URS

July 05, 2012

Pierre Martinez
Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Subject: Applicant's Response to Data Requests, Set 2B (#173-185)
Rio Mesa Solar Electric Generating Facility (11-AFC-04)

Dear Mr. Martinez:

On behalf of Rio Mesa Solar I, LLC and Rio Mesa Solar II, LLC, collectively the "Applicant" for the Rio Mesa Solar Electric Generating Facility project ("Rio Mesa SEGF"), we submit the Applicant's Response to Data Requests, Set 2B (#173-185) in response to staff data requests filed on June 11, 2012.

Sincerely,

Angela Leiba, Vice President
Senior Project Manager/ Environmental Department Manager

Enclosure

cc: POS List
Project File

Applicant's Response to Data Requests, Set 2B (Nos. 173-185)

for the

Application for Certification

for the

Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF)

(11-AFC-04)

Submitted to the

California Energy Commission

Submitted by

Rio Mesa Solar I, LLC

Rio Mesa Solar II, LLC

July 5, 2012

Contents

Introduction

Attached are responses from Rio Mesa Solar I, LLC and Rio Mesa Solar II, LLC, (collectively the "Applicant") to the California Energy Commission (CEC) Staff's Data Requests Set 2B (Nos. 173 – 185). Staff served these data requests on June 11, 2012. The responses are grouped into the following disciplines: Cultural Resources and Alternatives. Responses are presented in the same order provided by CEC staff, and are keyed to the data request number (173 through 185). Tables and attachments are numbered in reference to the data request number.

On July 2, 2012, Applicant provided notice of its objections pursuant to Title 20, California Code of Regulations, Section 1716(f). Applicant objected to Data Responses 174, 175, 177, and 178. There appears to be a typo in CEC Staff Data Request Set 2B. Staff has not issued a Data Request 176.

In addition to Applicant's responses below, additional confidential information responding to Data Request 179 will be submitted directly to the CEC Executive Director with an application for confidentiality.

Cultural Resources (Nos. 173-179)

Data Request:

173. Please provide the following additional information about each feature referred to as a "cleared circle" that the URS CRTR identifies as a "naturally occurring plant scar," including but not limited to the 35 features mentioned as part of sites CA-Riv-1746, CA-Riv-1748, CA-Riv-6538, PVM-MK-056, PVM-MN-060, and PVM-MN-067:

a. Photographs of each cleared circle.

b. A list of attributes used by URS to define prehistoric cleared circles on the project site;

c. A list of attributes used by URS to define historic cleared circles on the project site;

d. A list of attributes associated with "plant scars" by McAuliff and McDonald 2005 and used by URS to define naturally occurring cleared circles on the project site;

e. A description of each cleared circle detailing the specific attributes identified in each case, consistent with established attributes for cleared circles and their causes, and justification for the determination of the type of each cleared circle.

Response:

a. Photographs of each cleared circle are provided as Attachment DR 173-1.

See the following responses to 173b., 173c., and 174c. for lists of attributes that URS applied when identifying and interpreting the "cleared circles" as prehistoric, historic, and/or naturally occurring. However, the attributes for these categories have overlapping characteristics. Therefore, while context was the primary factor used in identification, the identification process is subjective.

b. Surface morphologies of prehistoric cleared circles:

- Very shallow, saucer-like depressions of the same diameter range as plant scar mounds
- Centers of depression are typically a few centimeter lower than the planar surface of the surrounding pavement
- Clasts on surfaces of depressions are well sorted in size and significantly smaller than clasts of the surrounding pavement
- Perimeters of depressions typically contain a diffuse ring of clasts that are significantly larger than clasts in the central parts of mounds
- Context: presence of prehistoric artifacts within circle, and/or prehistoric trails or features in close proximity

c. Surface morphologies of historic-period cleared circles:

- Very shallow, saucer-like depressions of the same diameter range as plant scar mounds
- Centers of depression are typically a few centimeter lower than the planar surface of the surrounding pavement
- Clasts on surfaces of depressions are well sorted in size and significantly smaller than clasts of the surrounding pavement
- Perimeters of depressions typically contain a diffuse ring of clasts that are significantly larger than clasts in the central parts of mounds
- Context: presence of historic-period military artifacts within the feature or features in close proximity

d. Surface morphologies of plant scar mounds:

- Light-colored mounds that stand out prominently against the background of the surrounding, dark varnished pavement
- Range from 2 to 6 m in diameter
- Centers elevated up to approximately 25 cm above the surrounding pavement
- Clasts on surfaces of mounds are well sorted in size and significantly smaller than clasts of the surrounding pavement
- Perimeters of mounds typically contain a diffuse ring of clasts that are significantly larger than clasts in the central parts of mounds
- Plants are generally absent from mounds
- *URS ADDITION - Context: Overall absence of associated prehistoric or historic-period artifacts and/or features*

Surface morphologies of plant scar depressions:

- Very shallow, saucer-like depressions of the same diameter range as plant scar mounds
- Centers of depression are typically a few centimeter lower than the planar surface of the surrounding pavement
- Clasts on surfaces of depressions are well sorted in size and significantly smaller than clasts of the surrounding pavement
- Perimeters of depressions typically contain a diffuse ring of clasts that are significantly larger than clasts in the central parts of mounds
- Clasts on surfaces of depressions are tightly packed and form a stone pavement
- Very little fine soil is exposed (less than 5 percent) and is not significantly different from the exposure of fine soil on surrounding areas of desert pavement
- Surface clasts within depressions are lightly to moderately covered with rock varnish. However, these varnish coatings are neither as dark nor as thick as rock varnish on clasts of the surrounding pavement

- *URS ADDITION - Context: Overall absence of associated prehistoric or historic-period artifacts and/or features.*

e. Tabulated summary of the specific attributes identified for each cleared circles, interpretation and justification for the type determination are provided as Attachment DR 173-2.

Data Request:

174. Please submit a plan for staff review and approval for the testing of short-term bivouac sites to determine if subsurface concentrations of metal objects are present. At a minimum, the plan needs to include a map showing the locations of proposed test sites, justification for site selection, and an explanation of the methodology for testing. If necessary, staff will meet with the applicant and/or their consultant to finalize the test sites and methodology.

Response:

On July 2, 2012, Applicant provided notice pursuant to Cal. Code Reg. Sec. 1716(f), objecting to this data request.

Data Request:

175. *Following staff's approval of the testing plan (DR174), please test specified sites, using metal detectors or magnetometer devices, to identify potential hot spots of subsurface concentrations of metal objects.*

Response:

On July 2, 2012, Applicant provided notice pursuant to Cal. Code Reg. Sec. 1716(f), objecting to this data request.

There appears to be a typo in CEC Staff Data Request Set 2B. Staff has not issued a Data Request Number 176.

Data Request:

177. Please add the locations of the surveyed features on the site maps for the individual sites.

Response:

On July 2, 2012, Applicant provided notice pursuant to Cal. Code Reg. Sec. 1716(f), objecting to this data request.

Data Request:

178. Please incorporate the findings into the eligibility evaluation of any sites on which they appear, in terms of their potential importance under California Register of Historic Resources Criterion 4

(National Register of Historic Places Criterion D) to provide information on the history of the sites as contributors to the DTC Cultural Landscape.

Response:

On July 2, 2012, Applicant provided notice pursuant to Cal. Code Reg. Sec. 1716(f), objecting to this data request.

Data Request:

179. Please provide a single U.S. Geological Survey quadrangle map for the transmission line corridor, at a scale of 1:24,000, depicting the following items:

a. Locations of all previously known and newly identified cultural resources, identified for the current project, as shown on previously provided maps within the CRTR;
b. Each planned transmission pole location;
c. Each proposed pull site;
d. The BLM Right of Way (ROW) boundary for the transmission line and all its components;
e. 50-foot Energy Commission-required survey buffers on either side of the transmission line and access road, and 200-foot buffer beyond the project site boundary.

Response:

The response to DR 179 will be provided under confidential cover.

Alternatives (Nos. 180-185)

Data Request:

180. Please provide the following additional information:

- *a. Information on the slope of the alternative site. Include shape files of the site boundaries and a map showing a possible project site and footprint. Describe the topography and elevations in the areas;*
- *b. Information on the site access from public roads in the area;*
- *c. Please provide a detailed map showing the route for a transmission line interconnection at the Colorado River Substation. Estimate a cost for the generation tie line to the Colorado River Substation and compare those costs to the known or estimated transmission costs for the Rio Mesa SEGF project;*
- *d. Information and a map showing a potential connection to a gas pipeline in the vicinity;*
- *e. Details on the individual water supply wells in the area, including the number of wells and current uses. Discuss any water allocations for agricultural use, and identify the potential source(s) of water for this alternative;*
- *f. Information on habitat types and protected plant and wildlife species that could be present in the area. Include data obtained from a California Natural Diversity Database (CNDDB) record search for the area, and a map illustrating CNDDB data and distribution;*
- *g. Information on the sensitivity of the area for cultural resources and the potential for discovery of cultural artifacts. Include information based on a California Historic Resource Information System literature search and contact with the Native American Heritage Commission. This information should be provided as a legible map depicting the cultural sites, and must be submitted under confidential cover.*
- *h. Description of the economic viability of this alternative compared to the Rio Mesa SEGF project.*

Response:

Since Applicant filed the AFC for the RMS project, BrightSource has continued to evaluate the Sonoran West project site, and BrightSource intends to develop both projects. As noted below, Applicant considers the Sonoran West project site to be equivalent to the RMS project site in terms of general site conditions and availability of infrastructure. The environmental impacts of a project on the Sonoran West site are expected to be similar to the impacts of a project on the RMS site. The Sonoran West site would not avoid any significant impacts that may occur on the RMS site. However, Sonoran West would not meet key project objectives, including the attainment of a commercial online date of 2015 as required in the Power Purchase Contract with Southern California Edison. While the Sonoran West site cannot meet the primary project objectives of the RMS project, Applicant ultimately intends to pursue both projects and believes that the Commission should consider both projects as potential contributors to the state's renewable energy, greenhouse gas and economic goals.

a. Information on the slope of the alternative site. Include shape files of the site boundaries and a map showing a possible project site and footprint. Describe the topography and elevations in the areas.

- *Site boundaries & Project footprint:* (See "Attachment DR 180-1")
- *Topography & Slope:* (See "Attachment DR 180-1" for further illustration of slope).
    - In general the site is characterized by a very flat (less than 5 percent slope) northeasterly draining watershed.

b. Information on the site access from public roads in the area.

- *Public Road Access:* (See "Attachment DR 180-1")
    - The primary and secondary access roads to the site are existing public roads (Powerline Road) and/or OHV trails (trail extending south and parallel to Powerline Road). Both existing access roads extend east from the Wiley Well Road (see Attachment DR 180-1").

c. Please provide a detailed map showing the route for a transmission line interconnection at the Colorado River Substation. Estimate a cost for the generation tie line to the Colorado River Substation and compare those costs to the known or estimated transmission costs for the Rio Mesa SEGF project;

- *Transmission Interconnection at the Colorado River Substation:* (See "Attachment DR 180-1")
    - A Generation tie line between the proposed Sonoran West Switchyard and the Colorado River Substation is not anticipated to be necessary due to its location immediately adjacent to the existing substation.
    - The lack of gen-tie facilities in the proposed Sonoran West Project layout implies that these facilities will have zero cost to the project.

d. Information and a map showing a potential connection to a gas pipeline in the vicinity;

- *Natural Gas Interconnection for Sonoran West:* (See "Attachment DR 180-1")
    - The proposed natural gas interconnection line spans a distance of approximately 1 mile to the proposed interconnection point to existing Southern California Edison natural gas pipelines running parallel to Hwy 10.

e. Details on the individual water supply wells in the area, including the number of wells and current uses. Discuss any water allocations for agricultural use, and identify the potential source(s) of water for this alternative.

- *Water wells located in the vicinity of Sonoran West:* (See "Attachment DR 180-2")
    - There are no existing waterwells located within the proposed project boundary of the Sonoran West Solar site. (See "Attachment DR 180-2")
    - There are approximately 4-5 existing water wells within a 2 mile radius of the proposed Sonoran West Project Site. (See "Attachment DR 180-2")
    - There is no existing agricultural land usage within the immediate vicinity of the Sonoran West Project. The applicant has no data pertaining to the existing water rights or water well usage in the area.

f. Information on habitat types and protected plant and wildlife species that could be present in the area. Include data obtained from a California Natural Diversity Database (CNDDB) record search for the area, and a map illustrating CNDDB data and distribution.

- *Sonoran West Habitat Types and Protected Plant & Wildlife Species potentially occurring in the area:* (See "Attachment DR 180-3" for known CNDBB data)
    - Mohave Fringe Toed Lizard habitat is known to potentially occur in areas (sand corridors) located within the northernmost portion of the project area. (See "Attachment DR 180-4")

g. Information on the sensitivity of the area for cultural resources and the potential for discovery of cultural artifacts. Include information based on a California Historic Resource Information System literature search and contact with the Native American Heritage Commission. This information should be provided as a legible map depicting the cultural sites, and must be submitted under confidential cover.

- *Known Cultural Resources occurring within or adjacent to the Sonoran West Boundary:*
    - Based on preliminary database records searches, the Applicant has no evidence to suggest the existence of known cultural resources within the project boundary.
    - The Applicant has not completed the cultural resource consultation process and hence has no additional data to provide under separate cover in regards to existing cultural resources.

h. Description of the economic viability of this alternative compared to the Rio Mesa SEGF project.

The Commission's review of alternatives should include those alternatives that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The Legislature has defined "feasible," for purposes of CEQA review, as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." (Pub. Resources Code, s 21061.1; Guidelines, s 15364; Laurel Heights, supra, 47 Cal.3d at p. 402, fn. 10, 253 Cal.Rptr. 426, 764 P.2d 278; Foundation for San Francisco's Architectural Heritage v. City and County of San Francisco (1980) 106 Cal.App.3d 893, 910, 165 Cal.Rptr. 401.) Economic viability is among the factors that may be taken into account when addressing the feasibility of alternatives. CEQA does not define the term "economic viability." The RMS project is economically viable because it is supported by a Power Purchase Agreement that guarantees sufficient revenues over the life of the Agreement to ensure a reasonable economic return. The Sonoran West Project would not qualify for the RMS PPA because it is at a different site and could not be brought on line by the deadline stated in the PPA. Because the Sonoran West site is currently not supported by a PPA, it does not guarantee any level of revenue; therefore it is not known at this time whether the Sonoran West site could be economically viable at a future date beyond the term of the RMS PPA.

Data Request:

181. *Please explain in detail why the energy storage technology option would require an 18 percent increase in the number of heliostats.*

Response:

The number of heliostats per solar field is calculated by a propriety software which takes into account many parameters and limitations. The software is programmed to optimize the number of heliostats in order to maximize the performance of the solar field i.e. the annual MWh produced given the certain developable area (the area that heliostats could be installed in) and given the Maximum Continuous Rate (MCR) output of the unit.

The addition of thermal energy storage will require additional steam flow to be produced by the Solar Receiver Steam Generator (SRSG) in order to charge the hot molten salt tank of the storage during the day. The charging is done by means of superheated steam from the SRSG, which is directed through a steam/Molten salts heat exchanger thereby transferring the energy from the steam into the molten salts.

This additional steam for charging can be generated by the SRSG only if additional heat flux is applied to it. Hence additional heliostats need to be installed.

The SRSG capacity itself needs to be increased to allow parallel operation of the unit at MCR and charging the thermal storage. The storage charging occurs during about 6 hours in a day. Due to thermal losses in the process the charging time is more than double than the storage capability. For a limited capability of about 2 hour storage it is required to increase the heliostats number by 18 percent.

Data Request:

182. Please clarify the estimate of acres of disturbance within the revised fence line.

Response:

Please see Attachments DR 166-1 and DR 166-2 to Applicant's Responses to Data Requests Set 2A, which was docketed with the CEC on June 19, 2012.

Data Request:

183. Please provide updated Tables DR 90-1 and DR90-2 with estimates of the direct impacts to jurisdictional waters within the revised 500 MW fence line.

Response:

See updated Tables DR 90-1 and DR 90-2 with estimates of the direct impacts to jurisdictional waters within the revised 500 MW fence line.

Updated Table DR 90-1
Direct Impacts to Jurisdictional Waters for On-Site Alternatives

On-Site Alternative	Land area within:		Waters of the U.S. within:[1]		Waters of the State of California within:[1]		Direct Impacts to WUS within:[2]		Direct Impacts to WSC Relative to On-Site Alternative 1:[3]	
	Fenceline[4]	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary
#1 Preferred Alternative	5,526 acres	8,979 acres	619 acres	1,171 acres	1,261.4 acres	2,081 acres	63.2 acres (44.6 acres permanent; 18.6 acres temporary)[5]	Not applicable	100%	100%
#2 750 MW MWD-only	Fenceline not available	8,449 acres	Fenceline not available	1,002 acres	Fenceline not available	1,786 acres	Fenceline not available	62.4 acres (33.2 acres permanent; 29.2 acres temporary)	Fenceline not available	94%
# 3 500 MW MWD-only	3,805 Acres.	5,549 acres	392 Acres	469 acres	810 acres	980 acres	51 acres[5]	54 acres[5]	N/A	N/A

Notes:
1. Results for WUS and WSC do not include acres within the transmission line corridor or access roads (Bradshaw Trail and 34th Avenue) because acres of WUS and WSC are the same for each on-site alternative.
2. For On-Site Alternatives 2 and 3, calculations of direct impacts to WUS are based on the ratio of direct impacts to fenceline acreage for On-Site Alternative 1 (i.e., 5,526 acres within the fenceline divided by 40.8 acres of direct impacts to WUS equals one acre of direct impact to WUS for every approximately 135.4 acres within the fenceline). The ratio of one acre of direct impact to WUS for every 135.4 acres is applied to the project boundary acreage for On-Site Alternatives 2 and 3. For purposes of this table, On-Site Alternatives 2 and 3 are assumed to have the same proportion of permanent and temporary impacts as the Preferred Alternative.
3. Direct impacts to Waters of the State are not available at this time. CDFG is currently reviewing the delineations provided to them on October 7, 2011. A copy of this filing was included in the AFC (Appendix K, Jurisdiction Delineation Information, of Appendix 5.2A, Biological Technical Report, docketed with the CEC on October 14, 2011). Once approval of the delineations occurs, CDFG can formally approve direct impact areas. Since direct impacts are not available at this time, impacts for the sake of comparison of alternatives are assumed to be proportional to the size (acres) of the alternative, and are expressed as a percentage based on their size relative to the size of the Preferred Alternative. For example, On-Site Alternative 2 is 94 percent the size of the Preferred Alternative. Therefore, under this proportional approach, the direct impact area of On-Site Alternative 2 would be equal to 94 percent of the direct impact area of the Preferred Alternative.
4. Fenceline includes solar field layout and common area.
5. Acres of impact increased to include Inner Circle Drive Zone Areas. The number for Alternative 1 reflects additional disturbance acreage for "inner drive zones" not included in original 40.8 acres formally accepted by ACOE. This number was changed from 40.8 to reflect an "apples to apples" comparison for the alternatives.

Acronyms:
MW = megawatt
MWD = Metropolitan Water District of Southern California
WSC = Waters of the State of California
WUS = Waters of the United States

Updated Table DR 90-2
Direct Impacts to Wetlands for On-Site Alternatives

On-Site Alternative	Land area within:		NWI Wetlands within:		Wetlands within:		Direct Impacts to NWI Wetlands within:		Direct Impacts to Wetlands within:	
	Fenceline	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary	Fenceline	Project Boundary
#1 Preferred Alternative	5,526 acres	8,979 acres	0 acres	0.27 acres	0 acres	58.9 acres	0 acres	Not applicable	0 acres	Not applicable
#2 750 MW MWD-only	Fenceline not available	8,449 acres	Fenceline not available	0.38 acres	Fenceline not available	80.9 acres	Fenceline not available	0.38 acres	Fenceline not available	80.9 acres
# 3 500 MW MWD-only	3,805 acres	5,549 acres	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres

Note:
1. Results do not include wetlands within the transmission line corridor or access roads (Bradshaw Trail and 34th Avenue) because acres of wetlands are the same for each on-site alternative.

Acronyms:
MW = megawatt
MWD = Metropolitan Water District of Southern California
NWI = National Wetlands Inventory

Data Request:

184. Please provide an updated figure that shows the waters of the U.S. overlain with an outline of the revised proposed project.

Response:

See Attachment DR 184-1.

Data Request:

185. Please estimate the area and megawatts of a project that would avoid all impacts to waters of the U.S. and describe the feasibility of such a project.

Response:

The Applicant foresees no feasible project alternative that could completely avoid all waters of the US and still satisfy the project objectives. As shown in Attachment DR 184-1 from the Formal PJD acceptance from the ACOE, drainages and fingers of Waters of the US flow throughout the site. The Applicant has made a concerted effort from conception to avoid the main washes (e.g., Drainage I and Drainage E) and continues to avoid washes as feasible. In fact, one of the Applicant's proposed access roads was moved to avoid potential impacts to Drainage G through continual coordination with the ACOE. The Applicant in the original three tower project was able to minimize the number of impacts to Waters of the US down to 28.2 acres. With the elimination of unit 3 and the change to the access road this number will likely go down even further. These new estimations of impacts will be included in the Applicant's Environmental Enhancement Filing to come to the CEC in July.

Attachment DR 173-1 – Photographs of each cleared circle

	
PVM-MN-060 Feature 02 overview	PVM-MN-060 Feature 02 planview
	
PVM-MN-060 Feature 03 overview	PVM-MN-060 Feature 03 planview
	
PVM-MN-060 Feature 04 overview	PVM-MN-060 Feature 04 planview

	
PVM-MN-060 Feature 05 overview	PVM-MN-060 Feature 05 planview
	
PVM-MN-060 Feature 06 overview	PVM-MN-060 Feature 06 planview
	
PVM-MN-060 Feature 07 overview	PVM-MN-060 Feature 07 planview

	
PVM-MN-060 Feature 08 overview	PVM-MN-060 Feature 08 planview
	
PVM-MN-060 Feature 09 overview	PVM-MN-060 Feature 09 planview
	
PVM-MN-060 Feature 10 overview	PVM-MN-060 Feature 10 planview

	
PVM-MN-060 Feature 11 overview	PVM-MN-060 Feature 11 planview
	
PVM-MN-060 Feature 12 overview	PVM-MN-060 Feature 12 planview
	
PVM-MN-060 Feature 13 overview	PVM-MN-060 Feature 13 planview

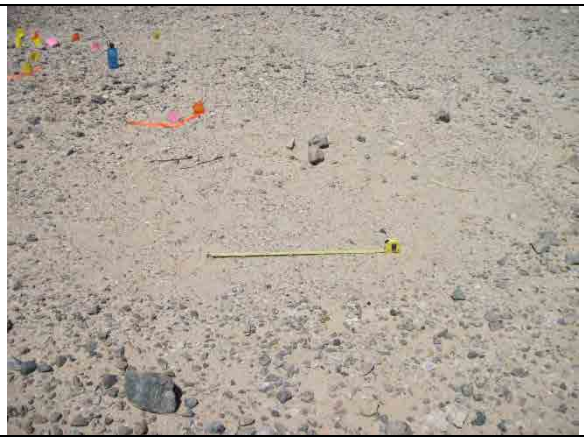
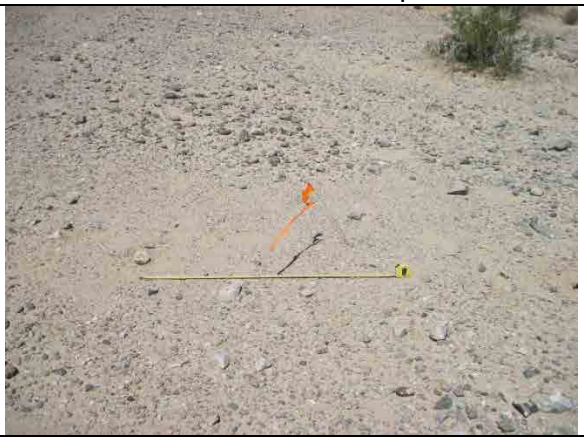
	
PVM-MN-060 Feature 14 overview	PVM-MN-060 Feature 14 planview
	
PVM-MN-060 Feature 15 overview	PVM-MN-060 Feature 15 planview
	
PVM-MN-060 Feature 16 overview	PVM-MN-060 Feature 16 planview
	
PVM-MN-060 Feature 17 overview	PVM-MN-060 Feature 17 planview

	
PVM-MN-060 Feature 18 overview	PVM-MN-060 Feature 18 planview
	
PVM-MN-060 Feature 19 overview	PVM-MN-060 Feature 19 planview
	
PVM-MN-060 Feature 20 overview	PVM-MN-060 Feature 20 planview

	
PVM-MN-060 Feature 21 overview	PVM-MN-060 Feature 21 planview
	
PVM-MN-060 Feature 22 overview	PVM-MN-060 Feature 22 planview
	
PVM-MN-060 Feature 23 overview	PVM-MN-060 Feature 23 planview

	
PVM-MN-060 Feature 24 overview	PVM-MN-060 Feature 24 planview
	
PVM-MN-067 Feature 07 overview	PVM-MN-067 Feature 07 planview
	
PVM-MN-067 Feature 09 overview	PVM-MN-067 Feature 09 planview

	
PVM-MN-067 Feature 10 overview	PVM-MN-067 Feature 10 planview
	
PVM-MN-067 Feature 11 overview	PVM-MN-067 Feature 11 planview
	
PVM-MN-067 Feature 12 overview	PVM-MN-067 Feature 12 planview

	
PVM-MN-067 Feature 13 overview	PVM-MN-067 Feature 13 planview
	
PVM-MN-067 Feature 14 overview	PVM-MN-067 Feature 14 planview
	
PVM-MK-056 Feature 02 planview	PVM-MK-056 Feature 03 planview

	
CA-RIV-6538 Feature 02 overview	CA-RIV-6538 Feature 06 overview
	
CA-RIV-6538 Feature 06 planview	

Attachment DR 173-2 – Summary of specific attributes identified for each cleared circle, interpretation and justification for the type determination

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-060	F2	4 meters E/W by 3.8 meters N/S by 1-2 cm deep	Feature 2 consists of military foxhole that is a shallow depression of desert pavement ranging from three to five centimeters deep.	Military - Foxhole based on attributes and context	PVM-MN-060_3/30/2011	08-09
PVM-MN-060	F3	3 meters E/W by 32 meters N/S by 1-3 cm deep	Feature consists of a roughly a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	10-11
PVM-MN-060	F4	3 meters E/W by 27 meters N/S by 1-2 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	12-13
PVM-MN-060	F5	2 meters E/W by 19 meters N/S by 1-2 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	14-15
PVM-MN-060	F6	2 meters E/W by 26 meters N/S by 1-2 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	16-17
PVM-MN-060	F7	2 meters E/W by 24 meters N/S by 1 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	18-19

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-060	F8	3 meters E/W by 31 meters N/S by 1 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	20-21
PVM-MN-060	F9	3 meters E/W by 23 meters N/S by 1 cm deep	Feature consists of a circular clearing of desert pavement. It contains non-patinated pebbles.	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	22-23
PVM-MN-060	F10	3 meters E/W by 32 meters N/S by 1-2 cm deep	Feature consists of a roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	24-25
PVM-MN-060	F11	2 meters E/W by 26 meters N/S by 1 cm deep	Feature consists of a roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles	Plant Scar based on attributes and context / Military based on attributes and context	PVM-MN-060_3/30/2011	27-28
PVM-MN-060	F12	2 meters E/W by 15 meters N/S by 1 cm deep	Feature consists of a roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-MN-060_3/30/2011	29-30
PVM-MN-060	F13	1 meters E/W by 10 meters N/S by 1 cm deep	Feature consists of a roughly circular and inset clearing of desert pavement. Contains non-patinated angular pebbles. Bounded by medium cobbles.	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-MN-060_3/30/2011	31-32

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-060	F14	2 meters E/W by 27 meters N/S by 1 cm deep	Feature consists of roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-MN-060_3/30/2011	33-34
PVM-MN-060	F15	2 meters E/W by 23 meters N/S by less than 1 cm deep	Feature consists of a circular and compacted area of desert pavement. Surface slightly patinated with angular pebbles.	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-MN-060_3/30/2011	35-36
PVM-MN-060	F16	2 meters E/W by 18 meters N/S by less than 1 cm deep	Feature consists of a roughly circular and compacted area of desert pavement. Surface slightly patinated with angular pebbles.	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-MN-060_3/30/2011	37-38
PVM-MN-060	F17	6 meters E/W by 51 meters N/S by 20 cm tall berm	Feature consists of military foxhole, u-shaped clearing of desert pavement opened to the North. Contains non-patinated angular pebbles and cobbles. U shape consists of non-patinated pebbles and small-med cobbles.	Military - Foxhole based on attributes and contexts, 2 in 1	PVM-MN-060_3/30/2011	39-40
PVM-MN-060	F18	3 meters E/W by 22 meters N/S by less than 1 cm deep	Feature consists of a roughly circular and compacted area of desert pavement. Surface slightly patinated angular pebbles.	Possibly Prehistoric but unlikely due to poor context	PVM-MN-060_3/30/2011	41-42

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-060	F19	2 meters E/W by 27 meters N/S by less than 1 cm deep	Feature consists of a roughly circular and compact area of desert pavement. Surface slightly patinated angular pebbles.	Possibly Prehistoric but unlikely due to poor context	PVM-MN-060_3/30/2011	44-45
PVM-MN-060	F20	2 meters E/W by 23 meters N/S by less than 1 cm deep	Feature consists of a roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles	Possibly Prehistoric but unlikely due to poor context	PVM-MN-060_3/30/2011	46-47
PVM-MN-060	F21	2 meters E/W by 23 meters N/S by 1-3 cm deep	Feature consists of Plant Scar based on attributes and context, roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles.	Plant Scar based on attributes and context	PVM-MN-060_3/30/2011	49-50
PVM-MN-060	F22	2 meters E/W by 23 meters N/S by 1-3 cm deep	Feature consists of Plant Scar based on attributes and context, roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles.	Plant Scar based on attributes and context	PVM-MN-060_3/30/2011	51-52
PVM-MN-060	F23	2 meters E/W by 2.7 meters N/S by 1-3 cm deep	Feature consists of Plant Scar based on attributes and context, roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles. Surrounding pavement contains heavily patinated angular cobbles and pebbles.	Plant Scar based on attributes and context	PVM-MN-060_3/30/2011	53-54

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-060	F24	1 meter E/W by 1.2 meters N/S by 1-2 cm deep	Feature consists of Plant Scar based on attributes and context, roughly circular and inset clearing of desert pavement. Contains non-patinated small angular pebbles.	Plant Scar based on attributes and context	PVM-MN-060_3/30/2011	55-56
PVM-MN-067	F07	1.8 meter E/W by 2 meters N/S by 1-15 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	18-19
PVM-MN-067	F09	2.9 meters E/W by 2.7 meters N/S by 1-3 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	22-23

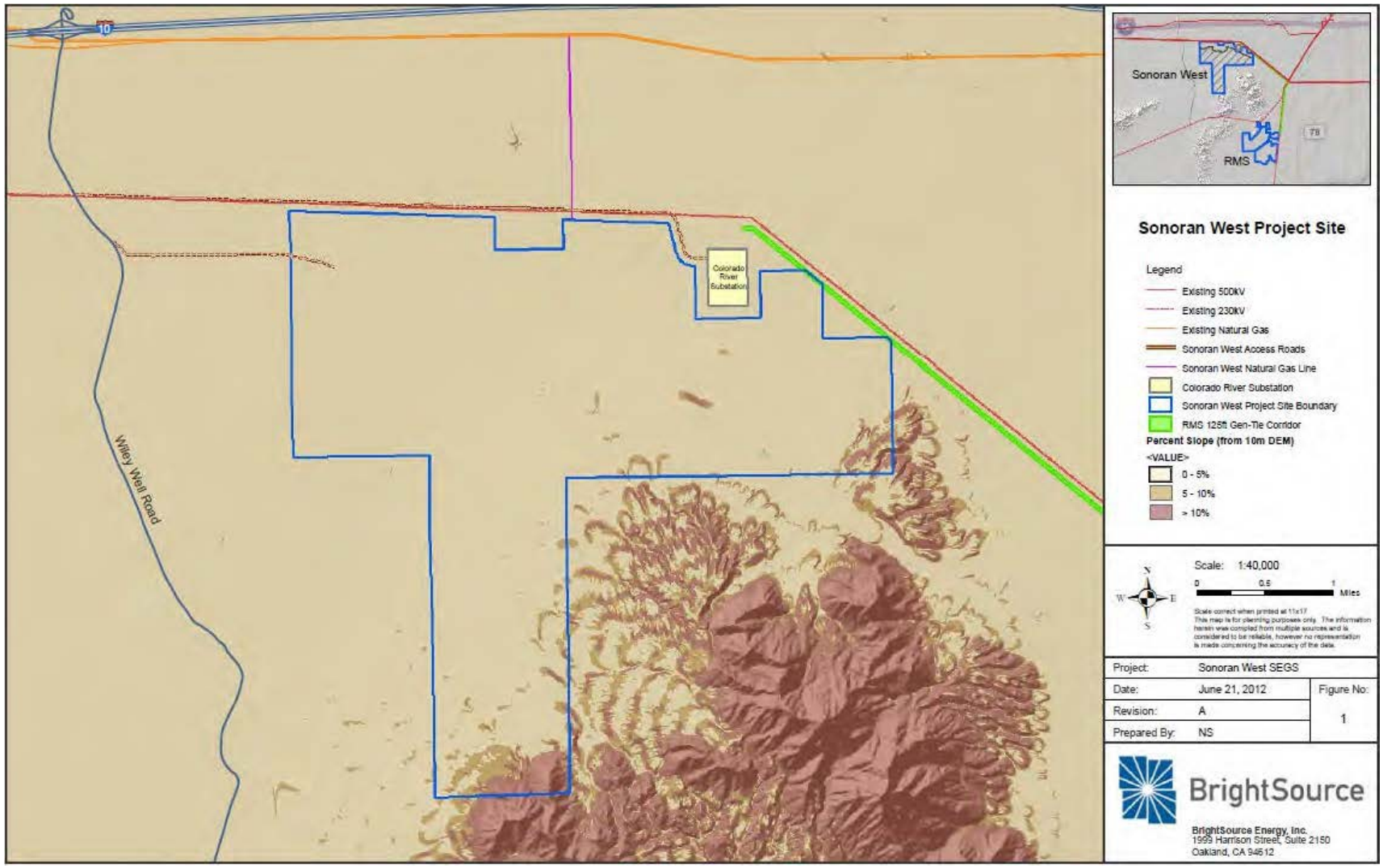
Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-067	F10	3.99 meters E/W by 4.9 meters N/S by 1-5 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	24-25
PVM-MN-067	F11	2.9 meters E/W by 2.5 meters N/S by 1-3 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	26-27

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-067	F12	2.9 meters E/W by 2.3 meters N/S by 1-3 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	28-29
PVM-MN-067	F13	2 meters E/W by 2 meters N/S by 1-2 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	30-31

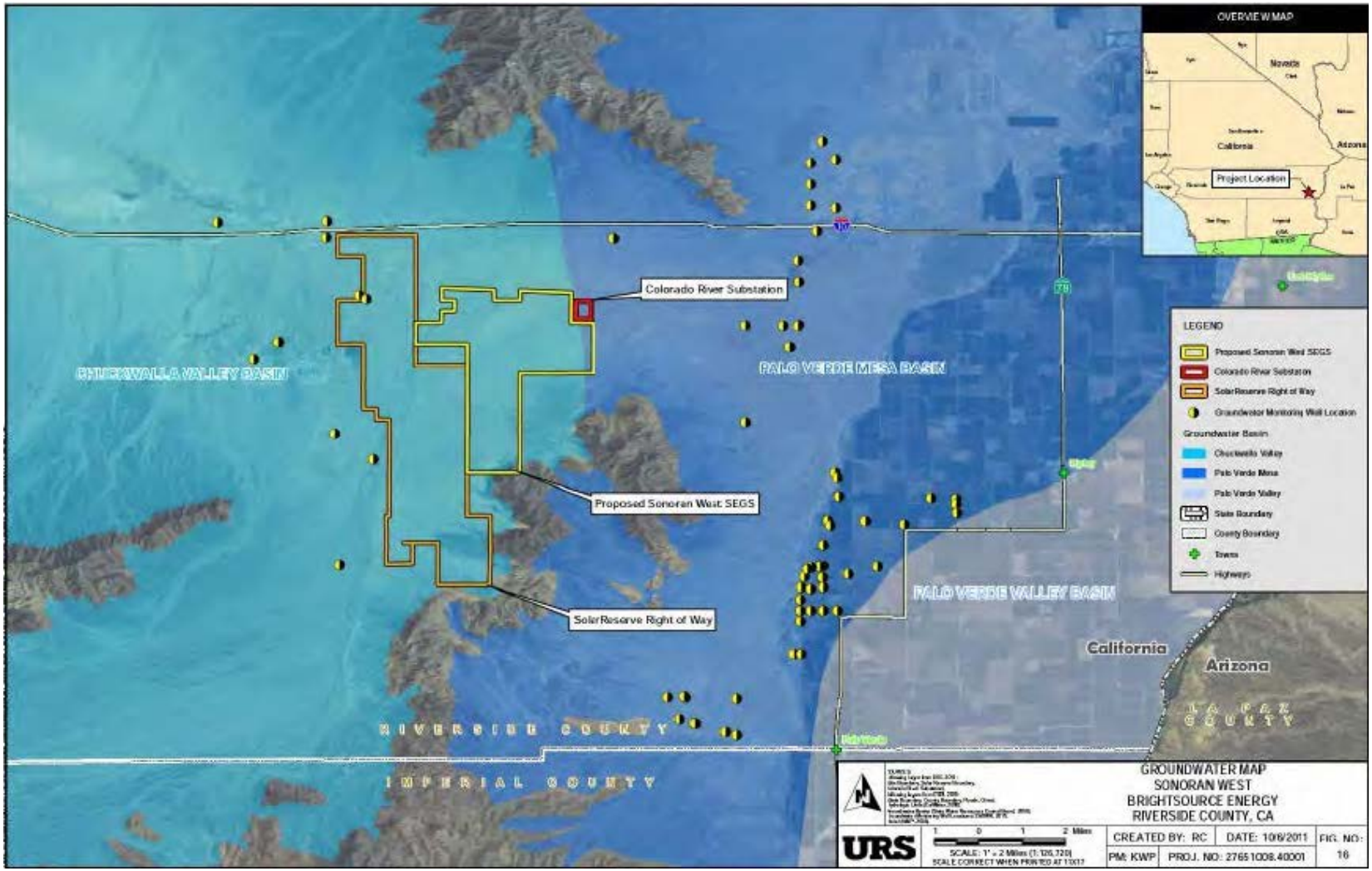
Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
PVM-MN-067	F14	2 meters E/W by 1.4 meters N/S by 1-3 cm deep	Feature consists of a roughly circular depression in the desert pavement that has been cleared and inset. The interior contains compacted sand and small angular pebbles with a low berm evident on the Northern edge. The feature might possibly be a Plant Scar based on attributes and context. No associated artifacts.	Plant Scar based on attributes and context	PVM-MN-067_04/04/2011	32-33
PVM-MK-056	F02	2.90 meters by 2.70 meters (no depth collected)	Feature consists of cleared circles near a segregated reduction locus. No associated artifacts were observed.	Plant Scar based on attributes and context	PVM-MK-056_04/30/2011	16
PVM-MK-056	F03	2.90 meters by 2.70 meters (no depth collected)	Feature 3 consists of a cleared circle. No associated artifacts were observed.	Plant Scar based on attributes and context	PVM-MK-056_04/30/2011	17
CA-RIV-6538	F02	12 meters N/S by 14 meters E/W (no depth collected)	Feature consists of a cleared circle within the well-patinated desert pavement at the site. The circle surface is covered with unvarnished small pebbles and sand. This feature was previously recorded as P-33-10825 (CA- RIV-6538).	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-JR-051_05/16/2011	09

Site name	Feature number	Measurements	Description	Interpretation and Justification	Photo log	Photo numbers
CA-RIV-6538	F06	4 meters diameter (no depth collected)	Feature consists of consists of a cleared circle within the well-patinated desert pavement at the site. The circle surface is covered with unvarnished small pebbles and sand and is surrounded by the cleared varnished larger angular cobbles and rocks.	Possible Prehistoric Cleared Circle / Military based on attributes and context	PVM-JR-044_05/11/2011	12-13

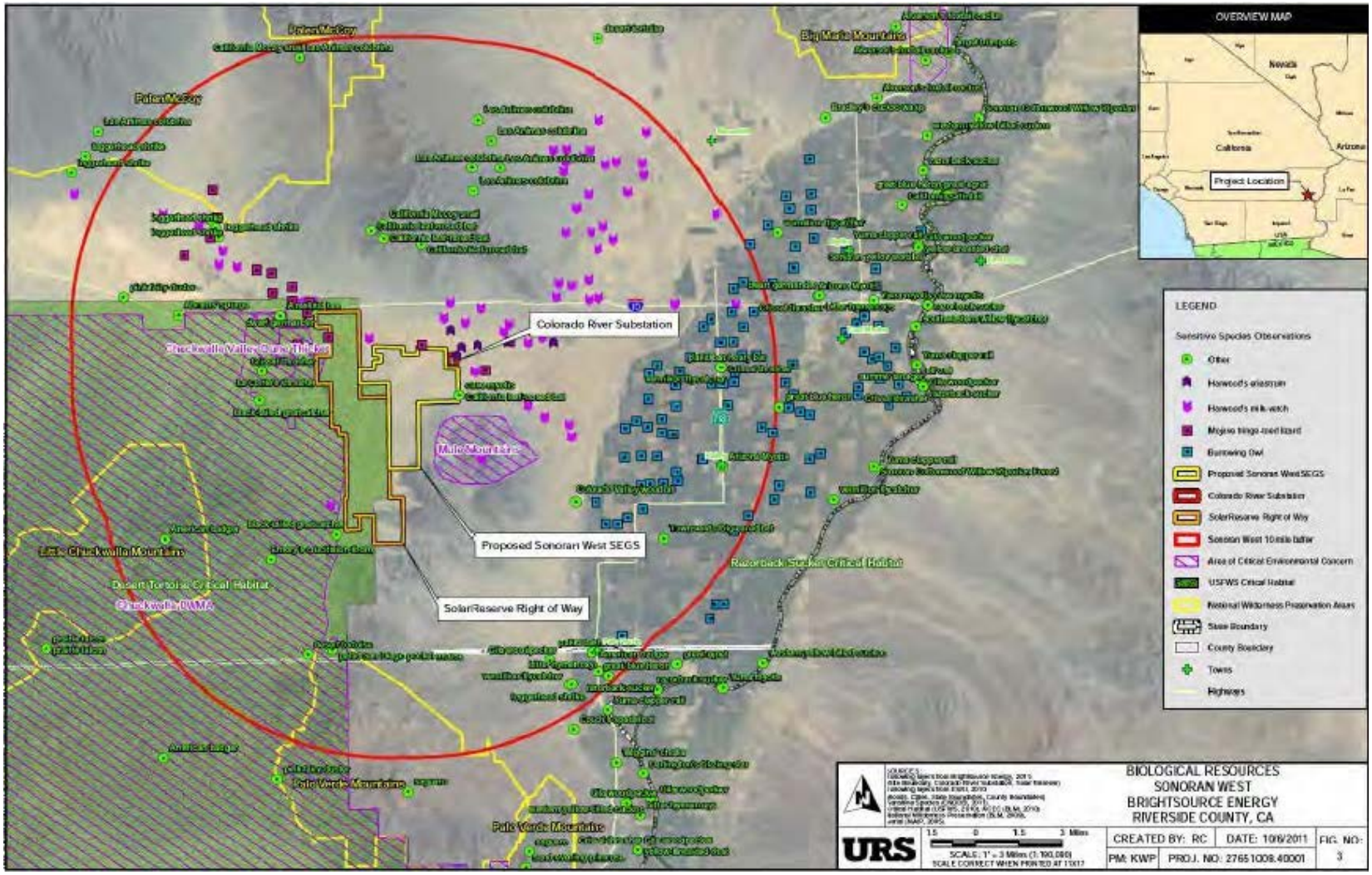
Attachment DR 180-1



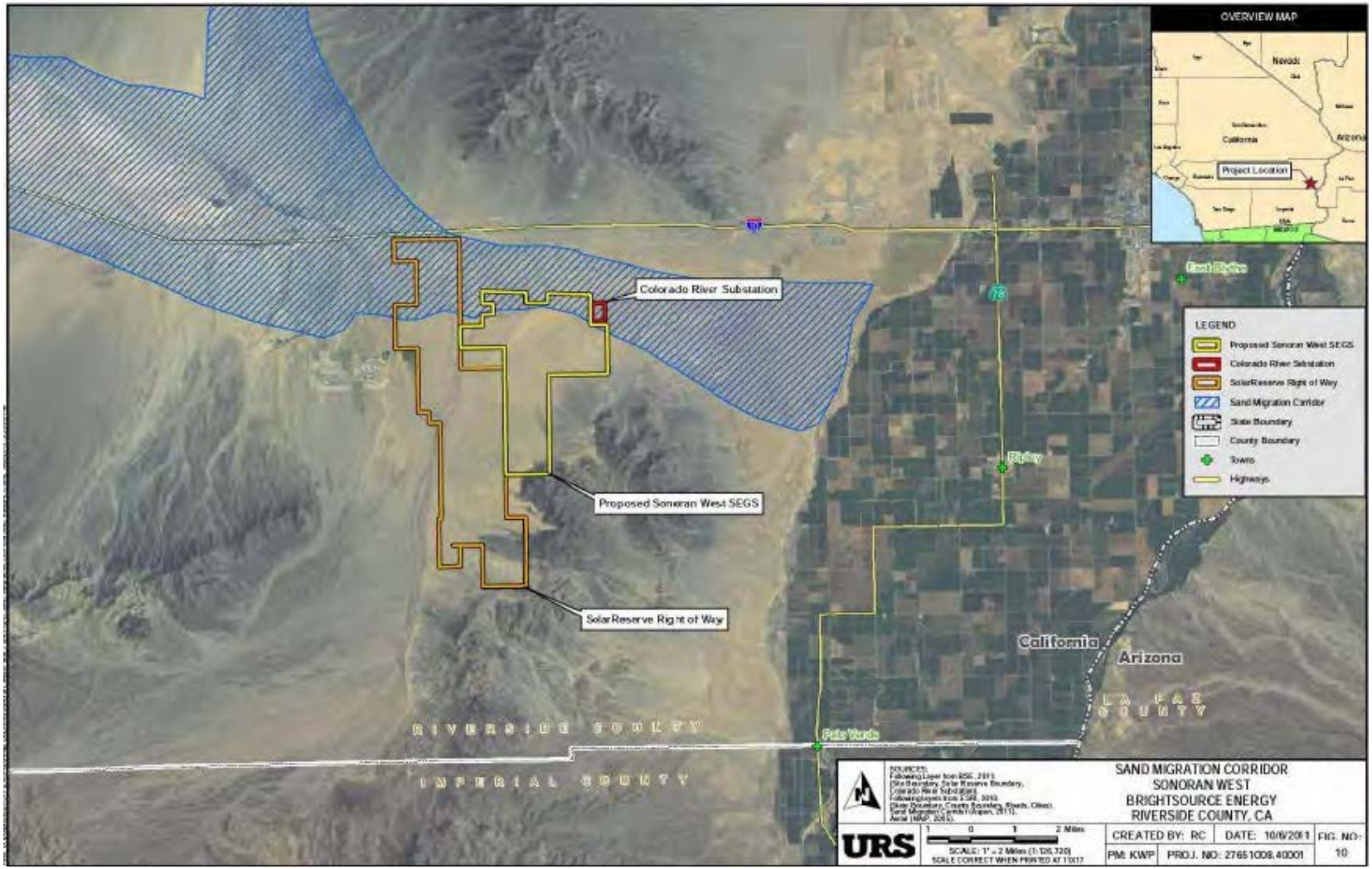
Attachment DR 180-2



Attachment DR 180-3



Attachment DR 180-4



Fenceline Boundary of Solar Field (3,805 acres) *Includes Common Areas, Switchyard and Gas Metering Yard
Common Areas Boundary (19.5 acres) *Included in Fenceline acres
Switchyard (2.47 acres) *Included in Fenceline acres
Temporary Construction Logistics Area (103 acres)
ROW Corridor approx. 1,641 ac.
(1,300 ft. corridor, approx 650ft. from c/l; approx acres: 1196 BLM, 445 Private)
Drainage Systems Division
USGS Blue Line

Drainage System

A
B
C
D
E
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G
H
I

A
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H
I

SOURCES:
Draft Solar Field Layout & Fenceline, MWD Land (Bechtel, 6-13-2012).
Transmission Line Corridor (URS, 6-14-2012).
Aerial Imagery (NAIP, 5-25-2009)
USGS Blue Lines (USGS, 2009)
NWI Wetlands (U.S. Fish & Wildlife Service, 2011)
ACOE Informally Agreed Waters of the U.S.,
Drainage Systems Division, Biological Survey Area (URS, 2011).

ACOE FORMALLY ACCEPTED WATERS OF THE U.S.
PROJECT SITE
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS

1100 0 1100 2200 Feet

SCALE: 1" = 2,200' (1:26,400)
SCALE CORRECT WHEN PRINTED AT 11X17

CREATED BY: DT | DATE: 6/26/2012 | FIG. NO: **DR 184-1**

PM: AL | PROJ. NO: 27651006.50506

Path: G:\gis\projects\15772765100\2\map_docs\mxd\AFC\JD_Waters\ACOE\Supplemental\ACOE_Project_Area_DR_185_1.mxd, colin_mattison, 6/26/2012, 5:37:32 PM

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 6/4/12)

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*indicates change

DECLARATION OF SERVICE

I, Darin Neufeld, declare that on July 5, 2012, I served and filed a copy of the attached document Data Request 2B, dated July 5, 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:

X Served electronically to all e-mail addresses on the Proof of Service list;

X 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 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-4
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.

Original Signed by Darin Neufeld

*indicates change

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

TO: *All Parties* *Date: June 5, 2012*

RE: ***RIO MESA SOLAR ELECTRIC GENERATING FACILITY***
Proof of Service List
Docket No. 11-AFC-04

Attached is the ***newly revised*** Proof of Service List for the above-mentioned project, current as of June 4, 2012. Please pay particular attention to the ***new*** filing instructions.

Energy Commission regulations (Cal. Code Regs., tit. 20, § 1210) require, in addition to any electronic service, that a paper copy be served in person or by first class mail except where a party requests to receive an electronic copy when one is available. Individuals and groups on the Proof of Service list who prefer to receive filings by e-mail and do not require a paper copy shall inform the Hearing Adviser assigned to the proceeding.

The Proof of Service list for this matter will delineate those individuals and groups and it is sufficient to serve those individuals with an e-mailed copy only. Those not so delineated must be served with a paper copy in addition to any e-mailed copy that the filing party chooses to provide. Signatures may be indicated on the electronic copy by **"*Original Signed By*"** or similar words. The original signed copy or an electronic copy shall be filed with the Energy Commission's Dockets Unit.

Unless otherwise specified in a regulation, all materials filed with the Commission must also be filed with the Docket Unit. (Cal. Code Regs., tit. 20, § 1209(d).) Some regulations require filing with the Commission's Chief Counsel instead of the Docket Unit. For example, Section 1720 requires a petition for reconsideration to be filed with the Chief Counsel and served on the parties. Service on the attorney representing Commission staff does not satisfy this requirement. This Proof of Service form is not appropriate for use when filing a document with the Chief Counsel under Title 20, sections 1231 (Complaint and Request for Investigation) or 2506 (Petition for Inspection or Copying of Confidential Records). The Public Advisor can answer any questions related to filing under these sections.

New addition(s) to the Proof of Service are indicated in **bold font** and marked with an asterisk (*). Additionally, if two or more persons are listed on a Proof of Service List with a single address, only one physical copy of a document need be mailed to the address.

Use this newly revised list for all future filings and submittals. This Proof of Service List will also be available on the Commission's Project Web Site at:

[http://www.energy.ca.gov/sitingcases/riomesa/index.html]

Please review the information and contact me at maggie.read@energy.ca.gov or (916) 654-3893, if you would like to be removed from the Proof of Service or if there are any changes to your contact information.

Maggie Read
Hearing Adviser's Office