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

January 13, 2012

Amy Heuslein
Regional Environmental Protection Officer
Bureau of Indian Affairs
Western Regional Office
2600 North Central Avenue, 4th floor
Phoenix, AZ 85004-3008

Subject: EPA comments on the Draft Environmental Impact Statement (DEIS) for the Proposed K Road Moapa Solar Facility, Clark County, Nevada (CEQ # 20110400)

Dear Ms. Heuslein:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The proposed project includes construction and operation, in phases, of a 350 megawatt (MW) solar photovoltaic electricity generating facility with associated transmission infrastructure on approximately 2,000 acres of tribal lands on the Moapa River Indian Reservation, 30 miles northeast of Las Vegas, Nevada. EPA supports the increase in renewable energy resource development, as recommended in the National Energy Policy Act of 2005. Using renewable energy resources, such as solar power, can help the nation meet its energy requirements without generating greenhouse gas emissions. We are also very supportive of tribal government interests in renewable energy as a means to help meet tribal economic development goals and help the nation's transition to cleaner energy.

EPA is a cooperating agency for the project and provided comments on the Administrative DEIS to the Bureau of Indian Affairs (BIA) on November 3, 2011. We appreciate the clarifications made to the document in response to our comments. Some comments were not fully addressed and are repeated here. We have recommendations regarding erosion control, air quality impact mitigation, and the assessment of cumulative impacts to the threatened Mojave desert tortoise. We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions").

EPA appreciates the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: William Anderson, Chairman, Moapa Band of Paiutes
Darren Daboda, Environmental Director, Moapa Band of Paiutes
Michael Burroughs, U.S. Fish and Wildlife Service
Tracey A. LeBeau, Director, U.S. Department of Energy, Office of Indian Energy Policy and Programs
Crystal J. Jackson, Executive Director, Nevada Public Utilities Commission
Steve Black, Counselor to Secretary of the Interior, U.S. Department of the Interior
Janea Scott, Special Assistant to the Counselor, U.S. Department of the Interior

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

Category "1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category "2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category "3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

EPA DETAILED COMMENTS ON THE K ROAD MOAPA SOLAR FACILITY DRAFT ENVIRONMENTAL IMPACT STATEMENT, CLARK COUNTY, NEVADA, JANUARY 13, 2012

Water Quality - Erosion and Sedimentation Impacts

The proposed project infrastructure will avoid the six main drainages onsite[1], and we commend the project proponents for this avoidance. However, as the DEIS indicates, there would likely be increased erosion or sedimentation on-site or off-site during both the construction and operational phases of the project that could have long-term adverse effects on surface water quality (p. 4-18). To manage drainage, the project applicant proposes to construct berms to direct the surface flow into the six drainages and off-site. Concrete weirs or rock gabions may also be constructed at key locations within the drainages to minimize velocity, decrease sediment transport and downstream peak flows, and control flash flooding downstream (p. 4-18).

Generally, when levees, berms and weirs are constructed in previously unconfined drainages, there are direct and indirect hydraulic responses to the modifications, including increased bank and channel erosion (scour leading to down cutting and often head cutting of the channel bed), and increases in sediment transport to downstream aquatic environments, especially in poorly consolidated alluvial soils characteristic of desert environments. The DEIS states that the applicant will develop and implement erosion and sediment control measures to minimize impacts for the life of the project (p. 4-19). These will include, at a minimum, soil stabilization measures to offset loss of vegetation, biannual and post-storm monitoring of erosion/sedimentation, and adaptive management if measures are found to be insufficient. The DEIS states that the Tribe will approve the erosion and sediment control measures and the Stormwater Pollution Prevention Plan (SWPPP) prior to construction. We also understand that there are plans for a more detailed engineering study pertaining to drainage/erosion control and that the SWPPP, which is required for the construction phase only, will address impacts that are expected to occur during the operations phase[2].

> *Recommendations*: The detailed drainage study should occur prior to project implementation, so that the additional information it would yield can inform any needed adjustments in the project design. Such adjustments to project design could include increased buffers around the drainages and the inclusion of small detention basins. We recommend including the detailed drainage study in the Final Environmental Impact Statement (FEIS).
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> The adaptive management approach for managing erosion should be documented in the mitigation measures listed in Chapter 5. We recommend that a framework for an adaptive management plan be included in the FEIS, including a discussion of the criteria that will be used to evaluate effectiveness of the erosion and sedimentation control measures and what modifications are available to address typical problems, to serve as a troubleshooting guide. For example, the framework should describe actions that could be taken if excessive erosion or sedimentation is observed.
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> Based on the information presented in the DEIS, we recommend that:
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> - the six large drainages be given wide buffers so the channels may adjust to the new hydraulic conditions without the need for major human-made structures;

[1] determined by the Corps of Engineers to be non-jurisdictional under Clean Water Act Section 404

[2] Personal communication with Amy Heuslein, BIA and Chad Martin, Arcadis Consulting, December 22, 2011

- permanent sediment and channel elevation monitoring stations be established to assist in the adaptive management of erosion and sedimentation;
- low-impact development techniques, such as bioretention, be explored as potential mitigation for changes in the drainage pattern.

Air Quality - Construction Vehicle Emissions

The Las Vegas 8-hour ozone nonattainment area excludes the Moapa River Indian Reservation; however, the reservation is surrounded by this nonattainment area and emissions from the project have the potential to impact it. Therefore, emissions of ozone precursors, (volatile organic carbons (VOCs) and oxides of nitrogen (NOx)) should be minimized through mitigation measures, especially during the construction phase. The DEIS estimates NOx emissions at 94 tons per year (tpy), which approaches the significance threshold of 100 tpy utilized in the DEIS's air impact assessment. The mitigation measures that EPA previously recommended are reasonable, and we continue to recommend that they be incorporated into the project.

> *Recommendation:* Any approvals made by BIA for the project should include a condition that the lessee incorporate the following measures into construction contracts. For more information on nonroad mobile sources and mitigation, see at http://www.epa.gov/nonroad.

- Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies.
- Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained.
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.
- If practicable, lease new, clean (diesel or retrofitted diesel) equipment. In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible[3].
- Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.

Desert Tortoise - Cumulative Impact Assessment

The geographic boundary utilized for the assessment of cumulative impacts to the threatened Mojave desert tortoise is limited to the reservation boundary (p. 4-101) or to the immediate topographic area (Fig. 4-3). Therefore, the DEIS does not fully present the cumulative impacts that this project, along with other solar projects proposed for the Mohave desert, is expected to have on this resource. As

[3] Diesel engines < 25 hp rated power started phasing in Tier 4 Model Years in 2008. Larger Tier 4 diesel engines will be phased in depending on the rated power (e.g., 25 hp - <75 hp: 2013; 75 hp - < 175 hp: 2012-2013; 175 hp - < 750 hp: 2011 - 2013; and ≥ 750 hp 2011- 2015).

Council on Environmental Quality (CEQ) guidance indicates[4], choosing the appropriate scale to use for cumulative effects analyses is critical (CEQ Guidance, p. 12). CEQ guidance suggests that once the geographic area affected by the project is identified, a list of resources within that zone should be prepared. Then, the geographic areas occupied by those resources outside of the project impact zone should be identified, and in most cases, the largest of these areas will be the appropriate area for the analysis of cumulative impacts (CEQ Guidance, p. 15). CEQ suggests that, for resident wildlife, a species' habitat or ecosystem could be used in a cumulative impact analysis.

> *Recommendation:* EPA recommends that the spatial scope of the cumulative impact assessment for the Mojave desert tortoise be expanded, consistent with CEQ guidance. We recommend consulting with the U.S. Fish and Wildlife Service (USFWS) on an appropriate boundary for this analysis. We understand that the USFWS will consider impacts across the range of the species for the Biological Opinion (BO) that will be issued under Section 7 of the Endangered Species Act (ESA). BIA may wish to incorporate information from the BO into the FEIS to improve this analysis. However, we note that the application and interpretation of the definition of cumulative impacts under NEPA and ESA[5] differ, and BIA should ensure the analysis in the FEIS is consistent with CEQ guidance.

Additional Comments

- The DEIS contains contradictory information regarding the capacity of the water wells. Page 2-33 states that the secondary water source test wells are estimated to have the ability to deliver water at 1,000 to 1,500 gpm, a capacity *greater* than the existing proposed use well, however Page 4-14 states that the existing proposed use well is capable of providing more than 1,700 gallons per minute (gpm) of water, which is obviously not less than the amount cited for the secondary water test wells on p. 2-33. The FEIS should clarify this. It should also provide additional information regarding the likelihood/frequency that the unimproved road to the secondary wells would be utilized, and ensure that mitigation measures are included to ensure desert tortoise do not get crushed on this road.
- The induced growth (indirect effects) associated with the additions to the Travel Plaza that electrification would support (p. 2-19) should be disclosed.
- In several places in the DEIS, there is reference to compliance with applicable federal, state and local laws and regulations, or with Laws, Ordinances, Regulations and Standards (LORS). Because the project is on tribal land, it is important to identify which laws are applicable, and if laws are not applicable, to identify the specific regulation or standard that is being specifically adopted for the project.
- In many places throughout the DEIS, there is reference to using the "respective methodology prescribed by NEPA". NEPA does not prescribe methodologies, so this wording should be

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[4] Council on Environmental Quality, "Considering Cumulative Effects Under the National Environmental Policy Act, January 1997. Available: http://ceq.hss.doe.gov/publications/cumulative_effects.html

[5] Cumulative Impact/Effect (NEPA) – The impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR 1508.7)
Cumulative Effects (ESA) – Effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02).

amended.

- The DEIS also notes that the drainages onsite flow into the California Wash and then into the Muddy River (p. 4-17). The DEIS also states that "The Proposed Project does not contain, nor is tributary to, any waterbodies that are on Nevada's 303(d) list for exceeding state water quality standards (Nevada Division of Environmental Protection 2009)", but notes that the Muddy River is considered impaired and is on the 303(d) list (p. 3-16). This inconsistency should be corrected in the FEIS.
- EPA previously recommended that water conservation features be included in the office and maintenance building's bathrooms and that, if landscaping will occur around the office, xeric or drought-tolerant native landscaping be used. We continue to recommend that low-flow toilets and faucets be installed in the offices and maintenance buildings, and that any landscaping minimize the use of irrigation water.
- EPA previously commented against the use of single-sided printing for the Administrative DEIS, and we note that the DEIS also uses single-sided printing. The BIA, as a federal agency, is subject to Executive Order 13514 - Federal Leadership in Environmental, Energy, and Economic Performance (October 5, 2009) which specifies that it is the policy of the United States that "Federal agencies shall… eliminate waste….". Additionally, the Federal Acquisition Regulation (48 CFR 23.703) states that agencies must "Promote cost-effective waste reduction…". We recommend that the FEIS be printed double-sided.