

Record of Decision (ROD)

Final Environmental Impact Statement For The Moapa Solar Energy Center Project

U.S. Department of the Interior
Bureau of Indian Affairs
Western Regional Office
Phoenix, Arizona

May 2014

DEPARTMENT OF THE INTERIOR

Record of Decision (ROD) for an 850 acre, long-term lease for the development of a 200 megawatt (MW) solar generation facility and approximately 220 acres of associated rights-of-way (ROW) for an access road, transmission lines and a water pipeline on the Moapa River Indian Reservation and land managed by the Bureau of Land Management (BLM) in Clark County, Nevada.

AGENCY: Bureau of Indian Affairs

ACTION: Record of Decision

SUMMARY: This document constitutes the United States Department of the Interior (DOI), Bureau of Indian Affairs (BIA) ROD for the Moapa Solar Energy Center Project (Project). This ROD represents BIA's approval [as further described herein] of the Moapa Band of Paiute Indians (Tribe) solar energy ground lease with Moapa Solar LLC (Applicant) and the associated ROWs for transmission lines, access road, and water pipeline for up to 50 years, on the Moapa River Indian Reservation (Reservation) for the purposes of constructing and operating an up to 200 megawatt (MW) photovoltaic (PV) solar generating station and associated infrastructure. The BLM will issue a separate ROD to approve the BLM's issuance of ROW grants for a 230 kilovolt (kV) transmission line, an up to 500 kV transmission line, water pipeline, and access road on BLM land and within a BLM-administered utility corridor. The Project is analyzed in the Final Environmental Impact Statement (FEIS) (BIA 2014), notice of which was issued on February 18, 2014, through the Environmental Protection Agency's (EPA) Notice of Availability published in the *Federal Register* as well as through the BIA Notice of Availability published in the *Federal Register* on February 14, 2014. Cooperating agencies for development of the FEIS were the BLM, National Park Service (NPS), EPA, and the Tribe.

ADDITIONAL COPIES: Copies of the FEIS and ROD are available at the project website (www.MoapaSolarEnergyCenterEIS.com) as well as via links on the BIA and BLM websites. Additionally, copies will be available in the following locations: BIA Western Regional Office, 2600 North Central Avenue, 12th Floor, Phoenix, Arizona 85004; U.S. Bureau of Land Management, 4701 N. Torrey Pines Drive Las Vegas, Nevada 89130; BIA Southern Paiute Agency, 180 North 200 East, Suite 111, St. George, Utah 84771; and Moapa River Indian Reservation Tribal Hall, One Lincoln Street, Moapa, Nevada 89025. A *Federal Register* notice regarding the availability of the FEIS was issued on February 7, 2014. Notices were also published in the Moapa Valley Progress, Las Vegas Review Journal, and Las Vegas Sun newspapers.

FOR FURTHER INFORMATION CONTACT: Mr. Charles Lewis, Acting BIA Western Regional Environmental Protection Officer, at charles.lewis@bia.gov or (602) 379-6750 and/or Mr. Paul Schlafly, BIA Southern Paiute Agency Natural Resource Officer, at paul.schlafly@bia.gov or (435) 674-9720.

TABLE OF CONTENTS

1.0	INTRODUCTION	4
1.1	Background	5
1.2	Decisions to be Made	5
2.0	ALTERNATIVES CONSIDERED AND CARRIED FORWARD FOR DETAILED ANALYSIS	6
3.0	ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS IN THE EIS	8
4.0	PERMITS AND APPROVALS	9
5.0	CORRECTIONS TO THE FINAL EIS	10
6.0	MITIGATION MEASURES	10
7.0	PUBLIC INVOLVEMENT	31
8.0	DECISION RATIONALE	33
9.0	FINAL AGENCY ACTION	35
10.0	SECRETARIAL APPROVAL	36
11.0	REFERENCES	37

1.0 INTRODUCTION

This document constitutes the United States Department of the Interior (DOI), Bureau of Indian Affairs (BIA) Record of Decision (ROD) for the Moapa Solar Energy Center Project (Project). This ROD represents BIA's approval of the Moapa Band of Paiute Indians (Tribe) solar energy ground lease (Lease) with Moapa Solar LLC (Applicant) and the associated transmission lines and access road rights-of-way (ROWs) for up to 50 years, on the Moapa River Indian Reservation (Reservation), for the purposes of constructing and operating an up to 200 megawatt (MW) photovoltaic (PV) solar generating station and associated infrastructure.¹

The Project is analyzed in the Final Environmental Impact Statement (FEIS) (BIA 2014), notice of which was issued by the BIA on February 14, 2014, and the Environmental Protection Agency's (EPA) Notice of Availability published in the *Federal Register* on February 18, 2014. Cooperating agencies for development of the FEIS include the Bureau of Land Management (BLM), EPA, National Park Service (NPS), and the Tribe.

The Project would be located approximately 20 miles northeast of Las Vegas in Clark County, Nevada. **Figure 1** shows the location of the Project. It would consist of a PV solar power generation facility (SPGF), electrical lines that would interconnect the generation project to the regional electrical transmission grid (gen-tie lines), a water pipeline, and an access road between the SPGF and an existing frontage road (North Las Vegas Boulevard) along the west side of Interstate 15 (I-15). The SPGF and water pipeline would be located entirely on lands within the Reservation. A portion of the water pipeline and part of a gen-tie line on the Reservation would be located within a designated utility corridor that is administered by the BLM. Other portions of the gen-tie lines and the proposed access road would be located on Federal land managed by the BLM.

The SPGF would be located on approximately 850 leased acres within the Reservation in, Township 16 South, Range 64 East, Sections 29, 30, 31, and 32 (Mount Diablo Meridian). The gen-tie lines and access road would be located on Federal lands managed by the BLM south of the SPGF site within Township 17 South, Range 63 East and Township 17 South, Range 64 East. The water pipeline associated with the Project would be located on the Reservation north and east of the SPGF in Township 16 South, Range 64 East. **Figure 2** shows the location of the proposed solar lease area and the associated ROWs.

This ROD will provide background on the solar project, describe the alternatives, discuss mitigation measures implemented, and summarize the public participation process to support a decision rationale.

¹ BIA provides this approval notwithstanding any future amendments to the Lease made and approved pursuant to 25 C.F.R. Part 162 that would not modify the scope of the Project or require further analysis for the Project under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.).

1.1 Background

The Applicant is proposing to construct an up to 200 MW solar PV generation facility and associated infrastructure on the Reservation in Clark County, Nevada. The Reservation consists of approximately 70,000 acres of land held in trust by the United States for the Tribe. The BIA's mission is to “enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian Tribes, and Alaska Natives.” The Project will create economic development opportunity for the Tribe, provide lease income as a revenue source for the Tribe, create new jobs and employment opportunities for tribal members, and develop sustainable renewable energy resources. The Project also will assist utilities in meeting their renewable energy goals by providing clean renewable electricity generated from the solar resources that may be efficiently connected to the existing transmission system in a manner that minimizes adverse impacts.

The Project would also help meet the goals of the Federal Government to eliminate or reduce greenhouse gas (GHG) emissions and promote the deployment of renewable energy technologies. The Project supports the President's New Energy for America Plan, which sets a target of ensuring that 25 percent of United States electricity is generated from renewable sources by 2025. Secretarial Order 3285 issued by the Secretary of the Interior (March 11, 2009, as amended February 22, 2010) encourages the production, development, and delivery of renewable energy as one of the DOI's highest priorities. The Project is listed on DOI's fast track list and supports the Executive Order issued March 22, 2012 “Improving Performance of Federal Permitting and Review of Infrastructure Projects.” The States of Nevada and California also have established a Renewable Portfolio Standard (RPS) that all public utilities must meet by investing in, and partnering with, commercial project developers to purchase renewable generated power and participate in turnkey projects and/or co-development of renewable projects. The RPS mandates that 25 percent of retail sales in Nevada come from renewable resources by 2025 (33 percent in California). This Project could help meet these goals. Renewable energy produced by the Project would also help reduce the need for fossil-fuel electric generating facilities that contribute to the reduction of GHG emissions.

1.2 Decisions to be made

1.2.1 BIA

The BIA has a trust responsibility to protect and preserve the Tribe's land, assets, and resources while promoting tribal self-governance. Under the Indian Long-Term Leasing Act, 69 Stat. 539, 25 U.S Code (U.S.C.) § 415(a), and regulations implementing the Act at 25 Code of Federal Regulations (CFR) Part 162, BIA approval is required for the solar energy ground lease. For the associated ROW agreements, BIA approval is required under the Indian Right of Way Act of 1948, 62 Stat. 17. 25 U.S.C. § 323 and by implementing regulations at 25 CFR Part 169, between the Tribe and Applicant for the transmission lines (500 and 230kV), a portion of the proposed access road, and the water pipeline on the Reservation.

1.2.2 BLM

The BLM will approve, approve with modifications, or deny the Applicant's ROW grant applications (BLM ROW application N-88870), pursuant to Title V of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1761(a)) and BLM's ROW regulations at 43 CFR Part 2800, to construct, operate, maintain and terminate the proposed electric transmission lines and access road on BLM managed lands and those portions of the ROW applications on the Reservation within the Moapa Utility Corridor. These ROWs must comply with FLPMA, BLM ROW regulations, and other applicable Federal laws. The Moapa Utility Corridor is reserved to the BLM and administered by the BLM in accordance with Public Law No. 96-491 (Dec. 2, 1980) (the Moapa Utility Corridor and the Moapa Act). The BLM is issuing a separate ROD for its decision.

2.0 ALTERNATIVES CONSIDERED AND CARRIED FORWARD FOR DETAILED ANALYSIS

2.1 The Project (BIA's Proposed Action/Selected Alternative)

The Project would consist of an SPGF, gen-tie lines that would interconnect the Project to the regional electrical transmission grid, a water pipeline, and an access road between the SPGF and an existing frontage road along the west side of Interstate 15 (I-15). The SPGF and water pipeline would be located entirely on lands within the Reservation; the gen-tie lines would be located on both Reservation and BLM-administered lands; and the proposed access road would be located on BLM-administered lands. The SPGF would be developed using PV technology and would generate up to 200 MWs of energy. The SPGF would be located on an 850-acre site, and while partial blading would be conducted as necessary, it is assumed that development would disturb the entire site.

The proposed PV solar field would utilize crystalline silicon or thin-film PV panels that would be mounted on single-axis trackers. The PV technology converts sunlight directly into direct current (DC) electricity. The process starts with PV cells that make up photovoltaic modules. A number of solar cells electrically connected to each other and mounted in a single support structure or frame is called a module. Several modules can be wired together to form an array and arrays can be connected in both series and parallel electrical arrangements to produce any required voltage and current combination. The DC from the array is collected at inverters where the DC is converted to alternating current (AC).

2.2 Concentrating Solar Power (CSP) Project Alternative – AREVA Technology

CSP technology focuses sunlight to receivers where the heat is used to produce steam that creates electricity via a conventional steam turbine generator. The primary components of a CSP project include:

- Solar Field containing mirrors that concentrate sunlight onto solar receivers to create steam.

- Steam Turbine Generator that converts the thermal energy of the steam to electrical energy for delivery to the grid.
- Thermal Energy Storage system.
- Plant control system that coordinates the functions of the CSP project components.

The CSP technology being proposed for this alternative is the AREVA CSP technology which utilizes the Compact Linear Fresnel Reflector system. Rows of solar reflectors focus sunlight onto boiler tubes located in a linear receiver supported on towers approximately 80 feet above the reflector field. This CSP alternative would be expected to disturb the entire 850-acre site and use wet-cooling requiring up to 600 to 800 acre-feet/year (AFY) of water for operation.

2.3 eSolar CSP Technology Alternative

In this alternative, instead of the AREVA CSP technology, the eSolar CSP technology and solar field would be used. The eSolar CSP power technology uses many small, flat heliostats (mirrors) focused to reflect sunlight onto receivers mounted on towers. The receivers are essentially traditional high-efficiency boilers that generate steam and provide it to a conventional steam turbine power block. The eSolar design is modular, currently with a standard plant size of 46 MW composed of 12 receivers and 2 subfields of heliostats per receiver. The MSEC Project would include 3 of these modules, with 36 receivers, for a total size of 138 MW on the 850-acre site. This CSP alternative would be expected to also disturb the entire 850-acre site and use wet-cooling requiring up to 600 to 800 AFY of water for operation.

2.4 Dry-Cooling Alternative

This alternative was developed to respond to concerns expressed during public and agency scoping about consumptive water use by the CSP technologies being considered for the Proposed Project. Under this alternative, either of the CSP alternatives described above would be constructed using a dry-cooling technology rather than the wet-cooling technology proposed. Dry-cooling uses approximately 90 percent less water than wet-cooling so this alternative would require approximately 60 to 80 acre-feet/year (AFY) for operations. This water would be supplied by the Tribe from the same well and pipeline as the Project.

Except for the water use described above, this alternative would be generally the same as that described for the CSP alternatives.

2.5 Access Route Alternative

An alternative access road route to connect the SPGF to the existing paved frontage road adjacent to I-15 was developed. This alternative site access road would follow the same existing road on BLM-administered lands from the frontage road for approximately 0.8 miles until it reaches an existing transmission line access road which it would follow for approximately 1.15 miles north onto Reservation lands to a point where it would turn due west to the SPGF site. This road would be approximately 2.1 miles long.

This access road would be constructed to the same standards as the proposed access road and have an approximately 24-foot wide gravel surface, with shoulders and drainage swales on either

side. Final design for the access road would be consistent with BLM and Clark County road standards. The road would be maintained by the Project. This alternative would also be constructed on both BLM-administered and Reservation lands.

2.6 No Action Alternative

Under NEPA, the BIA and cooperating agencies must consider an alternative that assesses the impacts that would occur if the Project were not constructed and the lease agreement and ROWs were not approved. The No Action Alternative assumes that the lease agreement is denied, the BLM utility ROWs are not issued, and the solar project is not built. Under the No Action Alternative the purpose and need of the project would not be met. The Tribe would not benefit economically from the energy production that can be obtained from their prime solar resources and the development of sustainable renewable resources would not occur. The Federal Government, State of Nevada, and neighboring states would not be assisted in their effort to meet their renewable energy goals from the Tribe's solar resources.

3.0 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS IN THE EIS

The alternatives below were not carried forward for detailed analysis because they did not meet the purpose and need, were determined to not be practical or feasible from the technical and/or economic standpoint, or would cause greater environmental effects than the alternatives analyzed in detail. The reasons for eliminating these alternatives are described briefly below.

3.1 Optional Site Locations

The Applicant and Tribe evaluated other sites on the Reservation for potential solar development. This evaluation considered a variety of factors including up to 1,000 contiguous developable acres, topography, drainage, sensitive resources (including special status species and cultural resources), and proximity to transmission interconnection points and highway access.

This process was designed to identify areas with the greatest potential for development while minimizing potential impacts or permitting issues. This included making use of existing infrastructure to minimize disturbance and impacts associated with the access roads and gen-tie lines. Large portions of the Reservation were eliminated from further consideration by applying these criteria.

The Applicant also eliminated the K Road Moapa Solar Project site and other sites on the Reservation previously studied and eliminated by the K Road Moapa Solar Facility EIS (BIA 2012). In addition, the 11,000-acre desert tortoise relocation areas associated with the K Road Moapa Project are not available for development.

The current Project site was identified as the best location for a number of reasons. It is close to the transmission interconnection points at the Crystal and Harry Allen substations. It is remote from other developments on the Reservation, and has nearby road access. It also has relatively lower quality habitat for desert tortoise and limited anticipated impacts to jurisdictional waters.

3.2 Alternative 230 kV Gen-Tie Route

A second route for the 230 kV transmission line to the Harry Allen Substation was considered. It would follow the same path leaving the SPGF site as the proposed 230 kV gen-tie route but would cross the existing 500-kV transmission line to its south side. This alternative route would then follow on the south side of the existing 500 kV transmission line for approximately 2.6 miles before turning southwest to go around the Harry Allen Substation. This alternative 230 kV route is approximately 6.7 miles long.

Through further discussion regarding the best way to route the 230 kV line to and into the Harry Allen Substation, NV Energy indicated that this option created greater technical difficulties and potential conflicts with the existing lines in and out of the substation. Therefore, this route option was dropped from further consideration.

3.3 Hybrid Wet/Dry Cooling for CSP Project

In a hybrid cooling scenario, the wet cooling and dry cooling technologies used for the CSP technologies described in sections 2.2, 2.3, and 2.4 above would be combined and used in tandem. This combined system would result in less reduced water use than the dry-cooling option and lower electrical generation than the wet-cooled system. A hybrid cooling system essentially requires the construction and operation of both a dry-cooling system and a wet-cooling system in a single plant. This would result in higher capital expenditures to purchase and construct both systems and a higher cost over the life of the project to operate both systems. A hybrid system does not achieve the same level of water savings as a dry-cooled system for the associated costs. Because of the hybrid system's increased cost and because it would not provide water-saving benefits comparable to a dry-cooled system, this alternative was not carried forward for detailed analysis.

3.4 Concentrated Photovoltaic (CPV) Technology

The CPV technology uses layers of wafers to absorb different wavelengths of sunlight and provide more power conversion efficiency than typical PV panels. This technology requires dual tracking technology to provide critical alignment with the direct sunlight in order to be efficient. The CPV is generally mounted on taller structures than traditional PV (as high as 40 feet above the surface). Because this technology is relatively new, there are risks for long-term performance reliability and manufacturing capacity to supply large-scale utility projects has not been proven to date. Therefore, this alternative was not carried forward for detailed analysis.

4.0 PERMITS AND APPROVALS

In addition to the approvals needed from BIA and BLM, below is a synopsis of the major permits and other approvals that will need to be obtained prior to construction activities:

- Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. § 1531 *et seq.*) – Section 7 of the ESA requires Federal agencies to ensure that their actions do not jeopardize the continued existence of threatened or endangered species or result in destruction of their designated critical habitat. The Biological Opinion (BO) was issued

by the U.S. Fish and Wildlife Service (USFWS) on January 21, 2014 (see MSEC FEIS at Appendix R).

- U.S. Environmental Protection Agency Section 402 Construction Stormwater Permit- This permit will be required prior to ground disturbing activities. A Stormwater Pollution Prevention Plan will be prepared that details erosion controls, drainage plans and other Best Management Practices engineered for the Project.
- Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) - Concurrence was obtained from Nevada State Historic Preservation Officer on December 9, 2013, that no historic or cultural resources would be adversely affected as a result of the Project (see MSEC FEIS at Appendix I).
- Migratory Bird Treaty Act (MBTA) - Compliance with the MBTA will be adhered to through implementation of the Bird and Bat Conservation Strategy (BBCS) (see MSEC FEIS at Appendix O).

5.0 CORRECTIONS TO THE FINAL EIS

Comments on the FEIS were received from the Nevada Department of Wildlife (NDOW), EPA Region 9, and the Desert Tortoise Council. The comments from EPA and NDOW did not require responses. The comments from the Desert Tortoise Council focus on clarifications to mitigation measures for the desert tortoise. These clarifications will be included in the final desert tortoise plan that will be developed in accordance with the BO for approval by the USFWS prior to construction. Therefore, no revisions or clarifications are being made to the FEIS.

6.0 MITIGATION MEASURES

As required by the Council of Environmental Quality (CEQ) NEPA regulations, 40 CFR §1505.2(c), the BIA and the BLM have identified and adopted all practicable mitigation measures to avoid or minimize environmental harm from the Selected Alternative according to Federal laws, rules, policies and regulations. The construction of the Project will also incorporate adaptive management principals to mitigate unforeseen impacts. Adaptive management is a structured, iterative process of optimal decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. In this way, decision-making simultaneously maximizes one or more resource objectives and, either passively or actively, accrues information needed to improve future management. Adaptive management is a tool which should be used not only to change a system, but also to learn about the system (Holling 1978). Because adaptive management is based on a learning process, it improves long-term management outcomes. The challenge in using the adaptive management approach lies in finding the correct balance between gaining knowledge to improve management in the future and achieving the best short-term outcome based on current knowledge (Stankey & Allan 2009).

The mitigation measures listed below represent best management practices and technologies, and the most current regulatory guidance to minimize adverse impacts to environmental resources. Results of the NEPA analyses determined that mitigation measures are required for the following

resources to minimize adverse effects: Soils, Water Quality, Air, Biological Resources, Transportation, and Public Health & Safety. The complete language of the mitigation measures, as well as design modifications and terms and conditions, are provided in Chapter 5 of the FEIS and are copied below. Additional measures are included in the detailed mitigation plans that are included as appendices to the FEIS.

6.1 Soils

The Proposed Project could result in adverse impacts to soils as a result of increased erosion rates and reduction of soil productivity from removal of vegetation and grading activities. The Applicant would implement the following mitigation measures to reduce overall impacts to soil resources:

- Grading on the solar site would be minimized to only those areas where necessary to meet the construction and operational requirements of the Project. Where no grading occurs, existing vegetation would be left in place and trimmed where necessary to avoid conflicts with panel operation.
- Construction and operational activities will be conducted in compliance with a stormwater pollution prevention plan (SWPPP) that would include best management practices (BMP) and other erosion-control measures designed to minimize soil erosion and limit sheet flow and downstream sedimentation. The SWPPP would also incorporate adaptive management of actions if erosion and sedimentation control measures are found to be insufficient to control surface water at the site.
- To minimize wind erosion, all construction activities shall comply with the Fugitive Dust Control Plan that would be developed and implemented for the Proposed Project. Measures such as watering and ‘stop work’ periods during high winds would be incorporated into the plan.
- A Site Restoration and Revegetation Plan would be implemented to limit impacts to native, on-site vegetation as much as practicable. The Plan would define construction limits and BMP measures for soil restoration and re-planting and establish monitoring and success criteria.

6.2 Water Quality / Quantity

Potential adverse impacts to water are related to soil erosion and downstream sedimentation as well as water transport of hazardous material through soil erosion. As mentioned above, soil erosion would be managed via the SWPPP and erosion controls within ephemeral washes to reduce velocity of flood flow and limit downstream sedimentation. The measures below would be implemented to reduce overall impacts to water quality:

- Grading on the solar site would be minimized to only those areas where necessary to meet the construction and operational requirements of the Project – such as where leveling is necessary, the driveways among the rows of panels, etc. The drainage plan will be designed to allow all surface flows upstream of the site to flow to the ephemeral drainages downstream of the site.

- Final grading and drainage plans will be completed and submitted for approval prior to construction. The final drainage and grading plans would demonstrate that downstream flows would not be adversely impacted due to any proposed changes to natural washes resulting from proposed grading, drainage management measures or the addition of retention ponds.
- The paths for all stormwater flows would be identified and modeled as part of the final grading and drainage plan.
- As part of the minimization of grading in the final design, ephemeral drainages would be avoided to the extent practical. Specifically, the major on-site drainage that runs north-south in the eastern portion of the site would be targeted for avoidance with a vegetative buffer maintained on both sides. The retention of other smaller drainages would be maximized to the extent practical where they can remain stable with project operation.
- The number of drainage crossings would be minimized to the extent possible and each would be designed to accommodate adequate flow.
- Adaptive management techniques will be implemented via the SWPPP to maintain BMP utilized to decrease sediment erosion and downstream transport of such during large rain events.
- Permanent channel monitoring stations would be incorporated into the final SWPPP.
- Weekly and post-storm monitoring of erosion and sedimentation would be conducted during construction. If localized gullies were to develop or result in increased rates of erosion and sedimentation, repairs would be made and erosion and sedimentation control measures would be updated.
- Existing vegetative buffers would be maintained as much as practical along perimeter edges of major drainages.
- Placing Project facilities in washes would be avoided by all alternatives to minimize direct and indirect impacts to the washes from erosion, migration of channels and local scour. All larger ancillary facilities will be located outside of drainages. Some PV supports could be placed within ungraded drainages where technically feasible.
- Where fencing would be built across drainages, breakaway fencing would be installed and would be designed to avoid interference with flows through those drainages. Breakaway fencing would be inspected and repaired as needed within 48 hours of large flood events.
- A spill prevention counter-measure and control (SPCC) plan would be developed and implemented during construction and the operations phase of the Project. Adequately-sized secondary spill containment would be incorporated with all chemical storage vessels to ensure proper capture and control measures for potential spills. The Plan would also provide for hazardous material spill prevention and clean-up measures, were a spill to occur.
- To conserve water, xeric landscaping would be used if applicable.

6.3 Air Quality

The primary impact upon air quality would occur during the construction and decommissioning periods from increased vehicle emissions and fugitive dust. The following mitigation measures

would be incorporated into construction contracts by the Applicant and would be implemented to reduce overall air impacts that would result from the Project:

- The area of grading and vegetation removal would be limited to only that area required for Project construction and operation. Where grading is not necessary, vegetation will be trimmed as needed to allow the surface soils and local drainage to be left undisturbed. Ground disturbance would be scheduled to occur in advance of construction to minimize the amount of time areas would be exposed to wind erosion.
- Vehicular speeds on non-paved roads would be limited 25 miles per hour.
- When hauling material and operating non-earthmoving equipment, spillage would be prevented and speeds would be limited to 15 miles per hour and speed of earth-moving equipment to 10 mph.
- Wind fencing capable of maintaining natural hydrological flows would be installed where needed, grading operations would be phased where appropriate to limit the amount of disturbance at any one time, and water trucks would be used for stabilization of surfaces under windy conditions.
- Water would be applied to disturbed areas to control dust and to maintain moisture level at optimum levels for compaction, as needed. Water will be applied using water trucks and application rates would be monitored to prevent runoff and ponding.
- Exposed stockpiled material areas would be covered during windy conditions (forecast or actual wind conditions of approximately 25 miles per hour or greater).
- Dust control measures such as watering and the application of palliatives approved by the USFWS would be applied to access roads and other Project roads to adequately control fugitive dust.
- Excavation and grading would be suspended during periods of high wind.
- All trucks hauling soil and other loose material would be covered or at least 2 feet of freeboard would be maintained.
- All paved roads would be kept clean of mud, dirt, or debris, as necessary. Gravel or other similar material would be used where non-paved access roads intersect paved roadways to prevent mud and dirt track-out.
- Air pollutant emissions from the emergency diesel generators and fire water pump engines would be minimized by an operating limitation of no more than 50 hours per year, per engine for routine testing and maintenance of these components. These engines would be compliant with current EPA tier emission performance criteria.
- In construction contracts, recommend that all contractors maintain and tune engines per manufacturer's specifications to perform to EPA certification levels, where applicable.
- Any tampering with engines would be prohibited and continuing adherence to manufacturer's recommendations would be required.
- In construction contracts, recommend that contractors lease new, clean diesel burning equipment. In general, the best available emissions control technology would be used - Tier 4 engines should be used for project construction equipment to the maximum extent feasible.
- Limit unnecessary idling, and perform periodic and unscheduled inspections to ensure that construction equipment is properly maintained.

- In construction contracts, recommend that contractors use EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutions at the construction site.
- A traffic and parking management plan would be developed to minimize traffic interference and maintain traffic flow.

6.4 Biological Resources

The following measures will minimize, reduce, and mitigate impacts to biological resources from implementation of the Project:

- As identified in the BO (**Appendix R** in the FEIS), the following measures will be implemented in order to mitigate potential effects to desert tortoise:
 - Oversee establishment and functionality of sediment control devices as outlined in the SWPPP. Ensure that BMPs are in place and working properly on a weekly basis.
 - Awareness training for desert tortoise would be provided to everyone onsite and performed by qualified personnel only.
 - Biologists would monitor the construction activities daily during the initial site disturbance (including installation of temporary and permanent desert tortoise exclusion fencing) and at weekly intervals after all tortoises have been removed from the site. Biologists shall be onsite daily to respond to tortoise issues. Exclusionary fencing would be checked monthly and after any substantial rain event to ensure that they are effective barriers for desert tortoise.
 - Implement controls at entry locations to facilitate weed management and invasive species control in order to minimize infestation within the project area from an outside source. Trucks and other large equipment would be randomly checked before entering the site for any invasive species debris or seed.
 - A permanent perimeter of tortoise-exclusionary fencing will be constructed around the solar facility boundary. Pre-construction clearance surveys to remove tortoises from the construction area will be conducted following USFWS protocol (USFWS 2010). Construction of the exclusionary fence will be monitored by a qualified biologist in order to eliminate impacts to tortoise burrows or live tortoises. The fence shall be maintained in accordance with USFWS standards. Tortoise guards shall be placed at all road access points, where desert tortoise-proof fencing is interrupted, to exclude desert tortoises from the road and solar facility.
 - Biological monitors to monitor the various construction crews in the active construction areas will be assigned until 100-percent tortoise clearance is confirmed. Biological monitoring will also occur during access road improvements and gen-tie and water pipeline construction in occupied desert tortoise habitat.
 - The Applicant will pay a fee based on acreage of disturbance to the Tribe for disturbance of tribal lands and to the BLM for disturbance of BLM lands. The

- fees will be assessed at a rate to be determined by the Tribe, BLM, and USFWS (as described in 5.h below). The Tribe, BLM, and USFWS have agreed that the funds will be used to implement conservation measures established in the Reservation-wide desert tortoise management and conservation plan prepared for the K Road Moapa Solar Project and approved by the Tribe, BIA, and USFWS.
- A biological monitor will be present during maintenance activities if occurring outside of the perimeter fence. Pre-maintenance clearance surveys followed by temporary exclusionary fencing may also be required in desert tortoise habitat if the maintenance action requires ground or vegetation disturbance.
 - Speed limits within the project area will be restricted to less than 25 miles per hour (mph) during construction and operation. Speed limit signs will be posted along the access road. Lower speed limits may be imposed to protect tortoises if determined necessary by the USFWS.
 - Lighting will be focused in toward the solar facility and downward to avoid lighting habitats beyond the SPGF perimeter.
 - Any trenches or excavations will be covered if left overnight or have escape ramps to allow wildlife to safely exit.
 - A Raven Control Plan will be prepared for the project. This plan will prescribe the following measures to limit the impacts of common ravens and other avian scavengers on desert tortoise:
 - Monitoring for the presence of ravens and other potential human-subsidized predators of special status wildlife will be conducted.
 - BMPs to discourage the presence of ravens onsite include trash management, elimination of available water sources, designing structures to discourage potential nest sites, use of hazing to discourage raven presence, and active monitoring of the site for presence of ravens.
 - If ravens are seen building nests, this nesting material will be removed prior to an egg being laid.
 - To minimize activities that attract prey and predators during construction and operations, garbage will be placed in approved containers with lids and removed promptly when full to avoid creating attractive nuisances for wildlife. Open containers that may collect rainwater will also be removed or stored in a secure or covered location to not attract birds.
 - A Weed Management Plan, which must be approved by the BIA, BLM, and the Tribe will be implemented prior to the initiation of ground disturbing activities. Mitigation measures in the Weed Management Plan include: worker awareness training; limiting ground disturbance to designated areas only; maintenance of vehicle wash and inspection stations and close monitoring of materials brought onto the site to minimize the potential for weed introduction; re-establishment of native vegetation in disturbed areas to prevent weeds from colonizing newly disturbed areas; and, regularly scheduled monitoring to quickly detect new infestations of weeds, coupled with rapid implementation of control measures to prevent further infiltration.
-

- A designated field contact representative (FCR) will be assigned to the construction phase of the solar project components; additional FCRs will be assigned for the linear project components including the transmission line and water pipeline.
- Desert tortoises will be relocated to BLM-managed lands or tribal lands following the Terms and Conditions of the BO. Reporting of relocations and other information pertaining to desert tortoise will be completed per the Terms and Conditions of the BO issued by the USFWS. Desert tortoise relocation is considered a take and requires an incidental take authorization from the Service.
- If a desert tortoise is injured as a direct or indirect result of project activities, it shall be immediately transported to a veterinarian or wildlife rehabilitation facility.
- Desert tortoises within the solar facility footprint will be translocated to secure areas outside the fence on tribal lands as approved by the USFWS. The disposition of displaced desert tortoises will be evaluated and reported on following the Terms and Conditions of the BO.
- Any project-related activity that may endanger a desert tortoise shall cease if a desert tortoise is encountered on the project site. Project activities may resume after an authorized desert tortoise biologist removes the desert tortoise from danger or after the desert tortoise has moved to a safe area.
- The Applicant and Tribe will coordinate to salvage and relocate cacti, yuccas, and shrubs on linear ROWs and plant them back on temporarily disturbed portions of the ROWs similar to the efforts undertaken on adjacent BLM lands. If the Tribe chooses to salvage plants from the solar facility, these plants may be held in a nursery or other temporary holding location until needed; no monitoring is required for these plants.
- All work area boundaries will be conspicuously staked, flagged, or otherwise marked to minimize surface disturbance activities. All workers, equipment, vehicles, and construction materials shall remain within the ROW, existing roads, and designated areas. Staging areas will be located in previously-disturbed areas whenever possible.
- The Applicant will develop a habitat restoration plan to be implemented for all temporary disturbances associated with construction of the project to be approved by the BIA, BLM (for disturbance of BLM land), Tribe, and the USFWS.

All trenches and holes will be covered, fenced, or backfilled to ensure desert tortoises do not become trapped unless alternate measures are in place as agreed by BLM, BIA, and the USFWS. If trenches or holes are to remain open during construction, they will be checked for tortoises at least four times a day: at the start of day, at mid-morning, early afternoon, and at the end of the work day. The trenches or holes will also be checked immediately before backfilling regardless of the season. Desert tortoises found in the trench will be reported and moved out of harm's way in

accordance with handling protocols (USFWS 2009). In addition, wildlife escape ramps in open trench segments will be no greater than every 0.25 mile.

The following reasonable and prudent measures (RPMs) and terms and conditions are required pursuant to USFWS's Biological Opinion for the project. To be exempt from the prohibitions of section 9 of the ESA, the BIA, BLM, Tribe, and Applicant, including all agents, consultants, and contractors, must comply with the following terms and conditions, which implement the reasonable and prudent measures described above, and are intended to minimize the impact of incidental take on the Moapa dace and desert tortoise. These terms and conditions are non-discretionary.

1. Moapa Dace

RPM 1: *The BIA shall ensure that measures are implemented to minimize potential impacts to Moapa dace that may result from groundwater pumping associated with construction and O&M of the proposed solar project.*

Terms and Conditions – The following terms and condition implements RPM 1:

The BIA and Tribe shall implement all conservation measures outlined in the Muddy River Memorandum of Agreement (MOA) that are specific to the project applicant, as well as those measures to be carried out in conjunction with other Parties to the MOA. The specific measures applicable to the Tribe are detailed in the Preliminary Biological Opinion (File No. 1-5-05-FW-536).

2. Desert Tortoise

RPM 2: *The BIA and BLM shall ensure the level of incidental take anticipated in the BO is commensurate with the analysis contained herein.*

Terms and Conditions – The following terms and conditions implement RPM 2:

- 2.a. To ensure that the conservation measures are effective and properly implemented, the USFWS and BLM shall be informed immediately upon discovery of a desert tortoise that has been killed or injured within the Action Area of the project. At that time, and in coordination with the USFWS, BIA, or BLM must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue during the outcome of the review, provided the conservation measures included as part of the proposed action (see "Conservation Measures" section) and the T&Cs in this biological opinion have been and continue to be fully implemented.
- 2.b. Authorized desert tortoise biologists (ADTBs) will be employed to monitor project activities within desert tortoise habitat and are responsible for locating desert tortoise and their sign (i.e., conduct clearance surveys). The ADTBs must ensure proper implementation of protective measures, and make certain that the effects of the project on the desert tortoise and its habitat are minimized in accordance with this biological opinion. All incidents of noncompliance in accordance with this biological opinion must be recorded and reported.

Potential authorized desert tortoise biologists must submit their statement of qualifications to the USFWS's Nevada Fish and Wildlife Office for approval, allowing a minimum of 30 days for USFWS response. The statement form is available on the internet at:

http://www.fws.gov/nevada/desert_tortoise/auth_dt_form.htm.

Within 3 days of employment or assignment, the Applicant, BLM, or BIA shall provide the USFWS with the names of FCRs and biological monitors who will assist the authorized desert tortoise biologist.

- 2.c. The FCRs will be assigned to the construction phase of the solar project components; additional FCRs will be assigned for the linear project components including the transmission lines, water pipeline, and access road, as needed. The FCR will be responsible for ensuring compliance to BMPs and other mitigation and minimization measures. Authorized desert tortoise biologists and the FCRs shall be onsite during all construction activities to ensure compliance with this biological opinion, including avoidance of inadvertently harming any desert tortoises that may wander onto the construction site. The authorized desert tortoise biologist and FCRs shall be responsible for: (1) enforcing the litter-control program; (2) ensuring that desert tortoise habitat disturbance is restricted to authorized areas; (3) ensuring that all equipment and materials are stored within the boundaries of the construction zone or within the boundaries of previously-disturbed areas or designated areas; (4) ensuring that all vehicles associated with construction activities remain within the proposed construction zones; and (5) ensuring compliance with the T&Cs of this biological opinion.
- 2.d. All desert tortoises in harm's way may be moved out of harm's way by an authorized desert tortoise biologist (T&C 3a). Tortoises shall not be unnecessarily handled (e.g., no marking, no health assessment beyond visual) or manipulated in any way that will result in an increase in handling time.
- 2.e. The BIA or BLM must reinitiate consultation on the proposed action if any of the following occur: more than 10 sub-adult or adult desert tortoises are identified for relocation during clearance surveys of the SPGF; desert tortoise mortalities on all project components exceed thresholds in Table 3; or desert tortoise incidental take along the linear ROWs outside the SPGF in the form of capture and handling exceed the number identified in Table 3.
- 2.f. Desert tortoises that are determined to be sick or injured, will be transferred to an appropriate facility as directed by the USFWS. The Applicant is responsible for paying for care of desert tortoises taken an appropriate facility as directed by the USFWS.

RPM 3: *The BIA or BLM shall ensure that desert tortoises and their eggs in harm's way are located, properly handled, and moved to safety.*

Terms and Conditions – The following terms and conditions implement RPM 3:

- 3.a. A desert tortoise education program will be prepared and presented by an authorized desert tortoise biologist to all personnel onsite during construction

activities. The program will contain information concerning the biology and distribution of the desert tortoise, its legal status and occurrence in the proposed project area, the definition of take and associated penalties, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be implemented when desert tortoises are encountered.

- 3.b. Tortoise-proof fencing shall be installed around the boundary of the SPGF. Fence specifications will be consistent with those approved by the USFWS in the Desert Tortoise Field Manual (USFWS 2009). Shade stations will be installed along the outside of the tortoise fence for tortoises that may travel along this area. Once exclusion fencing is installed, an authorized desert tortoise biologist will survey the SPGF area following standard protocols (USFWS 2009) to ensure that no tortoises or active burrows are present in the fenced area. An authorized desert tortoise biologist or monitor will be required to walk the entirety of the exterior of the SPGF fence on a daily basis during the desert tortoise active season (mid-March through May and September through mid-November) for a minimum of one year after the fence is constructed to document any desert tortoises that may be in the area or in stress. If tortoises are still being documented along the perimeter of the exterior of the fence at the end of the first year, the BIA will coordinate with the USFWS to extend the duration of this monitoring. Tortoises that are encountered along the perimeter of the fence that appear to be in stress may be transported to a veterinarian or wildlife rehabilitation facility with USFWS approval.

Tortoise guards shall be placed at all road access points, where desert tortoise-proof fencing is interrupted, to exclude desert tortoises from the road and solar facility. The Applicant shall coordinate with the USFWS on placement and design of tortoise guards and their connection with the fencing, to ensure that the guards provide a functional barrier to desert tortoises. Tortoise guards will be inspected quarterly and maintained to ensure they continue to function as a tortoise barrier.

- 3.c. Prior to surface-disturbing activities, authorized desert tortoise biologists, potentially assisted by project monitors, shall conduct a clearance survey in accordance with USFWS-approved protocol (USFWS 2009) to locate and remove all desert tortoises from areas to be disturbed or in harm's way using techniques that provide full coverage of all areas. Two passes of complete coverage will be accomplished. The authorized desert tortoise biologists shall also capture, handle, and relocate desert tortoises from harm's way in accordance with the Desert Tortoise Field Manual (USFWS 2009), as appropriate. Any tortoises encountered after clearance surveys in the SPGF will be handled in the same manner to those encountered during clearance surveys. Any desert tortoise eggs observed in harm's way will be relocated from harm's way by an authorized desert tortoise biologist in accordance with USFWS-approved protocol (USFWS 2009). Desert tortoise burrows that occur immediately outside work areas that can be avoided by project activities shall be clearly marked or flagged to prevent crushing. Burrows

occupied by adult females will be examined thoroughly for nests and eggs during the months of May through October. For those burrows that can be avoided, no desert tortoises shall be prevented from exiting their burrows by placing rocks or other obstructions at their burrow entrances without written authorization from the USFWS.

3.d. All burrows detected within areas proposed for disturbance, whether occupied or vacant, shall be excavated by an authorized desert tortoise biologist and collapsed. All burrows will be excavated with hand tools to allow removal of desert tortoises or desert tortoise eggs. All desert tortoise handling and excavations, including nests, will be conducted by an authorized desert tortoise biologist in accordance with USFWS-approved protocol (USFWS 2009).

3.e. *Project areas outside the fenced solar facility:* All desert tortoises in harm's way shall be relocated to safe, secure areas with suitable shelter and habitat up to 1,000 feet from the point of capture in accordance with the Desert Tortoise Field Manual (USFWS 2009). If a tortoise is injured as a direct or indirect result of project activities, it shall be immediately transported to a veterinarian or wildlife rehabilitation facility and the USFWS will be notified by the close of the first business day subsequent to the incident.

Project areas inside the fenced solar facility: The Applicant will complete 1) health assessments, which may require temporarily holding the tortoises in a facility or temporary pen while the assessment is completed; and 2) development of a disposition plan for each tortoise encountered in the SPGF following USFWS-approved protocol (USFWS 2013). Disposition plans must be submitted to and approved by the USFWS's Desert Tortoise Recovery Office and Las Vegas office prior to relocating any tortoises. Tortoises encountered within 1,000 feet outside of the fence boundary also may be considered for relocation to secure areas outside the fence if approved by the USFWS.

3.f. All trenches and holes shall be covered, fenced, or backfilled to ensure desert tortoises do not become trapped unless alternate measures are in place as agreed to by the BIA, BLM, and Service. If trenches or holes are to remain open during construction, they will be checked for tortoises at least four times a day, at the start of day, at mid-morning, early afternoon, and at the end of the work day. The trenches or holes will also be checked immediately before backfilling regardless of the season. Tortoises encountered in the trench will be reported and moved out of harm's way in accordance with handling protocols (USFWS 2009). In addition, wildlife escape ramps in open trench segments will be no greater than every 0.25 mile.

3.g. Any project-related activity that may endanger a desert tortoise shall cease if a desert tortoise is encountered on the project site. Project activities may resume after an authorized desert tortoise biologist removes the desert tortoise from danger or after the desert tortoise has moved to a safe area.

- 3.h. If a tortoise is encountered and relocated to a safe area, an authorized desert tortoise biologist, biological monitor, or FCR shall inform workers in the area to be particularly watchful for the tortoise as it may return to the work area.
- 3.i. Areas underneath parked project vehicles and equipment will be inspected for desert tortoises before moving them.
- 3.j. Vehicle speed within the project area will not exceed 25 mph. Speed limits will be clearly marked and all workers will be made aware of these limits.
- 3.k. Water used for fugitive dust control will not be allowed to pool on access roads or other project areas outside the fenced area, as this can attract desert tortoises. Similarly, leaks on water trucks and water tanks will be repaired to prevent pooling water.
- 3.l. Should any desert tortoise be injured or killed, all activities that have the potential for take will be halted, and the FCR or authorized desert tortoise biologist will be immediately contacted. The BIA, BLM, FCR, or authorized desert tortoise biologist will notify the Las Vegas office of the USFWS by the close of the first business day subsequent to the incident.
- 3.m. The BIA, BLM, Tribe, and Applicant shall implement appropriate measures, which may include measures not specified in this biological opinion, to ensure that desert tortoises captured and moved, or occur in harm's way do not die or become injured as a direct or indirect (e.g., predation, maladjustment to release areas) result of the project. Measures in this biological opinion may require modification or additional measures may be necessary in response to conditions and situations that pose a threat to the well-being of desert tortoises, in consultation with the USFWS.

RMP 4: *The BIA or BLM shall ensure implementation of measures to minimize predation on desert tortoises by ravens or other desert tortoise predators attracted to the action area.*

Terms and Conditions – The following terms and conditions implement RPM 4:

- 4.a. A litter control program shall be implemented to reduce the attractiveness of the area to opportunistic predators such as desert kit fox, coyotes, and common ravens. Trash and food items will be disposed properly in predator-proof containers with re-sealing lids. Trash containers will be emptied and construction waste will be removed daily from the project area and disposed of in an approved landfill.
- 4.b. The Applicant will monitor for the presence of ravens and other potential human-subsidized predators will be conducted and a control plan will be developed and implemented in coordination with the USFWS if predator densities substantially increase in the vicinity of the facility. In addition to trash management, the Applicant will implement BMPs to discourage the presence of ravens onsite including elimination of available water sources, designing structures to discourage potential nest sites, use of hazing to discourage raven presence, and

active monitoring of the site for presence of ravens. Raven nesting material may be removed if no eggs or young are present in the nest.

- 4.c. Dogs will be prohibited in all project work areas.

RMP 5: *The BIA or BLM shall ensure implementation of measures to minimize loss and long-term degradation of desert tortoise habitat, such as soil compaction, erosion, crushed vegetation, or introduction of non-native invasive plants or weeds as a result of project activities.*

Terms and Conditions – The following terms and conditions implement RPM 5:

- 5.a. Perennial native vegetation will be flagged and avoided to the maximum extent practicable.
- 5.b. Cross-country travel and travel outside designated areas shall be prohibited.
- 5.c. The Applicant and Tribe will coordinate to salvage and relocate cacti, yuccas, and shrubs on linear ROWs and plant them back on temporarily disturbed portions of the ROWs similar to the efforts undertaken on adjacent BLM lands. If the Tribe chooses to salvage plants from the 850-acre solar facility, these plants may be held in a nursery or other temporary holding location until needed; no monitoring is required for these plants.
- 5.d. All work area boundaries will be conspicuously staked, flagged, or otherwise marked to minimize surface disturbance activities. All workers, equipment, vehicles, and construction materials shall remain within the ROW, existing roads, and designated areas. Staging areas will be located in previously-disturbed areas whenever possible.
- 5.e. The Applicant will develop a habitat restoration plan prior to construction of the project to be implemented for all temporary disturbances associated with construction of the project to be approved by the BIA, BLM (for disturbance of BLM land), Tribe, and the USFWS.
- 5.f. The proposed Weed Management Plan will be developed and implemented (Conservation Measure 15).
- 5.g. Final power transmission tower and associated spur road locations will be adjusted to avoid potentially active tortoise burrows to the maximum extent practicable.
- 5.h. In accordance with the project description, the Applicant will pay remuneration fees for the acres disturbed on Tribal and BLM lands, accordingly, prior to surface-disturbing activities associated with the Project. The fees on both tribal and BLM lands would be assessed at the rate of \$824 per acre of disturbance (Hastey et al. 1991). The fee rate will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) on January 31st of each year, becoming effective March 1st. Fees assessed or collected for projects covered under this biological opinion will be adjusted based on the current CPI-U for the year they are collected. Information

on the CPI-U is located on the internet at:
<http://www.bls.gov/news.release/cpi.toc.htm>. The next adjustment will occur March 1, 2014. Fees may be paid at any time prior to surface-disturbing activities at the current fee rate of the date of payment.

The BLM shall collect remuneration fees for compensation of 66.1 acres of desert tortoise habitat loss (Appendix A). At the current rate, total fees for project disturbance of desert tortoise habitat on BLM lands will be (66.1 acres x \$824) \$54,466.40. Remuneration fees shall be used for management actions, as identified by the BLM and USFWS, expected to promote recovery of the desert tortoise over time. Actions may involve habitat acquisition, population or habitat enhancement, increasing knowledge of the species' biological requirements, reducing loss of individual animals, documenting the species status and trend, and preserving distinct population attributes. This fee will be paid directly to BLM. The payment shall be accompanied by the Section 7 Fee Payment Form (Appendix A) and completed by the payee. Payment shall be certified check or money order payable to BLM, and delivered to:

DOI/BLM
ATTN: Information Access Center
The Bureau of Land Management
1340 Financial Boulevard
Reno, Nevada 89502
Contact: (775) 861-6400

The Tribe shall collect remuneration fees for compensation of 885.4 acres of desert tortoise habitat loss. At the current rate, total fees for project disturbance of desert tortoise habitat on tribal lands will be (885.4 acres x \$824) \$729,569.60. The Tribe, BIA, and USFWS have worked cooperatively to develop the "Management and Conservation Plan for the Moapa River Indian Reservation" (USFWS et al. 2014), which identifies actions the Tribe can take to promote the conservation and recovery of the desert tortoise over time across the Reservation. The remuneration fees collected by the Tribe for development of the Project shall be used on specific actions selected from this plan. The Tribe, BIA, and USFWS will coordinate on the details of selected actions prior to implementation.

RPM 6: The BIA or BLM shall ensure implementation of measures to ensure compliance with the RPMs, Terms and Conditions, reporting requirements, and re-initiation requirements contained in this biological opinion.

Terms and Conditions – The following terms and conditions implement RPM 6:

- 6.a. Construction and O&M Reporting Requirements: The BIA and BLM will be responsible for providing quarterly reports during construction and annual reports during O&M activities for actions on lands managed by the respective agency. The BIA and BLM may delegate this responsibility to the Tribe or Applicant. In addition, a final construction report will be submitted to the USFWS within

60 days of completion of construction of the project. All quarterly reports are due by the 10th of each of the following months (January, April, July, October) 10 days following the end of the month, and annual reports are due February 1 of each year. The USFWS anticipates the first annual report by February 1, 2015, if construction or project activities occur in 2014. Annual reports shall be provided to the USFWS during O&M activities for the life of the facility.

Desert Tortoise monitoring reports are required quarterly during the duration of construction and annually during O&M for the life of the facility. Specifically, all reports must include Table 4 (see below) information on any instances when desert tortoises were killed, injured, or handled; the circumstances of such incidents; and any actions undertaken to prevent similar incidents from reoccurring. Additionally, the reports should provide detailed information regarding each desert tortoise handled or observed. Information will include the following: location (GPS), date and time of observation, whether desert tortoise was handled, general health and whether it voided its bladder, location desert tortoise was moved from and location moved to, unique physical characteristics of each tortoise, and effectiveness and compliance with the desert tortoise protection measures.

- 6.b. Any incident occurring during project activities that was considered by the FCR, authorized desert tortoise biologist or biological monitor to be in non-compliance with this biological opinion will be documented immediately by the authorized desert tortoise biologist and included in the monitoring report.

General Biological Mitigation Measures

- Preconstruction surveys will be conducted by qualified biologists according to the most current USFWS, BLM, or Nevada Department of Wildlife (NDOW) protocols, where available, by species. These surveys would confirm the presence of special status plants, noxious weeds, and general and special status wildlife species, to help prevent direct loss of vegetation and wildlife and to prevent the spread of noxious plant species.
- Biological monitors will be assigned to the Project in areas of sensitive biological resources and along all roads used by Project personnel. Biological monitors would be in place along the access road during construction and/or temporary fencing utilized during the construction period to minimize any impacts from vehicles during construction. The monitors will be responsible for ensuring that impacts to special status species, native vegetation, wildlife habitat, or unique resources would be avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities would need to be restricted to protect native plants and wildlife or special status species. Those restricted areas will be monitored to ensure their protection during construction.
- The Applicant will monitor establishment and functionality of sediment control devices as outlined in the SWPPP. Placement of these devices may need to be adjusted and

placed further from roads to minimize risk to tortoises using them for shade. Ensure that BMPs are in place and working properly on a weekly basis.

- The Applicant will implement controls at entry locations to facilitate weed management and invasive species control in order to minimize infestation to the Project site from an outside source. Trucks and other large equipment will be randomly checked before entering the site for any invasive species debris or seed.

The Applicant will pay a fee based on acreage of disturbance to the Tribe for disturbance of tribal lands and to the BLM for disturbance of BLM lands. The fees will be assessed at a rate to be determined by the Tribe, BLM, and USFWS who will agree upon how the funds will be spent prior to initiation of consultation and included in the proposed action for the Biological Opinion. Funds will be used to implement conservation measures established in the Reservation-wide desert tortoise management and conservation plan prepared for the K Road Moapa Solar Project and approved by the Tribe, BIA, and USFWS.

- Any trenches or excavations should be covered if left overnight or have escape ramps to allow wildlife to safely exit.
- Monitoring for the presence of ravens and other potential human-subsidized predators of desert tortoises will be conducted and a Raven Control Plan will be implemented. The BMPs to discourage the presence of ravens onsite include: trash management; elimination of available water sources; designing structures to discourage potential nest sites; use of hazing to discourage raven presence; removal of nesting material prior to an egg being laid; and active monitoring of the site for presence of ravens.
 - To minimize activities that attract prey and predators during construction and operations, garbage will be placed in approved containers with lids and removed promptly when full to avoid creating attractive nuisances for wildlife. Open containers that may collect rainwater will also be removed or stored in a secure or covered location to not attract birds.
- All work area boundaries will be conspicuously staked, flagged, or otherwise marked to minimize surface disturbance activities. All workers, equipment, vehicles, and construction materials shall remain within the ROW, existing roads, and designated areas. Staging areas will be located in previously-disturbed areas whenever possible. Crushing of perennial vegetation in work areas will be avoided to the maximum extent practicable.
- All transmission towers and poles will be designed to be avian-safe in accordance with the *Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) and *Reducing Avian Collisions with Power Lines* by the USFWS and the APLIC (APLIC 2012). Additionally, a post-construction bird study will be implemented to monitor for incidents of bird strikes during the operation of the Project. The scope and protocol of the post-construction surveys for the monitoring and reporting of bird strikes were determined in the BBCS developed in coordination with USFWS. If the tubular-H design type transmission pole structures are used the horizontal member of the structure will be fitted with an inverted-

Y bar to discourage perching. Similar measures will be used to deter nesting if lattice structures are utilized. The following measure identified in the BBCS will also be put into place:

- Areas along the transmission line(s) with a high potential for collision would incorporate flight diverters on the static line to make it more visible. Static lines are the smallest diameter lines, and potentially the most difficult for birds to see and avoid. Where any pole requiring guy wires is located near areas of concentrated bird activity, guy wires would be marked to increase visibility where possible. Currently, guy wire locations are not known. Post-construction monitoring and adaptive management will clarify areas of concentrated avian and/or bat use as well as areas experiencing a high degree of avian or bat mortality. Flight diverter types and locations would be determined through consultation with the BLM, USFWS, and/or NDOW. The number of structures requiring the use of guy wires would be kept to a minimum.
- To reduce perching along segments of the transmission line, perch deterrents would be installed during construction. Exact locations of perch deterrent poles would be determined in consultation with wildlife agencies prior to construction of the line.
- Inspections of lines and other areas where raptor or corvids (e.g. crows and ravens) might nest would be conducted annually. Inactive nests are not protected by the Migratory Bird Treaty Act (MBTA) and removal would be conducted prior to the next breeding season. Should nesting activity become a long-term issue, alternate measures to discourage nesting activities and removal of nesting materials prior to eggs being laid would be implemented. Prior to removing or relocating any nests, facility personnel would consult with USFWS and when necessary, proper permitting would be obtained. More details are provided in the Raven Control Plan that has been developed for the project.
- Vegetation clearing and ground-disturbing activities would be conducted outside the migratory bird nesting season when practical. If ground-disturbing activities cannot be avoided during this time period, a qualified biological monitor will conduct pre-construction nest surveys.
 - For all bird species, surveys would cover all potential nesting habitat in and within 300 feet of the area to be disturbed (as landowner access allows). Any disturbance or harm to active nests would be reported within 24 hours to the USFWS and the BLM, if on BLM lands. The biological monitor would halt work if it is determined that active nests are being disturbed by construction activities and the appropriate agencies would be consulted.
 - Qualified biologists would relocate or destroy bird nests only after young have fledged and perform any mitigation measures necessary to reduce or eliminate negative effects to birds inhabiting the construction area.
- A qualified biologist will conduct pre-construction surveys within 30 days prior to construction for Western Burrowing Owls within suitable habitat during the breeding

season (February 1 through August 31). All areas within 250 feet of the Proposed Project would be surveyed (if landowner access allows), per USFWS 2007 Burrowing Owl guidance (USFWS 2007).

- If an active nest is identified, there would be no construction activities within 250 feet of the Burrowing Owl nest location to prevent disturbance until the chicks have fledged or the nest has been abandoned, as determined by a qualified biologist. Buffers may be increased or reduced as needed with the approval of the BLM and USFWS.
- The occurrence and location of any Western Burrowing Owls would be documented by biological monitors in daily reports and submitted to the authorized biologist on a daily basis. The authorized biologist will report all incidents of disturbance or harm to Burrowing Owls within 24 hours to the USFWS.
- Lighting will be designed to provide the minimum illumination needed to achieve O&M objectives and not emit excessive light to the night sky by installing light absorbing shields on top of all light fixtures, and focusing desired light in a downward direction (Reed et al. 1985). This would reduce the visibility of the lights to migratory birds traveling through the area. Downward facing lights would also reduce the number of insects attracted to lights resulting in a decrease of potential concentrated feeding areas for bats. Any additional lighting needed to perform activities such as repairs would be kept to a minimum and only used when these actions are in progress.
- The on-site evaporation ponds would accumulate discharge that would be temporarily held for the Project's operations. The discharge would include materials that could potentially harm birds or bats if used as a water source. To eliminate avian and bat use of the evaporation ponds at the project site, the ponds would be covered with bird proof netting.
 - To minimize the potential risk of entanglement posed by the netting itself, the netting used would be a fine black twine mesh (as opposed to monofilament). Netting would be suspended more than 5 feet above the water surface upon installation so that the net will not dip into the water should sagging develop later. During the biological monitoring of SPGF, the Applicant would also include an assessment of the netting, ensuring that no birds or bats are entangled and no holes have developed that would increase the risk of ingestion of dissolved solids or entanglement in the netting. If the netting were deemed to be an entanglement hazard, the biological monitors would then use Adaptive Management strategies found in the BBCS (**Appendix O** in the FEIS) to reduce the hazard. After the designated post-construction biological monitoring has ceased at the Proposed Project site (3 years following the completion of construction), O&M staff at the SPGF would regularly check and maintain the netting to ensure no holes develop.
- A Worker Environmental Awareness Program (WEAP) will be prepared. All on-site personnel will be required to participate in WEAP training prior to starting work on the Proposed Project. The WEAP training will include a review of the special status species

and other sensitive resources that could exist in the Proposed Project, the locations of sensitive biological resources and their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all trained personnel will be maintained.

Construction vehicles and equipment will be cleaned of soil and plant material prior to entering and leaving the work site to minimize the introduction and spread of weeds.

- The following measures are intended to mitigate potential impacts to Gila monsters:
 - Field workers and personnel will know how to: (1) identify Gila monsters and be able to distinguish it from other lizards such as chuckwallas and western banded geckos; (2) report any observations of Gila monsters to the NDOW; (3) be alerted to the consequences of a Gila monster bite resulting from carelessness or unnecessary harassment; and (4) be aware of protective measures provided under state law.
 - Live Gila monsters found in harm's way on the SPGF site will be captured and then detained in a cool, shaded environment (<85°F) by the project biologist or equivalent personnel until a NDOW biologist can arrive for documentation, marking and obtaining biological measurements and samples prior to releasing. A clean 5 gallon plastic bucket with a secure, vented lid; an 18"x18"x4" plastic sweater box with a secure, vented lid; or, a tape-sealed cardboard box of similar dimension may be used for safe containment. Additionally, written information identifying the mapped capture location, GPS coordinates in Universal Transverse Mercator (UTM) using the North American Datum (NAD) 83 Zone 11. Date, time, and circumstances (e.g. biological survey or construction) and habitat description (vegetation, slope, aspect, substrate) will also be provided to NDOW.
 - Gila monsters found in harm's way along the gen-tie ROWs, pipeline ROW or access road would hazed off the immediate disturbance area and monitored. Written information identifying the mapped observation location, GPS coordinates in UTM using the NAD 83 Zone 11. Date, time, and circumstances (e.g. biological survey or construction) and habitat description (vegetation, slope, aspect, substrate) will also be provided to NDOW. The Gila monster may be captured using the methods outlined above if hazing is not effective or if the biologist determines that the individual has a high probability of returning to the project area.
 - Injuries to Gila monsters may occur during excavation, road grading, or other construction activities. In the event a Gila monster is injured, it should be transferred to a veterinarian proficient in reptile medicine for evaluation and appropriate treatment. Rehabilitation or euthanasia expenses will not be covered by NDOW. However, NDOW will be immediately notified of any injury to a Gila monster and which veterinarian is providing care for the animal. If an animal is killed or found dead, the carcass will be immediately frozen and transferred to NDOW with a complete written description of the discovery and

circumstances, date, time, habitat, and mapped location (GPS coordinates in UTM using NAD 83 Zone 11).

- Should NDOW's assistance be delayed, biological or equivalent acting personnel on site should detain the Gila monster out of harm's way until NDOW personnel can respond. The Gila monster should be detained until NDOW biologists have responded. Should NDOW not be immediately available to respond for photo-documentation, a digital camera will be used to take good quality images of the Gila monster in situ at the location of live encounter or dead salvage. The pictures will be provided to NDOW with specific location information including GPS coordinates, date, time, and habitat description
- A Facility Decommissioning Plan would be developed and provided to the Tribe and BLM addressing the Project facilities under their respective management. This plan would be submitted for approval at least 6 months prior to commencement of site closure activities.
- Potential closure activities could include re-grading and restoration of original site contours and re-vegetation of areas disturbed by closure activities in accordance with the Site Restoration Plan. Revegetation seed mixes will be composed of native plant species.
- Any and all additional measures identified in the Biological Opinion to mitigate impacts to sensitive species will be implemented as prescribed.

6.5 Cultural Resources

The alternative access road could result in impacts to Site 26CK6115 (wagon road) which could be an alignment or variant of the Mormon Wagon Road (26CK3848). If the alternative access road is selected, the following mitigation measures would be implemented prior to the final alignment survey and construction of this road:

- Whether found to be eligible or not, prior to final survey and construction of this road alignment, authorized personnel will flag the location where the road would cross this site so impacts could be minimized.
- During construction near this site, an archaeological monitor will be in place to ensure no direct or indirect effects take place at the recorded site.
- Should any unrecorded and unanticipated cultural resources be discovered during construction, all activities within the immediate area of discovery shall cease. The Chairman of the Moapa Tribal Council and the BIA Regional Archeologist shall be notified immediately and, consulting with BLM and SHPO as appropriate, they will make arrangements to assess the nature of discovered cultural resources and mitigate any effects resulting from the unanticipated discovery.

6.6 Transportation

The short-term impacts to traffic during construction would be reduced by implementing the following mitigation:

- A Traffic Management Plan would be finalized that identifies BMPs to minimize construction-related traffic impacts. A draft of this plan is available in **Appendix P** of the FEIS.
- Deliveries of materials would be scheduled for off-peak hours, when practical, to reduce effects during periods of peak traffic.
- Truck traffic would be phased throughout construction, as much as practical.
- Carpooling or mass transportation options for construction workers would be encouraged.
- Before construction, the Applicant and agency representatives will document the pre-construction condition of the access route, noting any existing damage. After construction, any damage to public roads will be repaired to the road's pre-construction condition, as determined by the agency representatives.

6.7 Public Health & Safety

The potential for exposure to hazards exists during transportation of materials, direct handling of substances, inadvertent release of hazardous material to the soil and groundwater, and general fire and electrical hazards. In addition to the previously discussed SPCC Plan, the Applicant would implement the following measures to reduce significant impact to public health and safety:

- **General Design and Construction Standards** - The Project would be designed in accordance with federal and industrial standards including the American Society of Mechanical Engineers (ASME), National Electrical Safety Code (NESC), International Energy Conservation Code (IECC), International Building Code (IBC), Uniform Plumbing Code (UPC), Uniform Mechanical Code (UMC), the National Fire Protection Association (NFPA) standards, and Occupational Safety and Health Administration regulations.
- **Health and Safety Program** - All employees and contractors would be required to adhere to appropriate health and safety plans and emergency response plans. All contractors would be required to maintain and carry health and safety materials including the material safety data sheets (MSDSs) of hazardous materials used on site.
- **Emergency Response Plan** - An Emergency Response Plan would be developed and implemented based on the results of a comprehensive facility hazard analysis.
- **Hazardous Waste Storage Plan** - A Hazardous Waste Storage Plan would describe the storage, transportation, and handling of wastes and emphasize the recycling of construction wastes where possible.
- The Project would coordinate with the holders of all existing ROWs that would be crossed or paralleled by the Project ROWs (transmission lines, access roads, water pipeline) to minimize encroachment conflicts and possible effects to existing transmission lines and pipelines.

6.8 Mitigation Measures Not Adopted

All mitigation measures discussed and recommended by State and Federal agencies and the cooperating agencies were adopted for this Project.

6.9 Mitigation Compliance Monitoring and Reporting

All mitigation measures and plans discussed in the FEIS will be implemented by the Applicant and monitored by a third party. Third party monitors will report to the agencies as outlined in the Plans or report directly to the BIA and BLM as determined by the lease and ROW agreements. Reporting procedures will be determined prior to onset of construction activities.

7.0 PUBLIC INVOLVEMENT

7.1 Public Scoping Period

On August 6, 2012, the BIA published the Notice of Intent (NOI) to prepare an EIS for the Moapa Solar Energy Center in Clark County, Nevada in the Federal Register (Volume 77, No.151). The NOI announced a public scoping period for soliciting comments on alternatives, issues, impacts, and planning criteria. The 30-day scoping period for the Project was initiated by the NOI and was completed on September 5, 2012.

The BIA identified significant issues to be covered during the scoping process such as, but not limited to: air quality; geology and soils; surface and groundwater resources; biological resources; threatened and endangered species; cultural resources; socioeconomic conditions; land use; aesthetics; environmental justice; and Indian trust resources. In addition, BIA sent out over 75 scoping letters to Federal, State, and local agencies, as well as individuals and organizations that were interested or may be affected by the Project requesting their participation in the scoping process and, if eligible, participation as a cooperating agency.

7.2 Scoping Meetings

The BIA, BLM, and Tribe held two public scoping meetings near the Project location during the initial 30-day scoping period for the Project. Meeting locations, dates, and numbers of attendees are provided below:

<u>Location</u>	<u>Date</u>	<u>No. of Attendees</u>
Moapa Reservation Tribal Hall	August 21, 2012	40
BLM Las Vegas Field Office	August 22, 2012	29

Commenters' concerns included:

- Substantiation of purpose and need
- Viable range of alternatives to the Project
- Potential impacts to desert tortoise and other sensitive species
- Potential impacts to sensitive plant species
- Potential hydrologic impacts from groundwater use and to ephemeral streams or desert washes and to water quality
- Additive impacts of climate change
- Impacts to air quality as a result of construction and operations
- Potential socioeconomic effects of the Project, particularly on tribal members
- Visibility of the Project from the Old Spanish National Historic Trail
- Potential cumulative impacts

7.3 Draft EIS Preparation and Distribution

On September 5, 2013, the BIA published the Notice of Availability (NOA) for the Moapa Solar Energy Center DEIS in Clark County, Nevada in the Federal Register (Vol. 78 No. 172). The NOA announced the 45 day public review period for the DEIS. Because of the Government shutdown, an extension of the public comment period was announced. The extended review period for the Project was concluded on November 12, 2013.

The DEIS was available on the project Website (www.MoapaSolarEnergyCenterEIS.com), via link on the BIA and BLM websites and hard copies at the BIA Western Regional Office Branch of Environmental Quality Services, 2600 North Central Avenue, 12th Floor, Suite 400, Phoenix, Arizona 85004; the BIA Southern Paiute Agency in St. George, Utah; and the BLM Southern Nevada District Office in Las Vegas, Nevada. In addition, a copy was sent, at their request, to any party who wished to provide comments to the DEIS and/or requested that they be added to the mailing list. Further, BIA provided notice in the Federal Register and within local papers (Moapa Valley Progress, Las Vegas Review Journal, and Las Vegas Sun) that the DEIS was publicly available.

7.4 Final EIS Preparation and Distribution

On February 18, 2014, the EPA published the NOA for the Moapa Solar Energy Center FEIS in Clark County, Nevada in the Federal Register, Vol. 79 No. 32. The NOA announced the public availability of the FEIS. The 30-day notice was initiated by the NOA and was concluded on March 18, 2014.

The FEIS was made available on the project Website (www.MoapaSolarEnergyCenterEIS.com), via a link on the BIA and BLM websites and hard copies at the BIA Western Regional Office Branch of Environmental Quality Services, 2600 North Central Avenue, 12th Floor, Suite 400, Phoenix, Arizona 85004; the BIA Southern Paiute Agency in St. George, Utah; and the BLM Southern Nevada District office in Las Vegas, Nevada. In addition, a copy was sent, at their request, to any party who provided comments on the DEIS and/or requested that they be added to the mailing list. Further, BIA acknowledged in the *Federal Register* and within local papers (Moapa Valley Progress, Las Vegas Review Journal, and Las Vegas Sun) that the FEIS was publicly available. The FEIS took into account and addressed all public comments received from the DEIS.

Comments on the FEIS were received from the NDOW, EPA Region 9, and Desert Tortoise Council and are addressed in this ROD in Section 5.0 above.

8.0 DECISION RATIONALE

The BIA has identified the Project as the Selected Alternative. Overall, the Selected Alternative will accomplish the purpose and need for the Federal action, and help in fulfilling BIA's statutory missions and responsibilities, given consideration to economic, environmental, and technical factors. The Project location and the use of PV technology will minimize adverse environmental impacts. The PV panels would typically sit 4 to 7 feet off the ground and would have minimal visibility from a distance. The PV technology would also minimize the use of water resources - 30 AFY during operation primarily for cleaning modules. The PV technology would not create a noticeable noise impact. The PV also is considered a "proven technology" and represents a less expensive solar technology when compared to CSP or other technologies.

The Project also supports Federal goals of increasing the amount of electricity generated from renewable sources and DOI's policies to encourage the production, development, and delivery of renewable energy as one of the DOI's highest priorities.

The Project also will assist utilities in meeting their renewable energy goals by providing clean renewable electricity generated from solar resources. The Project will support Nevada and California's established RPS for utilities, helping to meet their renewable energy goals of 25 percent and 33 percent, respectively. The Project's scale, technology, and location have been selected to provide substantial amounts of renewable energy to regional utility customers that reside in areas that are not suitable for solar development.

8.1 BIA Directive

The BIA has reviewed the Lease for compliance with 25 U.S.C. § 415 and its implementing regulations at 25 C.F.R. Part 162. The BIA has determined that the Lease and associated agreements are in the best interest of the Tribe. The Project will create economic development opportunities for the Tribe, provide lease income as a revenue source for the Tribe, create new jobs and employment opportunities for tribal members, develop sustainable renewable resources, and provide other benefits. The Project offers significant economic development potential and other benefits for the Tribe by using the Tribe's solar resources. Once the Project is complete, the Tribe will have an option to purchase, own, and operate the Project.

The Project location allows efficient connection of the energy from solar resources to existing transmission infrastructure. The selected site location allows for connection to both the Harry Allen and Crystal Substations with relatively short gen-tie lines (approximately 7 miles and 1 mile, respectively). This nearby existing transmission infrastructure has available capacity to carry the Project's output to market.

The dry washes located on site are a result of surface sheet flow and are not within FEMA 100- or 500-year flood zones. These drainages are not jurisdictional waters of the United States. Existing unimproved roads would be upgraded to provide access to the site from nearby I-15. The site is not visible from many locations in the vicinity and would not be notably visible from the Old Spanish National Historic Trail, the most important viewpoint in the surrounding area. The Project area has been recently studied and has been documented as having no cultural resource issues, minimal sensitive plant issues, and moderate wildlife issues. The Project would not interfere with day-to-day tribal life and does not interfere with the Tribe's plans for other economic development initiatives.

8.2.1 Analysis of Required Factors

The BIA has chosen the Selected Alternative due to minimal short-term and long-term adverse impacts, beneficial long term impacts for the Tribe, and the fact that no significant unmitigated impacts would occur. Adequate consideration has been given to the five approval criteria under 25 U.S.C. §415(a), as follows:

1. The relationship between the use of the leased premises and the use of the neighboring lands. The BIA and the Tribe chose the Selected Alternative after examining alternative sites on the Reservation as well as alternative technologies. Alternative sites and technologies were eliminated from further consideration based on human and natural resource factors as discussed in the FEIS.
2. The height, quality, and safety of any structures or other facilities to be constructed on the leased premises. The chosen PV technology will have a lower overall height than the alternative solar technologies described in section 3.4 of this ROD. The PV technology has very low fire risk and fire protection systems are included as part of the Project. All structures will adhere to Clark County standards and sub-contractor health and safety plans will be required.

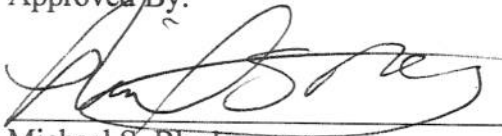
3. The availability of police and fire protection, utilities, and other essential community services. The FEIS shows that there will be no significant impact on utilities and other community services. In addition to on-site fire protection systems, Clark County is responsible for providing firefighting capability on the Reservation and law enforcement will be managed by the Moapa Tribal Police Department.
4. The availability of judicial forums for all criminal and civil matter arising on the leased premises. The Lease will provide that any claims/actions under the Lease will be adjudicated in the appropriate jurisdiction/court. Claims and actions arising on the leased premises, but not under the Lease, will be adjudicated in the appropriate tribal, Federal, or state court.
5. The effect on the environment of the proposed land use. All relevant environmental impacts have been fully addressed in the FEIS.

9.0 FINAL AGENCY ACTION

9.1 Bureau of Indian Affairs

It is my decision to approve, subject to the terms, conditions, stipulations, and environmental protection measures developed by DOI, BIA, and BLM, and reflected in this ROD, one solar energy ground lease and associated transmission line and water pipeline easements and access road ROW on tribal trust lands to Moapa Solar, LLC. This decision is effective on the date this ROD is signed.

Approved By:




Michael S. Black
Director
Bureau of Indian Affairs

5/5/2014
Date

10.0 DEPARTMENTAL APPROVAL

I hereby approve these decisions. My approval of these decisions constitutes the final decision of the DOI and, in accordance with the regulations at 43 CFR § 4.331(b), is not subject to appeal under departmental regulations at 43 CFR Part 4. Any challenge to these decisions, including the BIA Authorized Officer's approval of the lease and associated ROW's as approved by this decision, must be brought in the Federal district court.

Approved by:



Kevin K. Washburn
Assistant Secretary – Indian Affairs
U.S. Department of the Interior

May 6, 2014

Date