MEMORANDUM

To:	Bronwyn Brown, County of San Diego
From:	David Hochart and Erlin Worthington, Dudek
Subject:	JVR Energy Park Mineral Resources Investigation Report
Date:	February 11, 2019
cc:	Patrick Brown, George Gunnoe, BayWa
Attachment(s):	Soitec Solar Development Program EIR (September 2015)
	Jacumba Solar Energy Project EIR (April 2016)
	Kingbird Solar Project EIR (August 2013)

The following memorandum has been prepared in response to indications from the County of San Diego (County) that a stand-alone Mineral Resources Investigation Report would be required in accordance with the County Guidelines for Determining Significance and Report Format and Content Requirements, Mineral Resources (Mineral Resources Guidelines). The County's rationale for requiring a Mineral Resources Investigation Report is related to the project being underlain by Quarternary Alluvium.

I. **No County solar projects have previously been asked to analyze mineral resources as a stand-alone report.**

a. Soitec Solar Development Program EIR - The Soitec Solar Development Program EIR (September 2015), identified that the project sites have not been classified by the California Department of Conservation-Division of Mines and Geology and is underlain by granitic bedrock. This is the same baseline conditions as the proposed JVR Energy Park. The EIR concluded the following; "…Tierra del Sol site is underlain with granitic bedrock, which may be suitable for crushed rock, but is not currently located close to demand for these materials. The Tierra del Sol solar farm would not preclude the potential extraction of a mineral resource on the site in the future after decommissioning. Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the Tierra del Sol solar farm would be less than significant". The significance finding presented above in the County of San Diego certified CEQA document was made in absence of having to prepare a stand-alone Mineral Resources Investigation Report.

b. Jacumba Solar Energy Project EIR - The Jacumba Solar Energy Project EIR (April 2016), identified that the "Proposed Project would not result in permanent loss of availability of aggregate resources, including sand and gravel, because such resources, if present and economically viable, could be extracted in the future after decommissioning". The EIR further concluded that the expense of mining and processing of crushed rock combined with transportation costs currently restricts crushed rock operations to urbanized areas within the Western San Diego Consumption Region of the County. The significance finding presented above in the County of San Diego certified CEQA document was made in absence of having to prepare a stand-alone Mineral Resources Investigation Report.

As seen above, neither the Soitec or the Jacumba Solar projects were required to analyze mineral resources beyond the discussion presented in the EIR. In Dudek's experience, solar projects would not preclude the ability for future extractions or are located in an area that makes economic sense to extract resources for use in development projects. JVR Energy Park will be required to provide a Decommissioning Financial Plan for review and approval by the County that will ensure the resources are not precluded from future use.

II. **Financial infeasibility.** The Mineral Resources Guidelines consider resource extraction from eastern San Diego County to be "potentially" economically feasible in the "eastern portion of the County provided there is a very efficient freeway or railway access to get the materials to market in the urbanized western portion of the County." (*Id.* at p. 6.) The project site is located at the extreme southeastern corner of San Diego County, distant from the urban centers that use mineral resources and separated by significant changes in elevation. Access to Interstate 8 from the site is possible, but not economically viable for mineral resource delivery via trucks. Any minerals extracted would have to be trucked from the project site (elevation ~3,200 feet) to the coastal urban areas (elevation sea level). In between the coastal urban areas to the west and the project site to the south east is the Tecate Divide (elevation 4,140 feet), which would have to be traversed by trucks moving from the site in both directions. The long distance between the project site and the coastal urban areas, the significant change in elevation going both ways (climbing from 3,200 feet to 4,410 feet going west-bound, and climbing from sea level to 4,410 feet going east-bound), inefficient access to Interstate 8, and the low value of the mineral resources that may be extracted make it infeasible to consider the project site a mineral resource location. This discussion is most appropriate for an EIR and does not need to be included as part of a stand-alone Mineral Resources Investigation Report

III. **Adjacent Jacumba Hot Springs community and Jacumba Airport.** The project site is adjacent to both the community of Jacumba Hot Springs and the Jacumba Airport. According to the Mineral Resources Guidelines, a setback of at least 1,300 feet from the property line would be necessary, which would constrain the available extractive area significantly. This discussion is most appropriate for an EIR and does not need to be included as part of a stand-alone Mineral Resources Investigation Report

IV. **The site does not trigger any significance criteria in the County's Guidelines.** The project does not trigger either of the significance guidelines adopted the County in the Mineral Resources Guidelines. Significance guideline #1 does not apply because the project will not "result in the *permanent* loss of availability of a known mineral resource that would be of value to the region and the residents of the state." (Mineral Resources Guidelines, at p. 16.) As described above, the solar project is a temporary use as a decommissioning plan would be required and the use is also considered temporary as demonstrated in previously adopted CEQA documents. Significance guideline #2 also does not apply because the project site is not a resource recovery area designated on the County's General Plan, a specific plan, or a local land use plan. The project site is not in a MRZ-2 zone (see Mineral Resources Guidelines, Figure 2), and is not zoned S82 (extractive mining allowed), but rather is zoned S80 (Open Space), S88 (Specific Plan), S92 (General Rural), and RR (Rural Residential). In addition, incompatible land uses already exist within 1,300 feet of the site, including the community of Jacumba Hot Springs and the Jacumba Airport.

V. **Permanent Loss Definition and Consistency with Other Lead Agencies.** Lead Agencies including San Diego County (see above) have identified that since the life expectancy of the project is approximately 30 years, access to mineral resources that may be identified at the site would not be permanently lost or impacted as the project would be decommissioned after its useful life. See the Draft Environmental Impact Report (DEIR) for the Kingbird Solar Photovoltaic Project (August 2013) prepared by Kern County and attached to this memorandum.

Based on due-diligence completed by Dudek it is recommended that given the proposed solar project is not located close to demand for these materials and the project would not preclude the potential extraction of a mineral resource on the site in the future after decommissioning, a stand-alone Mineral Resource Investigation Report should not be required for the Project. It is understood the Environmental Impact Report (EIR) being prepared for the Project will require an evaluation in accordance with CEQA significance thresholds; however we don't feel it is necessary to prepare a stand-alone Mineral Resources Investigation Report.

3.2.2 Mineral Resources

3.2.2.1 Analysis of Project Effects

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Mineral Resources* (County of San Diego 2008) applies to both the direct impact analysis and the cumulative impact analysis. The guidelines stipulate:

> A project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it will generally not be considered to have a significant effect on mineral resources, absent specific evidence of such an effect:
>
> - The project is:
>   - On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2 [Mineral Resource Zone]; on land classified as MRZ-3; underlain by Quaternary alluvium; or on a known sand and gravel mine, quarry, or gemstone deposit;
>
>   AND
>   - The project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
>
>   AND
>   - The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):
>   - Construction materials (sand and gravel, crushed rock) $12,500,000
>   - Industrial and chemical mineral materials (limestone, dolomite, and marble [except where used as construction aggregate]; specialty sands, clays, phosphate, borates and gypsum, feldspar, talc, building stone and dimension stone) $2,500,000
> - Metallic and rare minerals (precious metals [gold, silver, platinum], iron and other ferroalloy metals, copper, lead, zinc, uranium, rare earths, gemstones and semi-precious materials, and optical–grade calcite) $1,250,000

- The project would result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

3.2.2.1.1 Regional Overview

The lands within the project area have not been classified by the California Department of Conservation–Division of Mines and Geology (California Department of Conservation 1997). The project sites are underlain by granitic bedrock (refer to Section 3.1.2 Geology, Soils, and Seismicity), which may contain mineral resource deposits suitable for crushed rock. However, due to the expensive mining and processing of crushed rock combined with transportation costs, this currently restricts crushed rock operations to urbanized areas closer to areas of demand in western San Diego County (County of San Diego 2008). In addition, there are no known quarries, mines, and/or gemstone deposits within or near any of the proposed project sites (County of San Diego 2008).

The Rugged and LanEast sites are also underlain by Quaternary alluvium, as described in Section 3.1.2, Geology, Soils, and Seismicity. Quaternary alluvium is a very broadly defined geologic unit that contains a wide range of unconsolidated sediments including clay, silt, sand, and gravel. It is sand and gravel (i.e., aggregate) that is the most economically useful as construction materials. Aggregate is used in one form or another for the construction of roads, parking lots, buildings, homes, schools, hospitals, shopping centers, and other essential infrastructure. Quaternary alluvium that is composed mostly or entirely of sand and gravel is the most economically attractive commodity. Alluvium that has high fractions of fine-grained materials (i.e., clay and silt) is generally unsuitable because it increases the cost and decreases the efficiency of aggregate extraction.

Compared to crushed rock, alluvial sand and gravel mining and processing is relatively inexpensive, and there is also a scarcity of high-grade aggregate materials (i.e., Portland concrete cement) being mined in the County. According to the local mining community, this has made it economically feasible for alluvial sand and gravel mines to be potentially permitted in the eastern portion of the County provided there is a very efficient freeway or railway access to get the materials to market in the urbanized western portion of the County (County of San Diego 2008).

The only mineral resource within the project area that is potentially present, and possibly economically feasible to extract is aggregate (i.e., sand and gravel). Therefore, the discussion below is focused on aggregate as there would be no impacts with respect to crushed rock, industrial and chemical minerals, or metallic and rare minerals.

3.2.2.1.2 Tierra del Sol

As stated earlier, the Tierra del Sol site is underlain with granitic bedrock, which may be suitable for crushed rock, but is not currently located close to demand for these materials. The Tierra del Sol solar farm would not preclude the potential extraction of a mineral resource on the site in the future after decommissioning. Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the Tierra del Sol solar farm **would be less than significant**.

3.2.2.1.3 Rugged

As stated earlier, the Rugged site is underlain with granitic bedrock which may be suitable for crushed rock, but is not currently located close to demand for these materials. Quaternary alluvium locally overlies the granite (e.g., along the Tule Creek corridor), which means that construction-grade aggregate could potentially be present.

Although the nearby Interstate 8 (I-8) could be used to economically transport aggregate materials to urban markets in western San Diego County, the Rugged solar farm would not result in permanent loss of availability of aggregate resources for two reasons. First, if the alluvium is of suitable quality and economically viable to extract, the Rugged solar farm would not preclude the potential extraction of the aggregate resource following the decommissioning phase of the project. Second, the site would likely be unsuitable under current land uses for a mining operation because of the presence of an environmentally sensitive area (i.e., Tule Creek), a floodway, as well as the presence of noise-sensitive land uses adjacent to the site. The closest private property line would be within 1,300 feet of the project, which is the noise setback that past County approved noise studies have indicated is needed for most typical extractive operations.

Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the Rugged solar farm would be **less than significant**.

3.2.2.1.4 LanEast

As stated earlier, the LanEast site is underlain with granitic bedrock, which may be suitable for crushed rock, but is not currently located close to demand for these materials. Quaternary alluvium locally overlies the granite, which means that construction-grade aggregate could potentially be present.

Although the nearby I-8 could be used to economically transport aggregate materials to urban markets in western San Diego County, the LanEast solar farm would not result in permanent loss

of availability of aggregate resources for two reasons. First, if the alluvium is of suitable quality and economically viable to extract, the LanEast solar farm would not preclude the potential extraction of the aggregate resource following the decommissioning phase. Second, the site would likely be unsuitable for a mining operation under current land uses because of the presence of environmentally sensitive areas (i.e., Walker Creek which is considered an RPO wetland) as well as the presence of noise-sensitive land uses adjacent to the site. The closest private property line would be within 1,300 feet of the project, which is the noise setback that past County approved noise studies have indicated is needed for most typical extractive operations.

Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the LanEast solar farm would be **less than significant**.

3.2.2.1.5 LanWest

As stated earlier, the LanWest site is underlain with granitic bedrock, which may be suitable for crushed rock, but is not currently located close to demand for these materials. There is no Quaternary alluvium mapped on the LanWest site (see Section 3.1.2). The LanWest solar farm would not preclude the potential extraction of crushed rock on the site in the future after decommissioning. Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the LanWest solar farm **would be less than significant**.

3.2.2.1.6 Proposed Project

The Proposed Project would not result in permanent loss of availability of aggregate resources, including sand and gravel, because such resources, if present and economically viable, could potentially be extracted in the future after decommissioning. In addition, the Rugged and LanEast sites would likely be unsuitable for a mining operation under current land uses because of the presence of environmentally sensitive areas as well as the presence of noise-sensitive land uses adjacent to the site. Therefore, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the Proposed Project would be **less than significant**.

3.2.2.2 Cumulative Impact Analysis

As discussed above, due to the expensive mining and processing of crushed rock combined with transportation costs, crushed rock operations are currently restricted to urbanized areas closer to areas of demand in western San Diego County. Thus, there is no significant cumulative impact with respect to crushed rock resources.

However, some areas underlying the Rugged site and the LanEast site have the potential to contain aggregate resources. However, for the reasons discussed above, the project would not result in the loss of availability of a mineral resource, and thus, **would not contribute to a cumulatively significant impact**.

3.2.2.3 Mitigation Measures

The Proposed Project would not result in significant impacts to mineral resources. Therefore, mitigation is not required.

3.2.2.4 Conclusion

The Proposed Project would not result in any significant impacts to mineral resources.

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3.2 Effects Found Not Significant during Initial Study

This section provides discussions of those effects that were identified as not significant or less than significant during the Initial Study process and did not require further analysis: Agriculture and Forestry Resources, Mineral Resources, Population and Housing, and Parks and Recreation. The Initial Study was made available by the County at the time the Notice of Preparation (NOP) was released (September 11, 2014). A summary of the findings from the Initial Study document for these issue areas is provided in this section.

3.2.1 Agriculture and Forestry Resources

The Proposed Project site and areas of off-site improvements do not contain agricultural resources, including forest land or timberland. The site is not zoned for agriculture, does not have an agricultural preserve or overlay, and is not subject to a Williamson Act Contract. There are no adjacent agricultural uses that would be affected by the Proposed Project. Therefore, the Proposed Project would have no direct or cumulative impacts to agriculture and forestry resources.

3.2.2 Mineral Resources

The Proposed Project would not result in permanent loss of availability of aggregate resources, including sand and gravel, because such resources, if present and economically viable, could be extracted in the future after decommissioning. A mining claim exists just to the west of the Project site, although no mining, either current or in the past, is evident. The value of the claim in not known. The Project area is not in the vicinity of a Mineral Resource Zone, and no mineral resource recovery site is delineated in the Project area on the County of San Diego (County) General Plan or other land use plan. The expense of mining and processing of crushed rock combined with transportation costs currently restricts crushed rock operations to urbanized areas within the Western San Diego Consumption Region of the County. Therefore, direct and cumulative impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state as a result of the Proposed Project would be less than significant.

3.2.3 Population and Housing

The Proposed Project does not include a residential or recreational component that would cause permanent or temporary population increases. Therefore, the Proposed Project would not result in a direct impact to population and housing. Because of the presence of locally available workers (San Diego and Imperial Counties), and because of the relatively short duration of construction (approximately 6 months), workers are not expected to relocate to the area with their families. Once the Proposed Project is operational, it would not employ any workers on site. Additionally, the electricity generated by the Proposed Project would be fed directly into the

regional electricity grid and would not serve or facilitate any growth of the local population directly. Therefore, the Proposed Project would not result in a substantial population increase across the Mountain Empire Subregion that would result in people in the area being displaced or requiring additional housing. Because no temporary or permanent increase in demand or need for housing would occur and no existing housing would be displaced, the Proposed Project would have no direct or cumulative impacts to population and housing.

3.2.4 Parks and Recreation

Demands for parks and recreational facilities are directly related to local population levels. The Proposed Project does not include any residential use, such as a residential subdivision, mobile home park, or construction for a single-family residence that would cause a direct increase in population. The Proposed Project does not include any new or physically altered governmental facilities (parks), or any recreational component, such as a hotel, resort, campground, or other facility that would attract or accommodate an increase in visitors to the area that would indirectly increase the use or demand for recreational and park facilities and services. Since the construction workers would be working in the area temporarily and are not expected to relocate to the area with their families, they are not expected to generate a substantial demand for local park services. No increase in the use of existing parks or other recreational facilities would result from the Proposed Project. The Proposed Project would not directly, through physical alteration, or indirectly, though increased use, result in the necessity to construct or expand recreational facilities or the need for new or physically altered governmental facilities (parks).

Once construction is complete, the Proposed Project would not add any permanent employees. Therefore, the Proposed Project is not considered to contribute to a substantial increase in demand for park and recreational services. Because no temporary or permanent increase in demand or need for new or expanded parks or recreation facilities would occur and no existing facilities would be impacted, the Proposed Project would have no direct or cumulative impacts to parks and recreation.

Section 4.11
Mineral Resources

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4.11.1 Introduction

This section describes the affected environment and regulatory setting for mineral resources. It also describes the impacts on mineral resources that would result from implementation of the proposed project, and mitigation measures that would reduce these impacts, if applicable. The information in this section is based on the Preliminary Geotechnical Evaluation prepared by Ninyo & Moore (provided in Appendix I) as well as resource maps compiled in the Kern County General Plan (Ninyo & Moore, 2012; Kern County, 2009) and the California Department of Conservation (Troxel & Morton, 1962; Koehler, 1999).

4.11.2 Environmental Setting

Public policy states that the nonrenewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas, but will also guide the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated. This section discusses the existing conditions related to mineral resources within the project area, which includes the project site.

Regional Setting

The State Geologist has classified 2,971 square miles of land in Kern County as Mineral Resource Zones (MRZs) of varying significance. Mineral resources in Kern County include numerous mining operations that extract a variety of materials, including sand and gravel, stone, gold, dimensional stone, limestone, clay, shale, gypsum, pumice, decorative rock, silica, and specialty sand. Significant mineral resources located in southeastern Kern County include borates, limestone, gold, and dimension stone. MRZs are classified as follows (Koehler, 1999):

MRZ-2a: Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves. Land included in MRZ-2a is of prime importance because it contains known economic mineral deposits.

MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain inferred mineral resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.

MRZ-3a: Areas containing known mineral occurrences of undetermined economic significance. Further exploration could result in reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.

MRZ-3b: Areas containing inferred mineral occurrences of undetermined economic significance. Further exploration could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.

Petroleum Resources

Kern County is one of the richest oil-producing counties in the United States. The valley floor area of Kern County and the surrounding lower elevations of the mountain ranges contain numerous deposits of oil and gas resources, a major economic resource for the County.

Kern County produces more oil than any other County in California, and is one of the nation's leading petroleum-producing counties. Mineral and petroleum resources are basic to Kern County's economy. As new recovery technologies come into use, petroleum extraction should continue in economic importance. And as long as new urbanization is restricted in areas having important mineral and petroleum resources, the future production of these resources remains promising. Today, 71 active fields are in production.

No petroleum resources have been discovered to date in the western Mojave Desert.

Sand and Gravel

Sand and gravel have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry. The major resources of sand and gravel in Kern County are in stream deposits along the eastern side of the San Joaquin Valley and in the Sierra Nevada foothills, and in alluvial fan deposits along the north flank of the San Emidio and Tehachapi Mountains at the southern end of the County.

Borax

Borax, a borate mineral (a compound that contains Boron and oxygen), was discovered and put into production in 1872 in Nevada and later, in 1881, in Death Valley. Ironically, for five years the route traveled by Pacific Coast Borax Company's famous twenty mule team trains would pass within 15 miles of a buried deposit that would produce in about six minutes the equivalent tonnage hauled by the mule team during each trip. The discovery of borates in southeastern Kern County was accidental, when in 1913 a water well penetrated lakebeds containing colemanite (calcium borate). In 1927 underground mining of the minerals kernite and borax began and continued until 1957, when underground operations ceased and open-pit mining began, eventually becoming the largest open-pit mine in California. Annually over 1.8 million tons are removed from this mine, which supplies about 40% of the world's supply of borates. There are several other sources of borate minerals in the County.

Limestone

Carbonate rocks were initially quarried in 1888 as a source of lime. By 1909 the limestone resources were used for the manufacture of Portland cement during the construction of the first Los Angeles aqueduct. Limestone has been mined continuously since 1921, just northeast of Tehachapi. The Tehachapi Plant was joined by California Portland Cement Company's Mojave Plant in 1955 and National Cement Company's Lebec Plant in 1976 making Portland cement production second only to borates in terms of economic importance to the region.

Stone

Deposits of marble, sandstone, schist, and other rocks in Kern County have been sources of modest tonnages of building stone which have been utilized as dimension stone, field stone, rubble, and flagstone. Most of the dimension stone (marble and flagstone) was mined before 1904; field stone and flagstone have been mined mostly since about 1952 in the area around Randsburg.

Precious minerals

In terms of total dollar value and number of deposits, gold is the most important metallic mineral commodity that has been produced in Kern County. The earliest mining in Kern County was in 1851 at placer gold deposits in Greenhorn Gulch, which drains into the Kern River about midway between Democrat Springs and Miracle Hot Springs. The first lode mining was in 1852, and by 1865 gold was being produced in four districts around the Kern River. Gold was first prospected in eastern Kern in the 1860s, with the two largest mines being established in the 1890s. The Yellow Aster and Golden Queen mines located in eastern Kern have yielded almost half of the total gold output of the county. The principal sources of silver in Kern County have been deposits in eastern Kern County. Although gold is the chief mineral in value, silver is predominant by a 5:1 ratio and is an important by-product of the gold ore.

Local Setting

The site consists of agricultural land, and is currently used for crop production, specifically oats and carrots. The project area borders Los Angeles County on the south and is located approximately 16 miles west of the community of Rosamond. It is located in the Antelope Valley, in the northwestern portion of the Mojave Desert. The site is located at the northwest corner of the 170th Street West and Avenue A intersection.

The general geologic conditions in the project area are described in Section 4.6, Geology and Soils, of this EIR. The project site is classified as MRZ-3, which is defined as "areas containing mineral deposits the significance of which cannot be evaluated from available data" (Ninyo & Moore, 2012). The site is not designated for mineral resources, nor is it located on or immediately adjacent to lands designated as Mineral and Petroleum areas by the Kern County General Plan. There are no lands designated as 8.4 Mineral and Petroleum (Minimum 5 Acre Parcel Size) located within five miles of the site. This designation indicates the land contains productive or potentially productive petroleum, mineral, or timber resources. The nearest mine is the Tropico Mine located 12 miles to the northeast of the site.

4.11.3 Regulatory Setting

State

Division of Oil, Gas, and Geothermal Resources (DOGGR)

DOGGR is a state agency responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. DOGGR's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells, or requires the remediation of wells to current DOGGR standards.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 requires the State Geologist to classify land into MRZs according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that the mineral potential of land is recognized by local government decision-makers and considered before land-use decisions are made that could preclude mining. MRZs in the vicinity of the proposed project are presented in Section 4.11.2, Environmental Setting.

Local

Kern County General Plan

Chapter 1. Land Use, Open Space and Conservation Element

1.9 Resource

Goal

Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations that will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources or diminish the other amenities that exist in the County.

Goal 2: To protect areas of important mineral, petroleum, and agricultural resource potential for future use.

Goal 3: To ensure that the development of resource areas minimizes effects of neighboring resource lands.

Policies

Policy 14: Emphasize conservation and development of identified mineral deposits.

Policy 17: Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.

Policy 25: Discourage incompatible land use adjacent to Map Code 8.4 Mineral and Petroleum areas.

Implementation Measures

Measure H: Use the California Geological Survey's latest maps to locate mineral deposits until the regional and statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.

Measure K: Protect oilfields and mineral extraction areas through the use of appropriate implementing zone districts: A (Exclusive Agriculture), DI (Drilling Island), NR (Natural Resource), or PE (Petroleum Extraction).

Willow Springs Specific Plan

Open Space and Conservation Element

Goal

Goal 1: Resource lands should be maintained in an undeveloped state until lands more suitable for development have been made use of.

4.11.4 Impacts and Mitigation Measures

Methodology

Potential significant project impacts associated with mineral resource extraction were identified based on the Preliminary Geotechnical Evaluation prepared by Ninyo & Moore (Ninyo & Moore, 2012), the Kern County General Plan map, and aerial photos.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project could potentially have a significant adverse affect on mineral resources.

A project would have a significant adverse effect on mineral resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Project Impacts

Impact 4.11-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

The project site is not designated as a mineral recovery area by the Kern County General Plan, nor is it zoned for or immediately adjacent to lands designated as Mineral and Petroleum areas by the Kern County General Plan. There is no land designated as 8.4, Mineral and Petroleum area in the Kern County General Plan within a five mile radius of the site.

The project site is classified as MRZ-3 Mineral Resource Zone by the Department of Conservation Mining and Geology Board, which is defined as "areas containing mineral deposits the significance of which cannot be evaluated from available data" (Ninyo & Moore, 2012). Due to the abundance of similar mineralogical materials in the surrounding desert region around the proposed project site, the potential of the project to result in the loss of availability of a known mineral resource is considered less than significant.

Additionally, the nearest mine is the Tropico Mine located 12 miles to the northeast of the site. At this distance, the proposed project would not interfere with any existing mining operations at the Tropico Mine, and would not result in the loss of land designated for mineral and petroleum. Also, based on the absence of historical surface mining in the area, the potential for surface mining at the site is considered extremely low. As such, the project would not result in the loss of availability of a known mineral resource and the potential impact to future mineral resources is less than significant.

Mitigation Measures

None required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.11-2: The project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

The site is not located on land designated for mineral resources by the Kern County General Plan or Willow Springs Specific Plan. Implementation of the proposed project would not directly or indirectly conflict with any local general plan, specific plan, or other land use plan. In addition, because the life expectancy of the project is approximately 30 years, access to any mineral resources that may be identified at the site in the future would not be permanently lost or impacted, and the proposed project would not result in a significant impact. As noted in Section 4.10, *Land Use and Planning*, the project operator is required to provide a Decommissioning Financial Plan for review and approval by the County. The Decommissioning Financial Plan would factor in the cost to remove the solar panels and support structures, replace any disturbed soil from removal of support structures, and control fugitive dust on the remaining vacant land.

Mitigation Measures

None required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

As described in Chapter 3, *Project Description*, multiple projects, including several utility-scale solar and wind energy production facilities, are proposed throughout Kern County. Many are located, like the project site, in the Mojave Desert. The proposed project would not restrict access to any mineral and petroleum areas designated in the Kern County General Plan. As a result, the proposed project would not contribute to any cumulative impacts to mineral resources.

Mitigation Measures

None required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.