

ANALYTIC FRAMEWORK

Project Description

BACKGROUND

Specific data on the lateral extent, the height above ground, and the subsurface depth of different project components is critical to the establishment of the appropriate framework for an environmental analysis. Based on information provided in AFC sections 1 and 2, and Appendices 2A–C and G, staff is unable to discern the anticipated depth to which construction of a number of key project components would disturb the ground, including the excavation depths for the power tower foundations, steam turbine generators, pipeline trenches for the natural gas pipeline, and pylons for the heliostat assemblies. Absent this information, staff has no way to delineate the appropriate subsurface extent of the cultural resources analysis for the proposed project. Such information may also facilitate narrowing the scope of any subsurface investigations that may become necessary.

DATA REQUEST

97. Please identify, with as much detail as the present state of the proposed project's design will permit, where ground disturbance (surface or excavation) would occur on the proposed project site during project construction and operation, including both the overall extent of the area(s) to be disturbed and individual locations of all project components, including the facility buildings, linears, ancillary facilities, parking, roads, and temporary construction parking, laydown, and operational areas. Also, please provide the footprint (length, width, and depth) of any excavations, including foundations and test trenches. For the purposes of staff's cultural resources analysis, it is particularly critical to know the portions of the proposed project area where construction excavation would exceed one meter, or approximately three feet in depth.

Project Area of Analysis

BACKGROUND

The "project area of analysis" is a concept that staff uses to bound the geographic area in which the proposed project has the potential to affect cultural resources. The effects that a project may have on cultural resources may be immediate, further removed in time, or cumulative. They may be physical, visual, auditory, or olfactory in character. The geographic area that would encompass a consideration of all such

effects may or may not be one uninterrupted expanse. It may include the project area, which would be the site of the proposed plant (project site), the routes of requisite transmission lines and water and natural gas pipelines, and other offsite ancillary facilities, in addition to one or several discontinuous areas where the project could be argued to potentially affect cultural resources.

The preliminary configuration of the project area of analysis for staff's consideration of HHSEGS reflects the limitations that CEQA places on dual-state projects. Staff presently sees the core of the project area of analysis as the project site, which includes the areas of Solar Plant 1 and Solar Plant 2, the Common Area, and the Temporary Construction Area (Figure 2.1-2, AFC). The eastern boundary of the project site is coincident with the California-Nevada border. Elements of the project constructed in Nevada, such as the transmission lines, are not assessed by staff for environmental effects within Nevada. However, impacts resulting from project activities in California, regardless of location, and impacts to resources in California, regardless of where the impacts originate, will need to be evaluated and mitigated. Therefore, the project area of analysis for cultural resources may extend beyond California's boundaries.

Staff is presently aware of two areas in Nevada that should be discontinuous components of the project area of analysis. One of these areas encompasses the portion of the shallow step fault zone that defines the eastern edge of the project site bolson and along which the HHSEGS power tower would impose a significantly discordant visual presence. Portions of the step fault zone, which appears to be part of the State Line fault system, have been the focus of relatively intense Native American activity for at least the last two thousand years, related to the periodic presence of surface springs and seeps along the zone and to natural groves of mesquite that have become encased in an archipelago of sand dunes along the zone. The portions of the fault zone that are coincident with these mesquite groves and the surface springs and seeps, and the archaeological deposits that relate to the use of these natural resources may qualify as an archaeological landscape, a constellation of passively and actively managed natural features and material culture remains that may be significant for its association with behavioral patterns that have made an important contribution to the Native American history of this portion of the eastern Mojave Desert. Additionally, it may have potential importance for the information that it may be able to provide about the history of Native American life in the region. In order to be able to convey the potential associative significance of the potential landscape, it must reasonably retain integrity of setting, feeling, and association. Staff will need to assess whether the landscape is a historical resource for its associative values and, if so, whether the visual intrusion of the HHSEGS power tower compromises the relevant aspects of the resource's integrity. Beyond the landscape as a whole, constituent places or resources within the landscape may also be significant as stand-alone cultural resources. Among such places may be some of the named springs and seeps along the step fault zone such as Stump, Brown, and Mound springs. As part of the BLM's review obligations under Federal statute and regulation, the concept of this landscape, its potential historical significance, and the potential for the construction, operation, and maintenance of the project's transmission lines and natural gas pipeline to disturb or destroy the associative and

information values of that landscape will need to be given formal consideration, as will the potential significance of and effects to the important stand-alone resources within it.

A second area in Nevada that staff foresees as a discontinuous component of the project area of analysis encompasses Mount Charleston and other prominent peaks of the Spring Mountains. On the basis of early consultation with local Native American communities and relying also on the basic tenants of ethnogeography, it is reasonable to assume a relatively high probability that these peaks are important elements of the mythologies and religions of different Native American groups in the region. As such, staff believes that the Energy Commission needs to consider whether and how the proposed project may significantly degrade the ability of any these natural features to convey the significant associative values they may possess.

There also appear to be areas to the west of the project site that should be further discontinuous components of the project area of analysis. Prominent peaks of the Nopah Range also appear, on the basis of Native American consultation to date, to be places known and named in local Native American mythological and religious repertoires. Among the lower reaches of the range, there may also be places where the sight of the HHSEGS power tower would degrade the ability of key places and trails to convey their respective associative values.

DATA REQUEST

98. Staff has sketched out, in relatively broad strokes, a preliminary basis for the HHSEGS project area of analysis. Please refine and consolidate these areas of concern, including those outside California, and plot out the boundaries of the resultant project area of analysis on a map of no less than a 1:24,000 scale. The project area of analysis is and will remain the fundamental basis for all subsequent requests for information related to the potential effects of the proposed project on cultural resources. Staff's preliminary iteration, as noted in the Background above, is the foundation for the present cultural resources data requests. If the applicant's concept of the project area of analysis differs significantly from staff's, please provide an additional map or overlay, at a minimum of 1:24,000 scale, delineating the applicant's preferred project area of analysis and justification for excluding any areas proposed in the Background discussion above.

NATURAL AND CULTURAL CONTEXTS

Geoarchaeology

BACKGROUND

The *Cultural Resources* section of the September 2011 *AFC Supplement B, Hidden Hills Solar Electric Generating System* provides new, insightful information on the paleoenvironment and the historical geomorphology of the proposed project area that more clearly contextualizes the applicant's revised evaluations of the historical significance of identified archaeological deposits. The *Geomorphic Setting of the Project Area* subsection (p. 66) cites data from recent geotechnical and

paleontological investigations to place the project site on the floor of the axial basin of Pahrump Valley atop a broad deposit of relatively old, hardened basin fill that ranges in texture from silty clay to clayey sand. This hardened fill is apparently exposed at the surface across a broad swath of the western portion of the project site and has moderate to dense gravel lags and saltbush vegetation. Alternately, alluvial deposits of silty sand apparently cover eastern portions of the project site. These deposits have sparse to rarely dense gravel lags and creosote bush scrub vegetation. The revised geomorphic contexts that Supplement B provides for individual archaeological sites appear to draw heavily from this dichotomous description of the near-surface geology of the project site. It is unclear how the individual archaeological sites identified to date were assigned to particular geomorphic contexts between the production of the original cultural resources technical report (CH2M HILL 2011), in which the geomorphic contexts were largely undescribed, and the production of Supplement B, and whether additional fieldwork was conducted in the interim, or field data from other technical investigations was retroactively applied to the extant cultural resources data. If the latter scenario were the case, there would presumably be a new map of the surface geology of the project site or at least the data necessary to produce such a map. This data has important implications for better understanding the archaeological deposits on the project site.

Staff's initial impression of the archaeological site distribution pattern for prehistoric archaeological deposits across the project site is that the frequency of surface archaeological deposits progressively increases as one approaches the mesquite groves and surface springs and seeps of the step fault zone immediately to the east of the project site boundary. If, as Supplement B reports, the alluvial silty sands across the eastern portion of the project site thicken as one progresses toward the east, there would appear to be a strong likelihood that the archaeological deposit frequency or density across that portion of the project site is much higher than the surface survey data alone would indicate. The AFC discusses the historical significance of some of the scatters of stone tool-making debris (lithic scatters), apparently in terms of the presumed limited distributions of certain types of toolstones across the project site. The evaluations of a number of these lithic scatters cite the limited distribution of one or another toolstone as the primary causal factor in the location of particular scatters without any explicit consideration of the possible widespread distribution of those same toolstones across the project site, where the primary causal factor for archaeological site location may have been behavioral choices of the people responsible for the lithic debris. Reference to field data on the natural distributions of potential toolstones among the lag deposits of the basin fill and alluvial silty sands would provide a more rigorous case for the applicant's assertions about the causal factors for the distribution of lithic scatters across the project area landscape.

Clarification of the geologic data is critical for staff to understand the physical contexts that support the archaeological deposits in the project area of analysis and, ultimately, to develop reliable interpretations of and recommendations about the archaeological site inventory for that area.

DATA REQUESTS

99. Please provide the "Preliminary Geotechnical Report" cited in Appendix 5.4A of the AFC, in electronic format, and any subsequent geotechnical reports that have been prepared.
100. Please provide the technical report for the paleontological investigation referenced in the *Cultural Resources* section of Supplement B of the AFC (p. 66), preferably in electronic format.
101. Please provide a map, at no less than a 1:24,000 scale, of the basin fill and alluvial silty sands identified in Supplement B to be the two principal Late Quaternary sedimentary units on the project site, as well as the landforms and landform features that compose the step fault zone immediately to the east of the eastern project site boundary. As staff presently understands the geomorphology of the project site, the above two sedimentary units contribute a portion of the constituent sediments that make up the predominant landform for the project site, the floor of the local bolson. Staff needs to better understand the depositional regimes inherent to the interface between the floor of the bolson and those of the step fault zone.
102. Please identify and provide a discussion of the data that forms the basis for dating the basin fill as "likely at least Late Pleistocene in age", as indicated in the AFC Supplement B, *Cultural Resources* (p.66).
103. Please clarify whether the gravel lag on portions of the basin fill are, in fact, desert pavements and, if so, please include the location(s) of any areas of desert pavement on the geomorphic map requested above. In the AFC Supplement B, *Cultural Resources* (p. 66), the applicant explicitly states that the gravel lag of the alluvial silty sands lack the principal attributes of a classic desert pavement. However, it is still unclear whether the lag across the older basin fill possesses those same attributes and the revised archaeological site descriptions in Supplement B are equivocal on the issue. The description for site S-3 places that artifact assemblage on a desert pavement, while the descriptions for sites S-6, S-23, S-AF-1, and S-AF-2 place those assemblages on a "gravel to cobble lag resting on Plio-Pleistocene valley fill."
104. Please provide a discussion of the field methods and resultant field data on the natural distributions of potential toolstones among the lag deposits of the basin fill and the alluvial silty sands that support the AFC's interpretations of the causal relationships between particular toolstone sources and archaeological site locations. In addition, please provide a map, at no less than a 1:24,000 scale, of those natural toolstone distributions. In the absence of such data, please prepare a plan for a field study to acquire such data. Upon staff approval of the plan, execute the approved field study and submit a technical report of the results of the investigation.

BACKGROUND

The paleoenvironmental context of the potential archaeological landscape that encompasses the ancient mesquite groves, springs, and seeps across portions of the step fault zone is critical to understanding the chronology of the use of this area, the age of related archaeological sites, and the relative importance that this zone may have played in the broader ecological milieu of Pahrump Valley over the last several millennia. Although the *Environmental Setting and Depositional Environment* and *Late Quaternary Environmental Changes* subsections of the AFC Supplement B, *Cultural Resources* section provide very useful contextual information on the historical geomorphology and the paleohydrology of the project site at regional and valley-wide scales, staff needs information more specific to the probable local foci of past Native American activity.

DATA REQUESTS

105. Please develop and submit, for staff review and approval, a research design for the investigation of the paleohydrology, aboriginal water management, paleoecology, and ethnobotany of the portion of the step fault zone that stretches from Mound Spring to Stump Spring. The research design should include collaboration among professionals in the disciplines of Quaternary geology or science, geoarchaeology, economic or ethnobotany, and Great Basin or Southwest archaeology. The research design should, at a minimum, set out contexts, theory, and field methods appropriate to the investigation of the research themes above, and other themes as appropriate to establish the character and relative importance of the step fault zone, through prehistoric and historic times, for the acquisition, preparation, and consumption of multiple, key natural resources. It should facilitate the acquisition of information on the age of the mesquite groves and coppice dunes that encase them, whether the mesquite trees exhibit any physical evidence that would indicate whether and how the groves were actively managed, the antiquity of the use of springs and seeps in the step fault zone and the chronology of their flow rates, whether physical evidence exists that would indicate whether and how flows may have been actively managed in the pursuit of such goals as increasing surface flows or irrigating horticultural plots, and how the predominant vegetation associations along the step fault zone may have changed through time.
106. Once staff has approved the proposed research design, please execute the study and provide a technical report of the field and laboratory data, as well as analyses and interpretations of that data relative to the original research design.

BACKGROUND

An integral part of the construction and assessment of the cultural resources inventory for a proposed project is to research any prior work in the vicinity of the proposed project area in order to formulate sound expectations for the field research and to help assess the adequacy and interpret the meaning of the results of that research. This was the purpose and intent of staff's requests of the applicant during data adequacy to develop a discussion of the prehistoric archaeology of the immediate project area vicinity and to explain what the archaeology looks like on the ground. The discussion provided in AFC Supplement B, Cultural Resources, does not provide sufficient discussion to facilitate staff's assessment, particularly of the prehistoric archaeological site inventory. The fourth and fifth paragraphs of the *Records Search Results* subsection of Supplement B (pp. 25 and 26) provides no locational data for a number of prehistoric archaeological sites that were found as a result of previous surveys in and around Pahrump Valley, nor does it provide geomorphic or other environmental contexts for many of the sites. The absence of this information prevents staff from deriving any expectations for the prehistoric archaeological site types that would be anticipated in the proposed project area. This information is necessary for staff to assess the adequacy of the prehistoric archaeological inventory for the proposed project area, interpret the results of the inventory effort, and acquire a reasonable command of the archaeological record of the project area of analysis.

DATA REQUESTS

107. Please provide a map of a scale appropriate to the depiction of the locations of the archaeological resources in the records search referred to in AFC Supplement B, *Records Search Results* subsection.
108. Please provide further discussion analyzing the character and location of the subject resources relative to geomorphic and other relevant environmental parameters, such as surface and subsurface hydrology, vegetation associations that include significant economic plant species and support significant economic animal species, known sources of toolstone, and landforms with potential for the ascription of cultural value.
109. Please provide complete and detailed descriptions of the archaeological sites and features in the AFC Supplement B, *Records Search Results* subsection. For archaeological features, please provide, at a minimum, the dimensions, orientations, material composition, inferred construction methods, and typical associations of the subject features. For archaeological sites, please provide the dimensions, geomorphic contexts, artifact assemblage compositions, material patterning, and inferred depositional origins and taphonomy of subject sites.

Historic Context

BACKGROUND

The sparse distribution of resources critical to human life in the Mojave Desert have had a major role in shaping the patterns of the historic use of the desert from the Spanish Colonial through the American eras. The portion of the desert that encompasses the proposed project area is adjacent to the intersection of an important route of travel, the Old Spanish Trail/ Mormon Road, and the once artesian springs and seeps of the shallow step fault zone that defines the eastern edge of the project site bolson. The distribution of both historical archaeological deposits and built-environment resources in and around the proposed project area undoubtedly reflect the influence of these resources. To properly interpret the cultural resources in the project area of analysis, staff needs to be able to document and establish a relatively complete local context for any historical archaeological deposits and built-environment resources. A map of the known roads, trails, springs, seeps, ranches, way-stations, and other notable foci of historic activity in the vicinity of the proposed project area is essential for staff to contextualize the historic cultural resources in the project area of analysis.

DATA REQUEST

110. Please provide a map at a scale of at least 1:24,000 and sufficient to show the project area and the adjacent vicinity from, at a minimum, Mound Spring to Stump Spring. Depict and label places and historic features including, but not limited to, Hidden Hills Ranch, Manse Ranch, Manse Spring, Mound Spring and associated adobe, Bolling Mound and Bowman habitation sites, Stump Spring, Brown Spring, Old Spanish National Historic Trail, documented Old Spanish Trail/Mormon Road segments in Figure 3 of technical report, and any other places or historic features that are important in the history of the project area vicinity.

Archival Research

BACKGROUND

AFC Section 5.3.3.6.1 (p. 5.3-22) indicates that the following maps were reviewed to identify known historical land uses pertinent to the project site and vicinity:

- 1937 *Clark County, Nevada*, State of Nevada, Department of Highways, Sheets 1 and 3
- 1954 *Official Highway Map of Nevada*
- 1956 *Official Highway Map of Nevada*
- 1939 *General Highway Map, Nye County, Nevada*
- 1955 *Roach Lake 15'* USGS quadrangle topographic map

Staff needs to review these maps to conduct an independent assessment of the information provided.

DATA REQUESTS

111. Please provide color copies of all available historic USGS topographic maps that cover the entire project area and vicinity. Copies reduced in size are acceptable, as long as printed information on the maps is legible. Please ensure that the mode of reproduction yields copies with sharp details. Include electronic copies of the maps, where available.
112. Please provide the four maps in the AFC Appendix 5.3E-2 on one 11" x 17" overview map for reference purposes.

EFFORTS TO IDENTIFY CULTURAL RESOURCES

Efforts to Identify Archaeological Resources

BACKGROUND

Resource data provided in the AFC and Supplement B, Cultural Resources section, is not sufficient for staff to clearly identify and analyze the archaeological deposits and resources in the study area, or understand the prehistoric and historic land use behaviors that the deposits represent. Useful graphic presentation, including appropriate maps, was generally lacking. This information is essential for staff to adequately analyze cultural resources in the project area of analysis and any project-related impacts to those resources.

DATA REQUESTS

113. Please provide a U.S. Geological Survey quadrangle map at a scale of 1:24,000, with separate overlays of prehistoric, historic, ethnographic, and built environment resource locations, depicting the locations of all previously known and newly identified cultural resources compiled during the course of the applicant's efforts to construct a cultural resources inventory for the proposed project area.
114. Please provide the total number of acres surveyed to date for the proposed project, including the project site, temporary construction area(s), common area, and all buffers. Please also provide the total number of acres in the proposed project area and the regulatory buffers that had been subject to previous survey. These figures would allow the calculation of the percentage of the proposed project area that had been subject to survey prior to the recent efforts. Please include the frequency, expressed as a ratio of sites per acre, of archaeological resources found on the previous surveys the reports for which are part of the results of the record search for the project. This figure will afford staff a baseline relative to help assess the recent pedestrian survey.
115. Please review the completeness and accuracy of all DPR 523 form for the archaeological sites in the project area of analysis, correct any absent data or incorrect data, and correct all discrepancies for each resource identified in the cultural resources section of the AFC, original technical report, subsequent

Supplements to the AFC, and the DPR 523 forms applicable to this project. Please provide corrected versions of all the DPR forms and a brief summary of the corrections made. Staff found that the DPR 523 forms for the archaeological sites in the project area of analysis often did not correspond well with the descriptions of the resources in the original technical report, the AFC, or subsequent Supplements to the AFC. For example, on the DPR 523 forms for archaeological site S-3, there is an apparent discrepancy where, on the Archaeological Site Record, the site dimensions are given as 15 meters north to south and 15 meters east to west while the Sketch Map depicts the site as measuring roughly four meters square with two flake concentrations and one isolate flake. The texts of both the original technical report and Supplement B to the AFC report a third scenario whereby the site includes six stone flakes and two cores concentrated in a one meter square area. Also, the Sketch Map for site S-4 shows different dimensions than the Archaeological Site Record (ASR) provides, respectively two stone flake concentrations instead of one, and four isolate flakes external to the depicted concentrations instead of the eight reported on the ASR. The DPR form for site S-20 does not include a Sketch Map at all.

116. Please redraft and provide the Sketch Maps for the DPR 523 forms for each archaeological site to more accurately depict the locations of site data; clarify which map symbols depict mapped vegetation, landscape features, and archaeological remains; and more accurately depict components of archaeological deposits, such as flake concentrations. The Sketch Maps provided as part of the DPR 523 forms for each archaeological site do not depict site data (permanent reference points) or use standard professional map symbols that normally would provide relational accuracy of the vegetation, landscape features, and archaeological remains depicted. For example, the use of a stock oval symbol to depict a flake concentration fails to convey relevant dimensional and relational data about the archaeological remains.
117. The descriptions of the geomorphic contexts of the archaeological sites in the project area of analysis are not resource-specific and, therefore, of limited use. For example, sites CA-INY-2492, S-2, S-4, S-55 and S-11 are simply said to be in sand alluvium of late Holocene age, and, in the case of S-11, the sand alluvium is equated with Hayne's 1967 Unit G in the Las Vegas Valley. Sites S-3 and S-6 are noted to be on Plio-Pleistocene valley or basin fill, while no geomorphic context at all was provided for sites S-1 and S-23. Please expand, with reference to field observations from the recent pedestrian survey, the geomorphic contexts for each archaeological site in the project area of analysis, and ensure that this information is presented in a consistent manner across the final technical report and the final DPR 523 forms. The geomorphic context for each archaeological site should reference the broader landform or landforms that serve as the host for the archaeological deposits and provide the finer resolution description of what, if any, landform features are part of the resource-specific geomorphology, if broader landform interfaces exist on a site, what the transition zone between the landforms looks like, and describe the surface hydrological regime across the resource.

118. Staff has not been able to find an explanation of the temporary archaeological site numbering system anywhere in the documentation that the applicant has submitted to date. Please provide an explanation that would clarify what the letters in the designations stand for, why there are numbering gaps between many of the designated sites, and what the status is of the applicant's application for permanent trinomials.
119. Please provide the DPR 523 forms for data collected on archaeological isolates within the project area. Also, please clarify or correct discrepancies between appendix D of the original technical report, which lists the isolates, and the plots of the isolates in appendix A of that same document.
120. Archaeological site S-2 appears to be a unique resource in the cultural resource inventory for the project area of analysis. The site includes a small, shallow, roughly rectangular pit (130 cm x 57 cm x 17 cm) that was identified on the original site form to be consistent with a roasting pit and on the September 2011 revision to the form to be a mesquite roasting pit. The applicant cites no source nor offers any rationale for ascribing a specific function to this feature. Identification as a mesquite roasting pit is questionable as the pit lies approximately one-third to one-half of a mile from the nearest mesquite tree. Please provide additional discussion and support for the function ascribed to the feature. Staff would further appreciate the discussion to include considerations of other possible functions for the pit, such as a cremation pit, an interpretation that would not be inconsistent with uses of the project area proper that have been expressed by Native Americans during meetings with staff.
121. Staff's analysis of the proposed project's potential to affect significant archaeological resources will reach beyond the identification and evaluation of individual archaeological sites and will consider the potential presence and significance of multi-site resources, such as archaeological districts or landscapes. If staff were to identify any such district or landscape, each individual archaeological site would need to be evaluated in terms of its historical significance as a stand-alone resource and as a potential contributor to a broader, multi-site resource. With this regulatory framework in mind, please provide a discussion of whether there may be prehistoric or historic themes that may be reflected by different subsets of archaeological sites in the project area of analysis. If the applicant comes to the conclusion that any such districts or landscapes exist, please revise the evaluations of the historical significance of those individual sites that may fall into one or more of those broader resources to include consideration of each site's potential to contribute to the historical significance of those broader resources.

Efforts to Identify Built-environment Resources

BACKGROUND

The AFC does not provide any information on above-ground structures and facilities that may be more than 45 years old, simply stating that no historic architectural standing structures are present in the project area. Additional information is needed for staff to complete their analysis.

DATA REQUESTS

122. Please identify all structures, including nearby residences, more than 45 years old, that are within one-half mile of the project site(s) and from which a major portion of the HHSEGS project will be visible. Please have an architectural historian complete any evaluations, provide copies of completed DPR 523 forms for each resource, and ensure that each form contains a discussion of the significance of the building or structure under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D). For those structures and properties evaluated as eligible, please have the architectural historian evaluate whether the integrity of setting will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.
123. Please provide a detailed history of the project site in the modern period, including the age and history of the existing subdivision and, if older than 45 years, whether it might be a historic resource. Include information regarding whether the subdivision is an overlay on an earlier landscape and what percentage of the site was graded for the existing layout. If it is over 45 years old, have an architectural historian complete the evaluation, provide a completed DPR 523 form for each resource, and ensure that it contains a discussion of the significance of the site under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D).

BACKGROUND

The Old Spanish Trail/Mormon Road was a well-travelled trade route through the area and portions of it have been listed on the National Register of Historic Places. The Tecopa Chapter of the Old Spanish Trail Association has identified and recorded portions of the trail still extant in the Mojave Desert, including in the project vicinity. While the segment adjacent to the project area is not listed as a contributing element to the National Register-listed Old Spanish Trail/Mormon Road Historic District, this segment and other extant segments in the project area of analysis may have significance at the local or state level and may then be considered historical resources for the purposes of CEQA. If impacted by the project, mitigation may be required.

The technical report and Supplement B also acknowledge the presence of a number of other roads and trails potentially located within the project area of analysis, such as the wagon road connecting Hidden Hills Ranch with Trout Canyon. It does not appear that these resources have been evaluated and, if within the project area of analysis, need to be surveyed, recorded and evaluated for their significance as historical resources pursuant to CEQA.

DATA REQUESTS

124. Please provide a map, at no less than a 1:24,000 scale, showing all of the roads and trails/segments within the project area of analysis, regardless of age. Identify the name and ages of the trails and roads to the extent possible. Consult with the Tecopa Chapter of the Old Spanish Trail Association to

ensure all segments of the Old Spanish Trail within the project area of analysis are identified on the map.

125. Present a complete history of the Old Spanish Trail. Describe, to the extent possible, how the trail was used in prehistoric times. The Paiute referred to the trail as the Indian Trail during the August 2, 2011 meeting. Please describe any cultural significance the trail plays in the history of the Paiute or other Native American groups in the area. Additionally, the history of the trail in the AFC stops at year 1863. Please complete and provide a description of the history of the trail. If any additional trail segments are present within the project area of analysis, provide a completed DPR 523 form for each resource, prepared by the appropriate resource specialist, and ensure that each form contains a discussion of the significance of the segment, both individually and as part of a potential district, under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D). For those segments evaluated as eligible, please have the appropriate specialist provide an evaluation of whether the integrity of setting will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.
126. Please identify and provide an evaluation of any other linear resources within the project area of analysis, including trails, wagon roads, highways, transmission lines, telegraph lines, or telephone lines that are 45 years old or older. If any additional linear resources are present within the project area of analysis, provide a completed DPR 523 form for each resource, prepared by the appropriate resource specialist, and ensure that each form contains a discussion of the significance of the linear resource, both individually and as part of a potential district, under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D). For those resources evaluated as eligible, please have the appropriate specialist provide an analysis whether the integrity of setting will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.

EFFORTS TO EVALUATE THE HISTORICAL SIGNIFICANCE OF CULTURAL RESOURCES

Evaluation of the Historical Significance of Archaeological Resources

BACKGROUND

A key aspect of the cultural resources analysis for any proposed project is the need for staff to determine which of the cultural resources that are known or found to be in a project area of analysis are of historical significance and would, therefore, warrant further consideration under CEQA. There are a number of the archaeological sites that the applicant found as a result of the pedestrian survey of the project area that staff can agree are not of historical significance on the basis of surface observations alone. There is, however, a subset of sites that surface observations alone are not sufficient to support a determination of historical significance. This latter subset requires further field investigation to document the character and the integrity of the data sets present in each site, and to then derive informed assessments of the historical significance of those data sets.

DATA REQUESTS

127. Please prepare and provide, for staff's review and approval, research designs and work plans for field investigations that are to support the evaluations of the historical significance of archaeological sites CA-INY-2492, S-2, S-4, S-6, S-10, S-11, S-23, and S-AF-1. Staff envisions the designs and work plans as one integrated document.
128. Once the research designs and work plans have been approved, please execute the approved investigations and provide a summary report of the total field investigation effort and reasoned arguments on the historical significance of the subject archaeological sites that explicitly reference the new data from the field investigations.

Evaluation of the Historical Significance of Ethnographic Resources

BACKGROUND

As discussed in Data Adequacy, the pre-filing meeting held on August 2, 2011 with the local Native American groups, specifically the Pahrump Band of Paiute and Las Vegas Paiute, clearly indicated a spiritual connection with the Pahrump Valley and the project site. The tribal members present indicated that different bands of Paiute have traditionally utilized the area, and the AFC indicates other groups were also utilizing the area. The summary of the ethnography of the Pahrump Valley included in the AFC and Supplement B provides an introduction into the general ethnography of the Pahrump Valley. A detailed ethnographic discussion of the use of the Pahrump Valley by the Southern Paiute and Panamint Shoshone groups is needed for staff to understand and determine the potential significance of places within the project area of analysis to the local Paiute groups, and identify any impacts the project may have on those cultural values.

DATA REQUESTS

129. Please provide a detailed discussion of the ethnography of the Southern Paiute and Panamint groups in relation to the project area of analysis.
130. Please provide a detailed description of how the Southern Paiute and Panamint groups utilized the project area of analysis. Describe how the two (or more) groups may have interrelated; what resources were being utilized and how that use is manifested in the archaeological record.
131. Please provide a detailed discussion of the religious or spiritual significance of the project area of analysis and Pahrump Valley to the various peoples using it. Identify the various land forms described in the songs described in Supplement B in relation to the project area of analysis, their significance to the Paiute or other Native American groups and how they might be impacted by the project. Identify any areas outside of the project footprint that are or may have been sacred to Native American groups that the project may have a visual affect on, including Mount Charleston and the Spring Mountains to the

east and the Nopah Range to west. Discuss the significance of the viewshed(s) and impact of towers on the viewshed(s), from a Native American cultural perspective. Discuss whether a cultural landscape or traditional cultural property is present and, if so, whether it would be a historical resource for the purposes of CEQA. Provide a completed DPR 523 form for each resource and ensure that the form contains a discussion of the significance of the resource, both individually and as part of a potential district, under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D) prepared by the appropriate resource specialist. For those segments evaluated as eligible, please have the appropriate specialist evaluate and provide a discussion of whether the integrity will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.

132. The Pahrump Paiute members present at the August 2, 2011 meeting described cremation and burial activity within the project area of analysis. Please provide a discussion of the local Native American traditions for the disposal of the dead and the physical remains that might be found as a result. If any indications of this activity are present within the project area of analysis, describe the impact the project may have on these sites or activities and how to best avoid impacting these sites. Please provide a completed DPR 523 form for each resource and ensure that each form contains a discussion of the significance of the resource under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D). For those resources evaluated as eligible, please evaluate whether the integrity of setting will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.

Evaluation of Historical Significance of Built-Environment Resources

BACKGROUND

In addition to Stump Spring, Supplement B discusses a number of other springs in the general project vicinity, including Mound Spring, Manse Spring, and Bolling Mound Spring. Both Stump Spring and Mound Spring are noted to have had historic-period adobe structures adjacent to them that may have been stations along the Old Spanish Trail, and possibly associated with ranching activity. The likely availability of water and structural remains would indicate some level of occupation at these sites or in general proximity to them. Additionally, the Paiute and Panamint are known to have practiced some limited agriculture and evidence of their use of these sites in the pre-historic and historic eras has been documented. Such resources could be eligible for their association with the Old Spanish Trail and the settlement of the Mojave Desert and project area under criterion A, individually and collectively.

DATA REQUESTS

133. Please provide a map showing the location of all known springs in the project area of analysis. This information may be included on, or as an overlay to, another of the requested maps; a separate map is not required.
134. Please provide a detailed discussion regarding the potential for agricultural activities in the project area of analysis. Describe and record any physical

evidence, such as irrigation works or ditches that would indicate the presence of agricultural activity. If such works are present, provide a completed DPR 523 form for each resource and ensure that each form contains a discussion of the significance of the resource under CEQA Section 15064.5(a)(3), (A)(B)(C) & (D), both as individual resources and as a thematic or discontinuous district, prepared by the appropriate resource specialist. For those properties evaluated as eligible, please have the appropriate specialist evaluate and provide a discussion of whether the integrity of setting will be significantly impacted by construction of the HHSEGS such that the significance of the resource will be materially impaired.

Technical Area: Waste Management

Author: Ellie Townsend-Hough

BACKGROUND

The Hidden Hills AFC (Section 5.14-8) states that during construction there will be a combination of hazardous and nonhazardous materials (both solid and liquid) that will be generated. The AFC summarizes the removal and proper disposal of these waste streams by means that include collection at satellite accumulation containers near the points of generation; daily waste removal to a contractor's waste storage area located in the construction laydown area; and, periodic 90-day removal and transportation of accumulated waste to an authorized hazardous waste management facility.

DATA REQUEST

135. Given the proposed project's proximity to Nevada, and the absence of hazardous waste collection facilities in California, please provide specific details on the Applicant's plans for nonhazardous and hazardous wastes that potentially would be generated at the facility as summarized in both Table 5.14-2 (construction phase) and Table 5.14-3 (operation phase). Please fully discuss:
 - a. Disposal of nonhazardous materials, including the type and volume of waste expected to be generated (provide responses for both the construction phase and the operation phase), the facility that will receive the waste, its location, its current level (volume) of use, and its expected annual use on a cumulative basis (i.e. overall use by other existing and reasonably foreseeable facilities and projects in California and Nevada).
 - b. Disposal of hazardous materials, including the type and volume of waste expected to be generated (provide responses for both the construction phase and the operation phase), the facility that will receive the waste, its location, its current level (volume) of use, and its expected annual use on a cumulative basis (i.e. overall use by other existing and reasonably foreseeable facilities and projects in California and Nevada).



**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 *HIDDEN HILLS SOLAR ELECTRIC
GENERATING SYSTEM PROJECT*
HIDDEN HILLS SOLAR HOLDINGS, LLC**

DOCKET NO. 11-AFC-2

PROOF OF SERVICE
(Revised 11/16/2011)

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*indicates change

DECLARATION OF SERVICE

I, Mike Battles, declare that on, December 6, 2011, I served and filed copies of the attached Data Requests, Set 1D, dated December 6, 2011. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, 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/hiddenhills/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:

- X 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:

- X by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the 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-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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
mlevy@energy.state.ca.us

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
Mike Battles