UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUG 30 2010

Jim Abbott, Acting State Director
Bureau of Land Management
California State Office
2800 Cottage Way, Suite W-1623
Sacramento, CA 95825

Subject: Final Environmental Impact Statement for the Imperial Valley Solar Project (formerly as SES Solar Two), Imperial County, California [CEQ# 20100272]

Dear Mr. Abbott:

The U.S. Environmental Protection Agency (EPA) has reviewed the Final Environmental Impact Statement (FEIS) for the Imperial Valley Solar Project (Project). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act (CAA).

EPA reviewed the Joint Draft Environmental Impact Statement (DEIS) and Staff Assessment and provided comments to the California Energy Commission (CEC) and the Bureau of Land Management (BLM) on May 27, 2010. We rated the DEIS as *Environmental Objections – Insufficient Information* (EO-2), primarily due to concerns over potential impacts to waters of the United States and the alternative water supply, as well as impacts to biological resources, threatened and endangered species, air quality, and cultural resources. We asked for additional information on cumulative impacts from future actions, justification for the Project purpose and need, and evaluation of alternatives.

Previously, on November 18, 2008, EPA provided extensive formal scoping comments for the proposed Project. Also, on May 12th and June 7th, 2010, we submitted comments to the Army Corps of Engineers (Corps) on the March 15, 2010 Public Notice (Application for Permit) which highlighted our recommendations for compliance with section 404(b)(1) of the Clean Water Act Guidelines. EPA has continued to work with the Corps, fellow resource and regulatory agencies, and the applicant toward the goal of arriving at a permittable Project that protects natural resources.

We appreciate the efforts of BLM, the applicant, and its consultants to discuss and respond to our DEIS comments. We note that the preferred agency alternative identified in the FEIS addresses many of our comments and includes project design modifications that have reduced the proposed Project's total generating capacity from 750 megawatts (MW) to 709 MW by removing 1,163 SunCatchers, and increasing the use of non-standard configurations to avoid ephemeral main-stem streams. We support the reduction in the roadways on the Project site, decreased roadway widths, use of Arizona crossings, removal of culverts across main access roads, elimination of sediment basins and retention ponds, and the relocation of the Main

Services Complex. While some of these modifications are only discussed as part of the 709 MW alternative in the Draft Section 404(b)(1) Alternatives Analysis (Appendix H) and not in the FEIS, we expect all of them to be incorporated into the Record of Decision. Combined, these modifications would reduce the direct impacts to waters of the United States from 177.4 to 38.2 acres. We note that construction of a single 300 MW plant, which BLM has indicated would meet the Purpose and Need for the Project, would reduce the direct impacts to waters of the United States even further, and may be a practicable alternative that is less environmentally damaging. We request that the Record of Decision and the response to comments on the FEIS clarify the feasibility of the 300 MW alternative as a stand-alone project.

We were pleased to note additional information in the FEIS on compensatory mitigation for impacts to flat-tailed horned lizard habitat, and note that most of our suggested air quality comments were incorporated.

EPA continues to have concerns about impacts to aquatic resources, including waters of the United States, and the alternative water supply for the Project. We request additional information, clarification, and analysis of impacts to biological and cultural resources and air quality. Our primary concerns and recommendations are attached. We recommend that BLM address these issues prior to making a final decision on the proposed Project.

We are available to discuss all recommendations provided. Please send two hard copies and one CD ROM copy of the responses to FEIS comments and the Record of Decision to us when they are filed with our Washington D.C. office. If you have any questions, please contact me at 415-972-3843, or contact Tom Plenys, the lead reviewer for this Project. Tom can be reached at 415-972-3238 or plenys.thomas@epa.gov.

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures: EPA Detailed Comments

cc: Jim Stobaugh, Program Manager, Bureau of Land Management
Tom Pogacnik, Deputy State Director, Bureau of Land Management
Colonel Mark Toy, U.S. Army Corps of Engineers
Michael Picker, California Governor's Office
Chris Meyer, California Energy Commission
Michelle Matson, U.S. Army Corps of Engineers
Felicia Sirchia, U. S. Fish and Wildlife Service
Becky Jones, California Department of Fish and Game

Aquatic Resources and Clean Water Act Section 404

Clean Water Act Section 404 prohibits avoidable discharges of dredged or fill material to waters of the United States (WUS). Among other requirements, proposals for discharges must meet EPA's regulatory standards at 40 CFR 230.10, including a comprehensive evaluation of project alternatives that avoid and minimize impacts to the aquatic environment. The only permittable discharge is the "Least Environmentally Damaging Practicable Alternative" (LEDPA). What is "practicable" is evaluated by the U.S. Army Corps of Engineers based on cost, logistical, and technological factors that impact the applicant's ability to achieve the project purpose.

We understand that the applicant has a Power Purchase Agreement with San Diego Gas and Electric (SDG&E) to provide 300 megawatts (MW) of power once on-line. In light of the contingency of Phase II of the Project upon the Sunrise Powerlink Transmission Line (SPTL), it appears that the 300 MW alternative may have been considered by the applicant or SDG&E to have independent utility. We again request clarification of the implications to the proposed Project if the SPTL is not built, and whether Phase I could be funded as a stand-alone project. This information should be provided in the response to comments on the FEIS and addressed in the ROD. We note that the 300 MW alternative would reduce temporary and permanent impacts to WUS due to a 60% reduction in Project acreage. In that case, a single 300 MW plant, which BLM has indicated would meet the Purpose and Need for the Project (at pg. 2-7), may be a practicable alternative that is less environmentally damaging and could be the LEDPA.

The Draft Section 404(b)(1) Alternatives Analysis (AA), included as Appendix H of the FEIS, describes design modifications to maximize avoidance and minimization of impacts to WUS (Appendix H at pg. 23). These modifications and updated calculations of impacts to WUS appear to have been incorporated into the 709 MW alternative (Alternative 3 in the 404(b)(1) AA), but not the other alternatives analyzed as part of the Draft Section 404(b)(1) AA. The Final 404(b)(1) AA and ROD should incorporate these modifications into all alternatives for which they are practicable, to ensure an accurate comparison of potential impacts.

Although the 404(b)(1) AA presented in the FEIS is still in draft form and certain environmental studies have not been completed nor fully incorporated into the FEIS (for example, the vegetation removal plan), we note a number of discrepancies and unconfirmed design features in the FEIS and appendices. We strongly recommend that the ROD and Final 404(b)(1) AA consistently incorporate all final project design features and mitigation measures to demonstrate avoidance and minimization of impacts to WUS. For example, we note a discrepancy in the FEIS with respect to sediment transport and sediment basins. The Draft 404 (b)(1) AA indicates sediment basins were removed, which reduced the impact to sediment transfer through the Project area and decreased permanent impacts to WUS by 3.3 acres (Appendix H at pg. 25). This information conflicts with the FEIS (at pg. 4.17-19) as well as the

Responses to Comments (Appendix D at pg. 335) which indicate that sediment basins will be used and could be overwhelmed by much larger sediment transport volume of larger flows. This could result in increased sediment deposition downstream if sediment transport from the SunCatcher fields has been increased through vegetation clearing and grading of surface irregularities (at pg. 4.17-19). The Draft 404 (b)(1) AA also indicates the waterline which extends to the Seeley Waste Water Treatment Facility (SWWTF) has been co-located beneath a site arterial and maintenance road and will either be horizontally drilled or constructed to span WUS, resulting in a reduction of impacts from over 2 acres to zero. While we note that a Frac-Out Contingency Plan for horizontal drilling is mentioned in BIO-7, neither the FEIS nor the Draft 404 (b)(1) AA confirms the final design nor the technical method that will be used to eliminate these impacts.

Lastly, Appendix D (Responses to Comments) indicates that "when conditions are not conducive to the use of the metal fin-pipe foundation (for hydraulic SunCatcher pedestal installation), the foundation would consist of rebar-reinforced concrete constructed below grade" (Appendix D at pg. D-335). The 5,150 SunCatchers to be placed in flood hazard areas are subject to scour, and could also become unstable if the scour undermines their structural foundation, resulting in collapse and potentially damaging and polluting the ground surface with mirror fragments and other debris. EPA remains concerned about the increased erosion, migration of channels, local scour, and potential destabilization and damage that could result. As stated in our DEIS comments, the final project design should fully use the inherent flexibility of the SunCatcher technology to maximize avoidance of WUS and high risk flood hazard areas.

Recommendations:

- In the response to comments on the FEIS and in the ROD, clarify the implications to the proposed Project if the SPTL is not built, and discuss the practicability of the 300 MW Phase I as a stand-alone project.
- Integrate design modifications consistently across all alternatives evaluated in the FEIS and the Draft Section 404(b)(1) Alternatives Analysis to assist in alternative selection and identification of the LEDPA.
- The ROD and responses to comments on the FEIS should discuss why the selected alternative could be the LEDPA.
- The ROD and responses to comments should include a robust discussion of all avoidance and minimization measures proposed for the Project and include the final details and requirements of a compensatory mitigation plan. BIO-17 should be updated to reflect these final determinations.
- In responses to FEIS comments and in the ROD, confirm removal of sediment basins and demonstrate that downstream flows will not be disrupted due to proposed changes to natural washes, excavation of sediment or increased sedimentation due to increased vegetation clearing and grading of surface irregularities.
- Confirm and incorporate final design criteria and installation methods into the ROD for locating the waterline to the SWWTF that eliminate impacts to WUS.
- Integrate fencing design into the ROD to ensure unimpeded hydrologic flow and sediment transport through the site.

- Incorporate vegetation removal and re-establishment conditions for construction into the ROD that minimize vegetation removal in drainages, avoid impacts to drainage bank contours and require restoration using low lying native species, as appropriate, that would not require trimming or impede SunCatcher operation.
- Incorporate into the ROD the applicant's commitment to not mow, trim, or otherwise disturb vegetation, nor place SunCatchers, within streams I, K, C, H, and the areas of streams E and G south of the transmission line corridor (Appendix H at pg. 80).
- Reponses to FEIS comments should fully discuss how many SunCatchers will be installed using rebar-reinforced concrete constructed below grade. Impacts from such construction to WUS should be quantified. All analyses should be updated to include a full evaluation of impacts to waters, sedimentation, scouring, etc. from locating SunCatchers in flood hazard areas.

Alternative Water Supply

The FEIS indicates in numerous places that the Project will rely on up to 40 acre-feet per year (afy) of withdrawals from State Well No. 16S.9E-36G4 (Boyer Well) within the Ocotillo-Coyote Wells Groundwater Basin (OCWGB) until water is made available from the upgraded Seeley Waste Water Treatment Facility (SWWTF). However, sections in the FEIS still indicate (see Appendix D, at pg. 334 and 509) that 50 afy will be needed for the Project. Thus, there is a discrepancy in the FEIS between the amount of water needed and the amount of water available. In addition, a question remains concerning how long the Boyer Well will be needed. The "Will Serve Letter" references a six-to-eleven month period, but the FEIS indicates up to 3 years. Unanticipated delays in the upgrade of the SWWTF could occur. The FEIS indicates that the proposed Project will not affect nearby residential/private wells, but it is still unclear whether the FEIS analysis factored in up to 67 afy of withdrawals for the Coyote Wells (CW) project in the same area. Thus, there is still some uncertainty whether nearby wells would be affected.

Recommendations:

- Resolve the 40 versus 50 afy discrepancy in the ROD and provide documentation (e.g., a letter from Imperial County or a copy of the permit for State Well No. 16S.9E-36G4) that Imperial County supports 40 afy (or whatever amount is determined to be correct) in withdrawals from the Boyer Well.
- Indicate whether other renewable energy projects and the CW project will, cumulatively, affect nearby residential/private wells, and, if so, describe the impact.
- Incorporate into the ROD an enforceable monitoring program to determine whether neighboring wells are affected by the use of Boyer Well. The ROD should describe the effectiveness of, and commitments to, proposed mitigation and monitoring plans.
- Integrate into the ROD a monitoring program to be initiated upon commencement of the use of water from the SWWTF to monitor for any indirect effects to wetlands in the New River.

Biological Resources

Detailed compensatory mitigation measures are determined on a project-specific basis, and must be contained in each project's environmental analyses and decision documents. The ROD should describe the final biological resources mitigation commitments and how they would be funded and implemented. The FEIS specifies the applicant shall contribute to the National Fish and Wildlife Foundation (NFWF) Account to compensate for loss of flat-tailed horned lizard (FTHL) habitat. For each species requiring compensatory mitigation, the ROD should state whether and how the Project applicant would use the NFWF Account, an in-lieu fee strategy, or an applicant-directed implementation strategy.

We also understand the Biological Opinion and Conferencing Opinion for peninsular bighorn sheep and the FTHL, respectively, have not been finalized (at pg. 4.3-22). As the FEIS indicates, the Conferencing Opinion for the FTHL would be converted to a Biological Opinion upon Federal listing of the FTHL. These final Biological Opinions will play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval. Lastly, while additional botanical surveys were completed in Spring of 2010, it is unclear from the Responses to Comments (Appendix D at pg. D-493) whether any additional avoidance or mitigation measures were incorporated as a result of the new findings.

Recommendations:

- Incorporate final information on the compensatory mitigation proposals (including quantification of acreages, estimates of species protected, costs to acquire compensatory lands, etc.) for unavoidable impacts to Waters of the State and biological resources such as peninsular bighorn sheep and FTHL.
- If the applicant is to acquire compensation lands, the location(s) and management plans for these lands should be fully disclosed in the ROD.
- Fully incorporate mitigation measures from the Conference Opinion on FTHL into BIO-9 through BIO-11 in the ROD as contingency measures in anticipation of a Federal listing of the species.
- Provide additional supporting documentation in the responses to FEIS comments for the final acreage identified as foraging habitat for the peninsular bighorn sheep on the Project site. Update BIO-17 as appropriate.
- Include the provisions or mechanism(s) in the ROD that will ensure that habitat selected for compensatory mitigation will be protected in perpetuity.
- Fully incorporate into the ROD any mitigation measures for avoidance of rare plants during Project construction and operation that result from recent or pending botanical surveys.
- All mitigation commitments should be included in the ROD.

Air Quality

The Responses to Comments did not respond to our cumulative impact comments on air quality. The scope of the cumulative impact analysis in the FEIS remains geographically limited to focus on 'localized' cumulative impacts. Determination of the affected environment should not be based on a predetermined geographic area, but rather on perception of meaningful impacts for each resource at issue. EPA disagrees that there is never overlap for sources separated by six miles. This would depend on the emissions, size of the source, and release height, among other criteria. For example, in our air permitting process, we require modeling of the significant impact area plus 50 kilometers out. In an area classified as nonattainment for ozone, the cumulative effects study area could be the entire air basin because ozone precursors are reactive over hundreds of miles.

Additionally, we understand, based on information provided at the July 22, 2010 Renewable Energy Policy Group meeting, that the Project may now require diesel powered equipment for at least some period of the Project construction, which was not previously analyzed in the DEIS. EPA strongly recommends that this new information and the direct, indirect, and cumulative impacts associated with the use of diesel be fully analyzed and disclosed in responses to comments on the FEIS and in the ROD.

Recommendations:

- The response to comments on the FEIS should provide the rationale for limiting the scope of the cumulative impacts analysis to the specified local area. If the Project would affect the ability of other foreseeable projects to be permitted, the ROD and responses to comments on the FEIS should discuss this.
- The ROD and responses to FEIS comments should thoroughly evaluate the additional use of diesel powered equipment for Project construction and incorporate appropriate mitigation measures to reduce impacts. (Please see our May 27, 2010 DEIS comment letter for additional construction mitigation recommendations for mobile and stationary sources.) The evaluation in the ROD and responses to comments should include consideration of the feasibility and impacts of avoiding the need for diesel power by altering the construction schedule.
- At a minimum, any additional nonroad, diesel-powered engines should comply with federal requirements, as applicable, for 40 CFR Part 89.
- For those engines that will be sited and operated for 12-months or more, federal applicable requirements should be identified for, at a minimum, air quality permitting, hazardous air pollutants (40 CFR Part 63, Subpart ZZZZ), and new source performance standards (40 CFR Part 60, Subpart IIII).
- The ROD and responses to FEIS comments should discuss and address whether the diesel equipment would require a permit from the Imperial County Air Pollution Control District.

Cultural Resources

Responses to FEIS comments should provide the latest update on how any outstanding concerns raised by Tribes were addressed and resolved, provide an update on the status of the Programmatic Agreement and Tribal consultation, and indicate whether the Tribes are in agreement that the Programmatic Agreement will reduce impacts to prehistoric and sacred sites to less than significant.

Alternatives Analysis

The purpose and need statement in an EIS should be broad enough for analysis and consideration of a full range of reasonable alternatives (including off-site locations and environmentally preferable on-site alternatives) to address the underlying need. In the subject FEIS, alternatives not on BLM-managed lands are not evaluated, nor does does the FEIS consider other projects under evaluation for nearby sites to be viable alternatives to the proposed Project (Appendix D at pg. 61). BLM should address conformance with the Council on Environmental Quality's guidance regarding consideration of alternatives outside the jurisdiction of the lead agency (Council on Environmental Quality's (CEQ) Forty Questions[1], #2a and #2b). While off-site alternatives are evaluated in the Draft 404(b)(1) AA(Appendix H), we continue to recommend that off-site alternatives be given full consideration under NEPA.

Recommendation:

- The ROD should reflect a full evaluation of reasonable alternatives, including off-site locations and other environmentally preferable on-site alternatives.

Adequacy of Responses to Comments in the FEIS

The format and, in some cases, cursory responses to comments in the FEIS may have resulted in unsatisfactory responses to some stakeholder comments. The FEIS grouped lengthy, substantive comments from stakeholders into 16 common response categories. Unfortunately, many of the responses in these sections seem unduly brief given the volume, substantiveness, and diversity of comments, concerns, and recommendations. The FEIS did not include responses to portions of our comments on cumulative impacts (F2-34), effects of fencing (F2-23), the alternative water supply (F2-26) and sensitive plant species and vegetation (F2-30). If the lead agency decides not to respond to a comment, it must cite the sources, authorities, or reasons that support its position (40 CFR 1503.4(a),(b)).

Recommendation:

- Responses to comments on the FEIS should more thoroughly address substantive comments received.

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[1]Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981.