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October 24, 2008
File No.: 04.02.16.02
Project No. 357891

Mr. Che McFarlin, Project Manager
California Energy Commission
Systems Assessment and Facilities Siting Division
1516 9th Street, MS 15
Sacramento, CA 95814-5504

RE: Data Response, Set 1I
Ivanpah Solar Electric Generating System (07-AFC-5)

Dear Che:

On behalf of Solar Partners I, LLC, Solar Partners II, LLC, Solar Partners IV, LLC, and Solar Partners VIII, LLC, please find attached one original and 12 hard copies of Data Response, Set 1I, which addresses Staff's Data Request 24 dated December 12, 2007.

As we previously discussed, this data response is a compilation of other previously provided responses and is being provided to facilitate staff's review.

Please call me if you have any questions.

Sincerely,

CH2M HILL

John L. Carrier, J.D.
Program Manager

Enclosure
c: POS List
Project File

CALIFORNIA
ENERGY
COMMISSION

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ELECTRONIC PROOF OF SERVICE LIST
7/14/08

Ivanpah Solar Electric Generating System
APPLICATION FOR CERTIFICATION,
DOCKET NO. 07-AFC-5

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I declare that transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above. I declare under penalty of perjury that the foregoing is true and correct.

John L. Carrier, J.D.
Program Manager
CH2M HILL

Ivanpah Solar Electric Generating System (ISEGS)

(07-AFC-5)

Data Response, Set 1I

(Response to Data Request for: Biological Resources)

Submitted to the

California Energy Commission

Submitted by

Solar Partners I, LLC; Solar Partners II, LLC; Solar Partners IV, LLC; and Solar Partners VIII, LLC

October 24, 2008

With Assistance from

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

Contents

Section Page

Introduction

Attached are Solar Partners I, LLC, Solar Partners II, LLC, Solar Partners IV, LLC, and Solar Partners VIII, LLC (Applicant) responses to the California Energy Commission (CEC) Staff's data requests for the Ivanpah Solar Electric Generating System (Ivanpah SEGS) Project (07-AFC-5). The CEC Staff served these data requests on December 12, 2007, as part of the discovery process for Ivanpah SEGS. The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as CEC Staff presented them and are keyed to the Data Request numbers (1 through 116). New graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 15 would be numbered Table DR15-1. The first figure used in response to Data Request 15 would be Figure DR15-1, and so on. AFC figures or tables that have been revised have "R1" following the original number, indicating revision 1.

Additional tables, figures, or documents submitted in response to a data request (supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of a discipline-specific section and may not be sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

The Applicant looks forward to working cooperatively with the CEC and Bureau of Land Management (BLM) staff as the Ivanpah SEGS Project proceeds through the siting process. We trust that these responses address the Staff's questions and remain available to have any additional dialogue the Staff may require.

Biological Resources (24)

Background

The AFC lacks a detailed project description for the following elements as they relate to biological resources: site runoff, pre-construction ground disturbance, and post-construction operations and maintenance activities. More information is needed for staff to determine whether these elements could result in additional impacts to biological resources. In addition, BLM needs this information for its consultation with USFWS on the effects of the proposed action on desert tortoise. BLM expressed concern regarding the formal consultation process with USFWS because other agencies may recommend project footprint changes, and it may be necessary to re-initiate the consultation process and biological evaluation.

Data Request

24.a. Please provide a detailed description and analyze the associated biological resource impacts related to site runoff from rainfall and mirror washing.

Response: Data Response 139 (Set 2B) provides a good general description of what is expected for stormwater management. It states:

> Existing small to moderate ephemeral washes are to remain intact at locations capable of being traversed by installation equipment. Large ephemeral washes that are subject to damaging heliostats or power block equipment are to be routed through detention ponds and/or diversion channels either through or along the outer perimeter of each solar field. The large washes are then to be graded to the extent necessary to provide equipment access. At locations where stormwater crosses roads (all surface types) as sheet flow, existing grade is to be maintained. In situations where concentrated stormwater cross paved roads, culverts are to be provided to pass the 100-year, 24-hour storm event as required by San Bernardino County. At locations where concentrated stormwater crosses unpaved roads or trails, a slight grading of the channel bank [if such a bank exists] is to be performed in order to provide vehicular access across the wash (provide an earthen ramp).
>
> Detention ponds sized for the respective sites' 100-year, 24-hour storm event are to be placed upstream in each facility drainage area (on the high or western side of the site) to detain and release a volume of concentrated offsite stormwater run-on equivalent to the volume required for conventional onsite stormwater detention and runoff. Stormwater received in excess of the volume required for detention will be permitted to surcharge the ponds and will be directed to long broad crested weirs armored with native stone to convey the excess stormwater across the site as sheet flow. At pond locations

with exceptionally large concentrated offsite stormwater run-on, a portion of the excessive flow is to be directed to bypass channels for redirection and velocity control prior to release within the site as sheet flow. Stormwater falling directly onto each facility will be conveyed through each site combined with the excess stormwater from the ponds and will not require additional detention. As the stormwater passes through the heliostat fields and around the power blocks and power towers (Ivanpah 3 only) check dams and rock filters are to be placed in locations where stormwater may concentrate to control velocity and redistribute water as sheet flow to prevent scouring.

Additional details of the engineering controls to manage sheet and channel flow across the site are described in more detail in that data response. Also, Attachment DR139b-1A (Data Response 139, Set 2B) contains the stormwater calculations for Pond C in Ivanpah 1. The design of the ponds on the west side of the other Ivanpah units will be designed so that similar results will be obtained in those areas. As stated therein, "The post-development stormwater collection and management system was analyzed and the peak flows were below the corresponding pre-development levels."

Since runoff is not anticipated from mirror washing and stormwater flows offsite are about what they would be prior to development, no significant offsite biological impacts are anticipated to result from site runoff caused by rainfall or mirror washing.

24.b. Down slope of the project, address the biological resource impacts and ground disturbance anticipated outside the 3,400-acre project site.

Response: Per the Draft Biological Assessment (Attachment DR124-1A, Data Response Set 2D), the project is now estimated to include 3,760 acres of permanent effects (this includes the solar sites, all access roads and linear features) and approximately 300 acres of work area (i.e., the Construction Logistics Area) that would be subject to restoration following construction. Hence, the total of affected acreage is now considered to be 4,060 acres, which is the outside boundaries of those features (estimated at 4,065 acres) minus the acreage for existing established dirt roads (about 5 acres).

The only other area affected outside of the 4,065-acre project area is from the construction of the fiber optic line. Per the Draft Biological Assessment, the telecommunication path from Ivanpah substation to local carrier facility interface at Mountain Pass area consists of approximately 8 miles of fiber optic cable to be installed overhead on existing poles.

Impacts from the construction of the fiber optic line are expected to be minimal because stringing the cable on the existing distribution lines would be conducted using a bucket truck that would remain in the dirt service road, or by another method (e.g., by helicopter) that would not result in any permanent disturbance to vegetation. Stringing the fiber optic cable would require a pulling station up to a 40-foot by 60-foot area every 10,000 to 20,000 feet. It is assumed a total of five,

40-foot x 60-foot temporary work areas would be required. Hence, assuming a 30-foot wide construction corridor for vehicle access along the 8-mile route, and a total of 5 temporary stringing work areas (spaced about every 2 miles [or 10,560 feet]), the temporarily affected construction area for the length of the line would be less than 30 acres. Much of this would be on existing dirt roads. No additional vegetation removal would be required for construction of this feature. Hence, all impacts would be temporary.

As described in the Draft Biological Assessment, biological surveys of this area were conducted by EPG, Inc. (2008) on April 7 to 10, 2008 and April 14 to 15, 2008. These surveys were conducted on foot and from vehicles. Protocol-level desert tortoise surveys were not conducted but the entire fiber optic project area was determined to be within the range of the desert tortoise, and most of the area provides suitable habitat for tortoises. Tortoise sign was observed during the surveys (EPG, 2008).

Tortoises tend to be most active in the spring but can be active year-round. During the stringing of the fiber optic cable, each 40-foot by 60-foot temporary work area will be searched for tortoises prior to accessing the area by foot or vehicle. Additionally, impact avoidance and minimization measures as outlined in Section 2.5.1 of the Biological Assessment will be followed to avoid and minimize impacts to tortoise during fiber optic cable stringing. Monitoring during construction will be conducted by USFWS-approved desert tortoise monitors and all off-road activities will be cleared and monitored. Activities on established roads will be monitored to avoid impacts to tortoises by vehicles accessing the site.

As described in the Biological Assessment, seven special status plant species, Mojave milkweed (*Asclepias nyctaginifolia*), nine-awned pappus grass (*Enneapogon desvauxii*), Parish's club-cholla (*Grusonia* (=*Opuntia*) *parishii*), Aven Nelson's phacelia (*Phacelia anelsonii*), sky-blue phacelia (*Phacelia coerulea*), black grama (*Bouteloua eriopoda*) and Utah vine milkweed (*Cynanchum utahense*) were identified within the Ivanpah Substation to Mountain Pass Area corridor of the fiber optic line. None of these special status plant species are federally listed. Additionally, one species in the Cactaceae family, in the genus *Coryphantha* [*Escobaria*], was identified in the Mountain Pass Area. This plant could not be positively identified to species, and it is uncertain if these plants are the desert pincushion, a special status plant.

In order to avoid and minimize potential impacts to special status plants or their habitat during the stringing of the fiber optic line, the 40-foot x 60-foot temporary work areas where vegetation might be temporarily trampled will be surveyed at the appropriate time of year to determine if special status plants are present prior to construction. Surveys will be conducted that follow accepted resource agency protocols and will be conducted by qualified botanists familiar with the local flora. If special status plants are present, they will be avoided if possible; if not, coordination with agencies would be performed and appropriate mitigation would be developed.