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FINAL

FACILITY DECOMMISSIONING PLAN

SOLAR ENERGY GENERATING SYSTEM (SEGS) VIII

(88-AFC-01C)

SAN BERNARDINO COUNTY, CALIFORNIA

LSA

May 2020

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FINAL

FACILITY DECOMMISSIONING PLAN

SOLAR ENERGY GENERATING SYSTEM (SEGS) VIII

(88-AFC-01C)

SAN BERNARDINO COUNTY, CALIFORNIA

Submitted to:

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LSA

May 2020

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EXECUTIVE SUMMARY

Luz Solar Partners, Ltd., VIII (hereinafter Project Owner), an indirect wholly owned subsidiary of Terra-Gen, LLC, submits this Facility Decommissioning Plan for the Solar Energy Generating System (SEGS) VIII (88-AFC-01C) to the California Energy Commission (CEC). This Decommissioning Plan fulfills the compliance requirement of Condition of Certification (COC) DECOMMISSIONING-1, as found in the Commission Final Decision for the SEGS VIII.

The SEGS VIII facility is near Harper Lake in San Bernardino County, California. The CEC certified the SEGS VIII Project in March 1989 (88-AFC-01C). SEGS VIII completed construction and went online in December 1989. SEGS VIII generates a peak of 80 megawatts of solar thermal electricity for the Southern California Edison transmission grid. While SEGS VIII shares a project footprint and numerous project facilities with SEGS IX, this plan is for the decommissioning of SEGS VIII only.

Although the SEGS VIII facility has been in operation for 30 years and can continue to operate effectively as a concentrated thermal solar plant with proper maintenance, the Project Owner intends to decommission the existing SEGS VIII concentrated solar thermal facility and replace it with a new photovoltaic (PV) solar facility. As the CEC does not assume jurisdiction of PV solar facilities, the CEC license for SEGS VIII would be terminated upon completion of decommissioning activities. The proposed PV Project would be under the local jurisdiction of the County of San Bernardino. The Project Owner obtained a Conditional Use Permit (CUP) for the decommissioning and demolition of the existing SEGS VIII facility and redevelopment of a new PV Project and Battery Energy Storage System (BESS) from County of San Bernardino on October 3, 2019. The proposed PV Project is a California Environmental Quality Act Class 2 Categorical Exemption under Section 15302 for replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

SEGS VIII would begin safe layup and decommissioning activities as early as October 2020, pending approval of this Decommissioning Plan. After safe layup and decommissioning activities have been completed, the CEC license will be terminated and the County of San Bernardino will assume jurisdiction for the redevelopment of the project site for the proposed PV and BESS Project.

Environmental analysis of the decommissioning activities shows that decommissioning will not result in environmentally significant, unmitigated adverse effects and will comply with applicable laws, ordinances, regulations, and standards (LORS).

Section 1.0 of this plan describes the Project background and provides an overview of the decommissioning plan. Section 2.0 provides a description of safe layup activities, including plant staffing, security, equipment lockout, removal of hazardous waste, and handling of utilities. Section 3.0 provides a complete description of decommissioning activities, the plan for reuse of the site, identification of facilities to remain on site, facilities to be removed, and the decommissioning schedule. Section 4.0 provides an analysis of the potential environmental effects of decommissioning and the Project's compliance with all applicable LORS. Section 4.0 also includes a discussion of alternatives considered and why decommissioning of the existing facility and reuse of the site as a solar PV facility is the preferred alternative. The current CEC

conditions of certification (COCs) for SEGS VIII are included in Appendix A of this plan. Appendix B contains the County of San Bernardino Final Staff Report, and Appendices C through E consist of supporting studies and documentation for air quality and biological resources.

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LIST OF ABBREVIATIONS AND ACRONYMS

AC	alternating current
BESS	Battery Energy Storage System
BMP	best management practice
BRMIP	Biological Resources Mitigation Implementation Plan
Caltrans	California Department of Transportation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
COA	Condition of Approval
COC	Condition of Certification
CPM	Compliance Project Manager
CT	Combustion turbine
CUP	Conditional Use Permit
DOT	Department of Transportation
GSU	generator step-up
HDPE	high density polyethylene
HTF	heat transfer fluid
LORS	laws, ordinances, regulations, and standards
MDAQMD	Mojave Desert Air Quality Management District
MW	megawatts
NPDES	National Pollutant Discharge Elimination System
Project	SEGS VIII facility
Project Owner	Luz Solar Partners, Ltd., VIII
PV	photovoltaic
RE	Renewable Energy
RECE	Renewable Energy and Conservation Element
RWQCB	Regional Water Quality Control Board
SEGS	Solar Energy Generating System
SPCC	Spill Prevention Countermeasure Control
ST	Steam turbine
SWPPP	Stormwater Pollution Prevention Plan

1.0 INTRODUCTION

1.1 BACKGROUND

The Solar Energy Generating System (SEGS) VIII facility (Project) is near Harper Lake in San Bernardino County, California (see Figure 1, Project Location). The California Energy Commission (CEC) certified the SEGS VIII Project in March 1989 (88-AFC-01C). Construction of the SEGS VIII finished and the facility went online in December 1989. SEGS VIII generates a peak of 80 megawatts of solar thermal electricity for the Southern California Edison transmission grid using fields of parabolic solar collector mirrors. Heat from the mirrors is concentrated on tubes of heat transfer fluid, which is circulated to steam boilers to produce electricity. In 2011, additional loops of mirrors were added within the SEGS VIII plant boundary and are in operation today.

It was assumed that decommissioning of the permanent plant facilities would begin 25 to 30 years after the commercial operation date of the Project, which was anticipated to be first quarter of 2019. However, during second quarter of 2015, a useful life memorandum was completed and the analysis revealed that the facility could continue to operate for an additional 20 years with the proper maintenance activities. Although the facility can continue to operate as a concentrated thermal solar plant, the Project Owner intends to decommission the existing SEGS VIII concentrated solar thermal facility and replace it with a new photovoltaic (PV) solar and Battery Energy Storage System (BESS) facility.

The proposed PV Project would be under the local jurisdiction of the County of San Bernardino. It will be entirely within the existing SEGS VIII and IX footprint and will have the same solar utility purpose and capacity as the existing solar thermal Project. The proposed - Project would reuse existing project transmission equipment and some of the existing structures. The Project Owner obtained a Conditional Use Permit (CUP) for the proposed Project from the County of San Bernardino for the decommissioning and demolition of the existing SEGS VIII and IX solar thermal facilities and redevelopment at the same location, of a new PV solar facility and BESS. The CUP was approved on October 3, 2019. The proposed Project is a California Environmental Quality Act (CEQA) Class 2 Categorical Exemption under Section 15302 for replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. Appendix B contains the County of San Bernardino's Planning Commission Final Staff Report with the adopted findings, approval of the CUP based on the recommended findings and Conditions of Approval, and Notice of Exemption (posted January 8, 2020).

This decommissioning plan is being submitted for CEC approval of the decommissioning of the existing SEGS VIII facility. This plan describes the decommissioning activities, plans for continued use of facility land and equipment, and provides an analysis of potential environmental impacts associated with the shutdown and decommissioning of SEGS VIII.

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SEGS Project Footprint

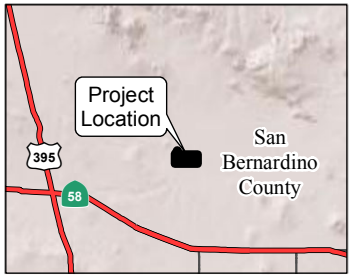

FIGURE 1

SEGS VIII and IX

Project Location

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SOURCE: Luz Solar Partners VIII and IX, LLC (6/2019), Google (9/2015)

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1.2 DECOMMISSIONING PLAN

This Facility Decommissioning Plan is being submitted to the California Energy Commission (CEC) pursuant to COC DECOMMISSIONING-1 of the Commission Decision for SEGS VIII (88-AFC-01C). DECOMMISSIONING-1 states:

> Prior to commencing decommissioning activities for SEGS Unit VIII, Luz shall file a decommissioning plan with the CEC Compliance Project Manager (CPM). The decommissioning plan shall:
>
> - Identify and discuss the proposed decommissioning activities and schedule for the power plant site, transmission line corridor, and all appurtenant facilities constructed as a part of/or because of the project;
> - Identify all applicable laws, ordinances, regulations, standards, (LORS) and local/ regional plans applicable at that time;
> - Discuss how the specific proposed decommissioning activities will comply with those identified LORS and plans;
> - Contain an analysis of all decommissioning alternatives considered, including restoration of the site to its preconstruction, natural state; and
> - Discuss the reasons for selecting the preferred proposal.

1.3 PLAN OBJECTIVES

Consistent with DECOMMISSIONING-1, the objectives of this Facility Decommissioning Plan include:

- Describe decommissioning activities;
- Describe plans for continued use of facility land and equipment;
- Describe plans for reuse and recycling of equipment and materials;
- Describe procedures to be used to demolish and transport equipment and materials;
- Analyze potential environmental impacts of shutdown and decommissioning; and
- Where applicable, propose conditions of certification (COCs) to be implemented during decommissioning and demolition to further ensure that activities conform with applicable LORS.

1.4 DECOMMISSIONING AND REUSE OVERVIEW

Upon termination of current solar thermal power generation activities, the following initial decommissioning activities would take place to remove the SEGS VIII from service:

- Drain all fluid systems, collect all contents, and dispose of or recycle within applicable LORS to ensure public health and safety, and protection of the environment.

- Categorize all wastes including heat transfer fluid (HTF), lubricating oils, fuels, water treatment chemicals, universal waste, and possible lead and asbestos containing materials, etc. These materials will be managed for proper containerization, profiling, and shipment off site for disposal or recycling.

- Identify utility systems required for continued operation of SEGS IX, the Battery Energy Storage System (BESS) infrastructure and future PV solar project.

- Design and install temporary facilities for support of SEGS decommissioning and contractor personnel such as office trailers, temporary power, potable water and sanitary service.

- Equipment liquidation/sale, recycle or disposal activities.

Certain Project facilities and equipment would remain in place at the Project site to support SEGS IX, the BESS and future PV solar facilities. Certain other equipment would be decommissioned and placed into temporary storage (either the Project site or elsewhere) or permanently removed from the site. The planned disposition of the current Project facilities and equipment is discussed in Section 3.0 of this plan.

SEGS VIII decommissioning activities are subject to the jurisdiction of the CEC until a Petition for Termination is approved and all open COCs are closed. The County of San Bernardino has issued approval for the redevelopment of the SEGS VIII and IX Project into a solar PV and BESS facility through the issuance of a CUP. The County of San Bernardino may take over jurisdiction of the decommissioning and demolition of the existing SEGS VIII solar thermal facilities upon agreement with the CEC that the County would oversee the necessary COCs and/or conditions of approval to ensure that decommissioning and demolition activities will not result in a significant impact to the environment or public health and safety.

1.5 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS OF DECOMMISSIONING

This Decommissioning Plan provides an environmental analysis and discussion of impacts associated with the decommissioning of SEGS VIII. Section 4.0 of this plan identifies all applicable LORS and local/regional plans and discusses how decommissioning activities would comply with the identified LORS and plans. Section 4.0 concludes that there will be no significant environmental impacts associated with the decommissioning of the existing SEGS VIII facility and that the decommissioning process will comply with all applicable LORS and plans.

Additionally, where applicable, the County of San Bernardino's Planning Commission Final Staff Report findings and required Conditions of Approval (included in Appendix B) are incorporated into this plan to further demonstrate decommissioning would comply with all applicable LORS and plans and not result in significant environmental impacts.

The County of San Bernardino's Planning Commission Final Staff Report findings item number 6 (see page 13 of Appendix B) states the following:

> ***6. The lawful conditions stated in the approval are deemed reasonable and necessary to protect the overall public health, safety and general welfare.***
>
> *The Project conditions of approval include measures that require the developer to comply with the performance measures outlined in the Development Code. The Project has been evaluated by County departments and as part of the environmental review process to respond to specific development needs and reduce potential environmental impacts.*

As discussed in Section 1.1, Background, the County of San Bernardino determined that the PV redevelopment Project, which includes the decommissioning and demolition of the existing SEGS VIII and IX solar thermal facilities and replacing with the proposed new facility, is exempt from the California Environmental Quality Act (CEQA) as a Class 2 Categorical Exemption under Section 15302(c) of the CEQA Guidelines related to replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The new structures will be located on the same site and within the same footprint and will have the same solar utility purpose and capacity as the structures being replaced. In addition, the proposed facility reduces water usage and visual impacts through reduced panel heights, and reduces greenhouse gas (GHG) emissions by shutting down the existing gas fired heaters.

In compliance with CEQA, the proposed PV and BESS redevelopment Project is exempt pursuant to CEQA Guideline Section 15302(c); "Replacement or Reconstruction" (c) replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. Therefore, the filing of a Notice of Exemption was recommended and posted on January 8, 2020.

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2.0 SAFE LAYUP

This section describes the initial measures that the Project Owner would take to ensure safe and secure layup of SEGS VIII. Shutdown and initial layup may commence as early as October 2020, pending CEC approval of this Decommissioning Plan and favorable market conditions.

2.1 PLANT STAFFING AND SECURITY

Select plant staff will remain on site throughout decommissioning activities. There would be existing security measures on site that restrict public access during decommissioning and layup. The entire site will continue to have the existing chain-link security fencing around the site with electronic gate access. Controlled access gates would be located at the entrance to the facility and access through the main gate would require an electronic control number input or be opened by control room personnel once identification is confirmed, preventing unaccompanied visitors from accessing the facility. All Facility personnel, contractors and visitors will be logged in and out of the facility at the main office or at the main gate during normal business hours. Visitors and non-SEGS VIII employees would be allowed entry only with approval from a staff member at the facility. SEGS IX will continue operation during SEGS VIII decommissioning and SEGS IX operations staff will continue to have access through the main gate.

In addition, at each point of access from a public road, an easily visible sign shall be posted indicating the facility name and other pertinent information as required.

2.2 SAFE POWER PLANT EQUIPMENT LOCKOUT

The safe layup of a power generation facility can prevent hazards to personnel and potential equipment damage due to the potential for accidental energization of equipment. The safe layup process includes the de-energization of certain control systems and the partial de-energization of others. If not specifically mitigated, these conditions can lead to equipment starting or closing unintentionally. Accordingly, the SEGS will lockout specific equipment according to the Project Lockout/Tagout Procedures to ensure unintentional operation does not occur.

Some of the major equipment to be locked out are listed below however, all equipment requiring lockout/tagout will be appropriately locked out and de-energized before handling and removal:

- Steam turbine (ST): Disable and decouple starting means
- Generator step-up (GSU) Transformer: removing high and low side connections
- Generators: removing links to iso-phase busses
- Natural gas supply: blinding and/or air gapping the supply
- ST starting motors: disconnecting and grounding cabling to motors

Safe layup of SEGS VIII will mitigate the hazards associated with inadvertent energization during the layup process. All other maintenance work during the safe layup activities will be conducted in accordance with Project Owner's existing safety and maintenance procedures.

2.3 REMOVAL OF HAZARDOUS MATERIALS

Table 2.1 lists the primary hazardous materials expected to be handled during the decommissioning process. These materials include HTF, lead acid batteries, diesel, hydraulic oil, lubricating oil, and mineral oil. Any additional operational chemicals listed as hazardous in the Spill Prevention Countermeasure Control Plan (SPCC), or otherwise used at the site, would also be removed as part of the terminal shutdown of the plant prior to decommissioning activities. Lead and asbestos containing structures and materials are not known to be present on site, but testing will be performed prior to the start of demolition.

Table 2.1: Hazardous Materials

Material	Site Use	Location	Decommissioning and Reuse Strategy
Lead acid batteries (sulfuric acid and lead) size of batteries approximately 10cm x 5cm x 7cm	Electrical power	Collectors	Remove prior to demolition
Lead	None known	Unknown (testing of structures and pipes will be conducted prior to demolition)	Perform testing prior to demolition. If lead containing materials are encountered, waste will be disposed of properly at a licensed facility.
Asbestos	None known	Unknown (testing of structures and pipes will be conducted prior to demolition)	Perform testing prior to demolition. If structures or pipes containing asbestos are encountered, waste will be disposed of properly at a licensed facility.
Heat transfer fluid	Heat transfer from solar collectors to solar steam generator	Solar collector assemblies, storage tanks, ullage system	Drain liquid from equipment prior to removal. Triple-rinse tanks and piping prior to processing and recycling. Product and rinsate fluid will be disposed of off-site.
Diesel No. 2	Fuel for pump engine/ generators	Near fire pump; (maximum quantity 9,000 gallons)	
Hydraulic oil	Used in turbine starter system, turbine control valve actuators	Contained within equipment; (maximum quantity on site 500 gallons)	
Lubricating oil	Used to lubricate rotating equipment	Contained within equipment; (maximum quantity on site 30,000 gallons)	
Mineral oil	Used in transformers	Contained within transformers; (maximum quantity on site 105,000 gallons)	

Source: Luz Solar Partners, Ltd., VIII, and Luz Solar Partners, Ltd., IX (2016).
cm = centimeter

All residual materials and chemicals will be removed prior to demolition for - recycling or for proper disposal at licensed facilities. Fuel, HTF, hydraulic fluids and oils would be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks/vessels would be rinsed and

rinsate would also be transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller containers of lubricants, paints, thinners, solvents, cleaners, batteries and sealants, would be kept in a locked utility building with integral secondary containment that meets local and State requirements for hazardous waste storage until removal for proper recycling or disposal. It is anticipated that all oils and batteries would be recycled at an appropriate facility. Decommissioning personnel involved in handling these materials would be trained in proper handling. Containers used to store hazardous materials would be inspected regularly for any signs of failure or leakage. Additional procedures will be specified in the Hazardous Materials Business Plan for decommissioning and submitted to the required agency.

Transportation of the removed hazardous materials would comply with regulations for transporting hazardous materials, including those set by the United States Department of Transportation, United States Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal. Table 2.2 lists the properties and toxicity of the primary hazardous waste materials that are expected to be removed.

Table 2.2: Hazardous Waste Properties and Toxicity

Material	Physical Description	Health Hazard	Flammability
Sulfuric acid	Oily, colorless liquid	Corrosive to skin, eyes, and digestive tract; respiratory tract irritant	Non-flammable
Diesel No. 2	Oily, light liquid	Skin irritant; hazardous if ingested; inhalation hazard	Combustible
Heat transfer fluid	Oily, dark liquid	Hazardous if ingested	Combustible
Hydraulic oil	Oily, dark liquid	Hazardous if ingested	Combustible
Lubricating oil	Oily, dark liquid	Hazardous if ingested	Combustible
Mineral oil	Oily, clear liquid	Minor health hazard	Combustible

Source: Luz Solar Partners, Ltd. VIII and Luz Solar Partners, Ltd., IX (2016).

The SPCC plan for the site will be updated to cover spill prevention and countermeasures for handling of these materials during decommissioning. A site-specific Health and Safety Plan would document health and safety requirements for establishing and maintaining a safe working environment during the implementation of the planned Site activities. Additional procedures to decrease the potential release of contaminants to the environment and contact with stormwater would be specified in the Stormwater Pollution Prevention Plan (SWPPP), which would be updated for decommissioning activities, if necessary.

2.4 GENERATOR TIE-LINE

The existing 13.5-mile 220 kV generator tie-line will remain in place and be utilized for the future PV and BESS Project and the continued operation of SEGS IX. During safe layup, SEGS VIII will be isolated from the generator tie-line by disconnection of the generator tie-line conductors between the switchyard and the associated substation. Onsite transmission poles and conductors will be removed. Conductors will either be sold as scrap metal to be recycled or sent to a licensed disposal facility. The switchyard will remain in place for continued use by the SEGS IX and future PV and BESS Project. The SEGS VIII substation will remain in place if it can be upgraded for solar PV use; otherwise, it will be removed.

2.5 NATURAL GAS SUPPLY LINE

During safe layup for SEGS VIII, the natural gas pipeline serving SEGS VIII will be cut and capped in place at the on-site isolation point at the natural gas distribution yard. The pipeline would be left in place in accordance with applicable LORS.

3.0 DECOMMISSIONING AND REUSE OF FACILITIES REMAINING ON SITE

3.1 FACILITIES TO REMAIN IN PLACE

Some of the SEGS VIII facilities may remain in place, including solar tracker foundations, underground utilities and installations, the switchyard and the off-site generator-tie line for future use of the PV and BESS Project. A plot plan of existing facilities is included as Figure 2.

Facilities to remain in place, both within the SEGS VIII footprint and within the shared facilities footprint, are listed below.

3.1.1 SEGS VIII Facilities

- Substation (if it can be upgraded for solar PV use, otherwise it will be removed)
- Electrical lines and poles (if they can be reused for a future solar PV project, otherwise they will be removed)

3.1.2 SEGS VIII and SEGS IX Shared Facilities

- Switchyard
- Employee building
- Control building
- Warehouse building
- BESS
- Perimeter fencing, including desert tortoise fencing
- Access gates
- On-site water wells
- Septic system
- Natural gas supply line (will continue to serve SEGS IX)
- Electrical gen-tie line
- 34.5 kV electric disconnect equipment
- Site access roads
- Parking lot
- Concrete foundations (may remain in place if they do not interfere with future solar PV facilities)
- Several support and miscellaneous buildings (e.g., sheds and mechanical shop, etc.)
- Water evaporation ponds
- Water treatment facility (includes ancillary equipment associated with the on-site water treatment process)

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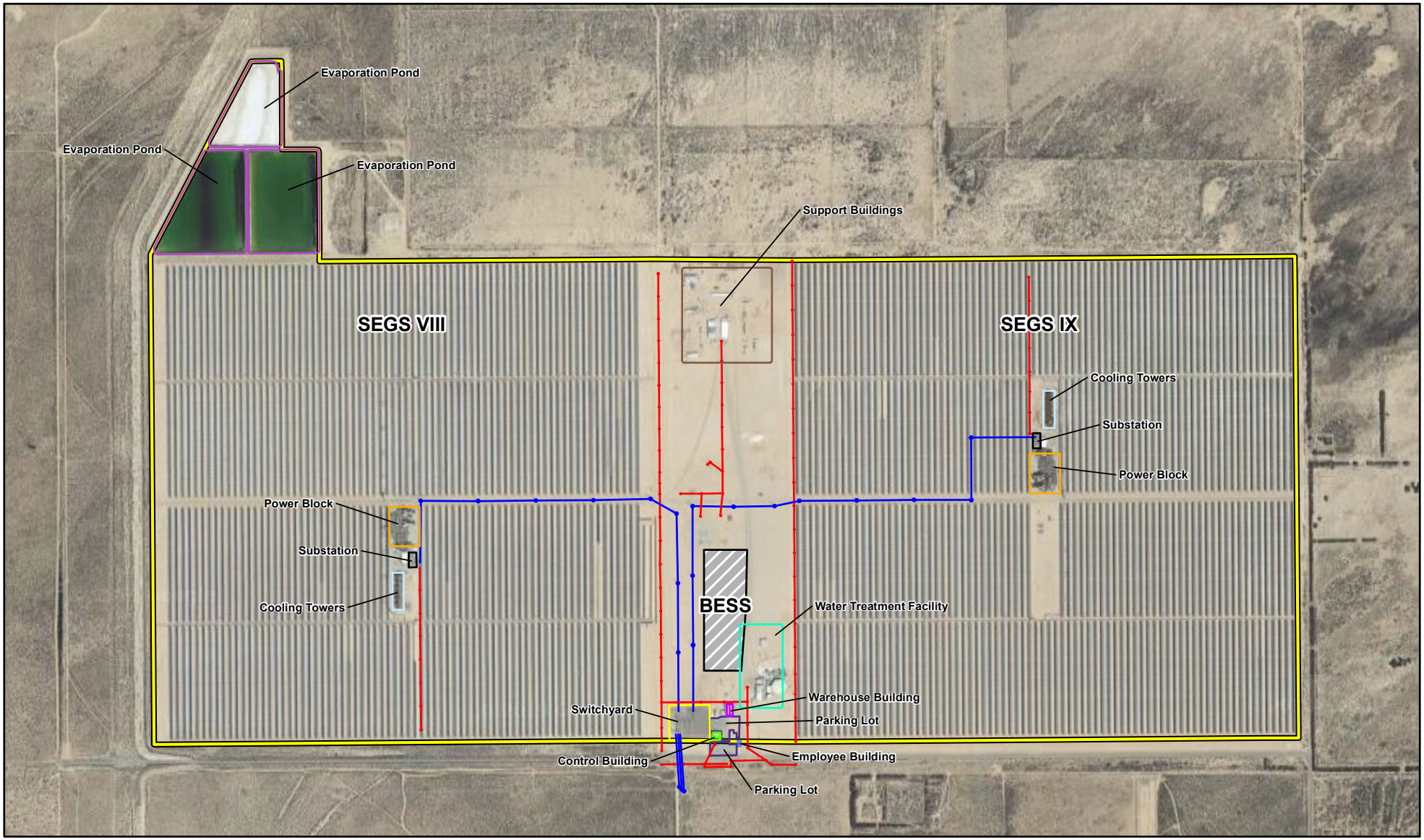

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SEGS Project Footprint	Evaporation Ponds	Substation
Existing Plot Plan	Gen-Tie	Support Buildings
Control Building	Parking Lot	Switchyard
Cooling Towers	Power	Warehouse Building
Employee Building	Power Block	Water Treatment Facility

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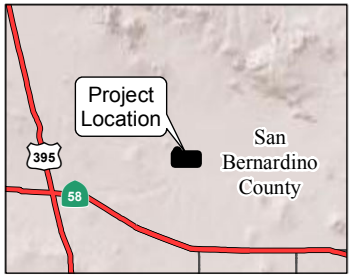

FIGURE 2

SEGS VIII and IX

Existing Plot Plan

SOURCE: Luz Solar Partners VIII and IX, LLC (10/2019), Google (9/2015)

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3.2 FACILITIES TO BE REMOVED

The following lists facilities that would be removed from the SEGS VIII Project area. Figure 2, Plot Plan, shows the location of the existing facilities.

- Substation (would be removed if upgrade of existing substation for future use is not viable)
- Onsite electrical transmission lines and towers (if they cannot be reused for future solar PV project)
- Cooling towers: This includes an evaporative cooling tower system.
- Power block: This includes storage tanks, a steam turbine generator, transformers, heat exchangers, a power block, pumps, and other ancillary equipment.
- Parabolic mirrors, aboveground supports, aboveground HTF piping, and related equipment.
- Some of the support and miscellaneous buildings (e.g., sheds, mechanical shop, etc.) currently on site, which are not listed in the Section 3.1.2 list of facilities to remain, may be removed if they will not be needed for SEGS IX operation or be reused for the PV facility.

The facilities planned for removal would be disconnected from existing electrical, fuel, lubrication, and other lines and removed from their foundations. Above-ground demolition entails breakdown and removal of above-ground structures and facilities. Residual materials from these activities would be transported via heavy haul dump truck to one or more central recycling/staging areas where the debris would be processed for transport to an off-site recycler or a licensed disposal facility.

The strategy for demolition consists of the use of mechanized equipment and trained personnel in the safe dismantling and removal of the following above-ground structures.

- Parabolic mirrors, supports and related equipment using low environmental impact equipment.
- Support and miscellaneous buildings using conventional dismantling, deconstruction and demolition techniques. Temporary or stationary facilities such as storage buildings, containers and small tanks would be detached, disassembled as minimally as possible and as required for safe transport, then hauled off for reuse or recycling.
- Storage tanks will be emptied of all remaining residues and products such as HTF, diesel, hydraulic oil, lubricating oil, and mineral oils, and other materials (where feasible) to reduce potential personnel and environmental exposure and to facilitate decommissioning. Hazardous material and petroleum containers and pipelines would be rinsed clean when feasible and the rinsate collected for off-site disposal. In general, these materials would be placed directly into tanker trucks or other transport vessels and removed from the site at the point of generation to reduce the need for hazardous material and waste storage at the site.

- Removal of the turbine generators, heaters, condensers and related equipment, transmission lines and towers that cannot be reused on site, and above-ground pipelines using conventional deconstruction and demolition equipment and techniques.

3.3 DECOMMISSIONING AND RECYCLING

Some materials decommissioned from SEGS VIII may be retained as spare parts for the continued operation of SEGS IX. Materials and equipment at the site that would not be reused would be decommissioned, removed, and transported for recycling and salvage value to the greatest extent possible. This includes the cooling towers, power block, heaters, and water treatment facility, as well as other ancillary equipment. These materials would be transported off site by the contractor to be sold for salvage value (e.g. any working equipment), or recycling/scrap value (e.g., metal scrap, piping, etc.).

The Project Owner intends to limit concrete and foundation removal to the extent practical. Where practical, concrete may be crushed to 2 inches minus size and backfilled into open pits and/or may be used as road base for the new PV plant as permitted by regulatory entities.

The natural gas pipeline serving SEGS VIII will be cut and capped in place at the on-site natural gas distribution yard. The pipeline would be left in place in accordance with applicable LORS.

Other underground utility lines and piping that will not be reused for the future PV Project will be cut and capped at or below the ground surface but not removed.

3.4 SCHEDULE

Decommissioning is scheduled to begin as early as October 2020, pending the approval of this Decommissioning Plan and market-driven business decisions. Decommissioning will be completed using traditional heavy construction equipment including but not limited to front-end loaders, track mounted and rubber tired excavators, bull dozers, concrete crushers, dump trucks and heavy haul trucks. Although various types of decommissioning and demolition equipment will be utilized to dismantle each type of structure or equipment, dismantling will proceed according to the following general staging process. The first stage consists of safe layup of Project facilities including removal of HTF, which will take approximately 30 to 60 days. The second stage consists of dismantling and demolition of above-ground structures to be removed. This is anticipated to take approximately 3 months. The third stage consists of concrete removal and crushing as needed to ensure that no concrete structure remains within 3 feet of final grade (i.e., floor slabs, below-ground walls, and footings) in areas that need to be cleared for future solar PV Project facilities. This stage would take approximately 30 to 60 days. The fourth stage consists of removal/dismantling of underground utilities within 3 feet of final grade if the underground utility conflicts with placement of PV equipment. The Project Owner intends to limit the needs for underground utility removal to the maximum extent practical. This stage would take approximately 30 days.

4.0 ENVIRONMENTAL ANALYSIS OF DECOMMISSIONING

This section provides an environmental analysis for each discipline area and addresses the potential effects of decommissioning on the environment and public health and safety. This section identifies the LORS and local/regional plans and discusses how the decommissioning of SEGS VIII would comply with those LORS and plans. This section also identifies COCs that are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS. Additionally, this section provides an analysis of decommissioning alternatives considered and the reasons for selecting the preferred proposal.

4.1 AIR QUALITY

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to air quality and greenhouse gas emissions that may result from the decommissioning of the Project. The Project Owner intends to replace the current solar thermal facilities with cleaner operating solar PV facilities. Solar PV does not require gas-fired heaters, exhaust tower or cooling tower operation. With the cessation of current project operations, there is a reduction in emissions, which will be temporarily replaced with short-term emissions related to decommissioning and demolition. Decommissioning activities will result in short-term, minor, and localized air quality impacts from fugitive dust, tailpipe emissions from construction equipment used, waste/recycling truck trips, and construction worker commutes.

Given the small amount of construction-related emissions anticipated for Project decommissioning and that the Project would only temporarily increase air emissions, the SEGS VIII decommissioning Project would not create a significant cumulative impact on air quality. The decommissioning of the SEGS VIII solar thermal energy facility with natural gas fired heaters and the cooling towers would result in substantial emission reductions of criteria pollutants ranging into the hundreds of pounds. Cleaner, zero emission solar PV technologies would be commissioned that would result in substantial emission reductions at the SEGS VIII Project site. Implementation of solar PV technologies after decommissioning would produce less than the annual permitted emission levels during operations of the existing SEGS VIII plant, which would represent a net air quality benefit due to the elimination of the natural gas fired heaters and cooling tower emissions. Therefore, the cessation of solar thermal operations and decommissioning of SEGS VIII would not produce substantial impacts and would present a net air quality benefit to the region.

As indicated in the Air Quality Technical Analysis Memorandum (included as Appendix C), prior to the issuance of decommissioning permits or approvals, the Project Owner will develop a Dust Control Plan (DCP) per the requirements of Mojave Desert Air Quality Management District (MDAQMD) Rule 403.2. The DCP shall comply with MDAQMD rules to control fugitive dust by addressing objectives, key contacts, roles and responsibilities, dust sources, and control measures. The DCP follows control strategies as required by the MDAQMD's 2017 Dust Control Plan Guidance Document.

Additionally, on-road trucks shall comply with United States Environmental Protection Agency (USEPA) 2010 on-road emission standards or better, unless the contractor can reasonably demonstrate that such equipment is unavailable to the satisfaction of the MDAQMD.

As concluded in the Appendix C technical memorandum, the emissions from the decommissioning Project would not exceed the significance thresholds for all criteria pollutants and GHG emissions. The annual emissions thresholds for all criteria pollutants would be less than significant for the Project. Further, the Project is not expected to generate any odors which would cause a public nuisance or impact a substantial population at any off-site location.

Compliance with the LORS applicable to air quality will ensure that the temporary and localized air quality impacts associated with the decommissioning of SEGS VIII would be less than significant.

Table 4.1 lists the LORS applicable to air quality.

Table 4.1: LORS Applicable to Air Quality

LORS	Description	Comments
Federal		
40 Code of Federal Regulations Part 60 – NSPS, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Establishes emission standards for stationary compression ignition internal combustion engines, including emergency fire water pump and generator engines over a specific size.	All the stationary engines operated as part of the power plant would be shut down, drained of fluids (fuel and lubricants), and potentially sold off/ recycled before the start of demolition. No MDAQMD permits would be required for the decommissioning and demolition activities. If portable equipment requiring permits is used, that equipment will be registered through the CARB PERP.
Title V Permits	Sets forth permitting requirements for major sources of emissions across the country.	No MDAQMD permits would be required for the decommissioning and demolition activities. Once operations cease for both SEGS VIII and SEGS IX, the Title V permit will be retired. The MDAQMD requires a signed original application to change ownership of an existing permitted unit. Name change can be made by the MDAQMD in response to a written letter.

Table 4.1: LORS Applicable to Air Quality

LORS	Description	Comments
State		
Title 17 California Code of Regulations (CCR), Section 93115, Airborne Toxic Control Measure for Stationary Compression Ignition Engines	Establishes emission limits, operating limits, fuel use restrictions, monitoring and recordkeeping requirements for large (>50 hp) stationary compression ignition engines, including emergency fire water pump and generator engines.	No MDAQMD permits would be required for the decommissioning and demolition activities. If portable equipment requiring permits is used, that equipment would be registered through the CARB PERP.
California Health & Safety Code (H&SC) §41700 (Nuisance Regulation)	Prohibits discharge of such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance.	The Project Owner would ensure the contractor would comply with this requirement.
California H&SC §2451, et seq. (Portable Equipment Registration Program – PERP)	Allows the permitting of portable equipment under a Statewide registration program.	If portable equipment requiring permits is used for the decommissioning and demolition activities, that equipment will be registered through the CARB PERP.
Title 13, CCR, Article 4.8, Chapter 9, Section 2449, Regulation for In-Use Off-Road Diesel-Fueled Fleets	Establishes requirements for diesel-fueled, mobile off-road vehicle fleets in order to reduce criteria pollutant emissions from engines greater than 25 hp, including requirements on excess idling, CARB assigned equipment identification numbers, and year-by-year fleet average requirements, as well as recordkeeping and reporting.	An Air Quality Supervisor (AQS) shall be responsible for determining the compliance status of all mobile off-road equipment that would be operated during decommissioning at the Project site, including verifying that all equipment is properly identified and that equipment fleets meet the appropriate annual reporting and compliance schedules.
Title 13, CCR, Division 3, Chapter 1, Section 2025, Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants for In-Use Heavy Duty Diesel-Fueled Vehicles.	Regulates diesel–fueled, on-highway vehicles over 14,000 pounds Gross Vehicle Weight Rating (GVWR) by establishing dates by which certain model year engines can no longer be operated in California, with separate requirements for medium-duty (14,000-26,000 GVWR) and heavy-duty (over 26,000 GVWR) vehicles, including recordkeeping and reporting for some vehicles.	The AQS shall be responsible for determining the compliance status of all mobile on-road vehicles over 14,000 GVWR that are used in any capacity during the decommissioning and demolition of the Project.
Local – Mojave Desert Air Quality Management District (MDAQMD)		
Rule 201 – Permit to Construct, Rule 202- Temporary Permit to Operate, Rule 203 – Permit to Operate	Rules 201, 202 and 203 require that permits be obtained for any equipment that emits air contaminants.	No MDAQMD permits would be required for the decommissioning and demolition activities. If portable equipment requiring permits is used, that equipment would be registered through the CARB PERP.
Rule 401 – Visible Emissions	Limits visible emissions from applicable equipment or processes to values no darker than Ringelmann #1 for periods greater than 3 minutes in any hour.	The Project Owner would ensure that the demolition contractor complies with this requirement.
Rule 402 – Nuisance	Prohibits emissions in quantities that would adversely affect public health, other businesses, or property.	The Project Owner would ensure that the demolition contractor complies with this requirement.

Table 4.1: LORS Applicable to Air Quality

LORS	Description	Comments
Rule 403.2 – Fugitive Dust	Limits fugitive PM emissions from transport, construction, handling and storage activities.	The Project Owner would ensure the contractor will use appropriate dust suppression mitigation to limit fugitive PM emissions consistent with the requirements outlined in Rule 403.2, including preparing a Dust Control Plan that describes all applicable dust control measures that will be implemented.
Rule 404 – Particulate Matter Concentration	Limits PM emissions concentration from point sources.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Rule 405 – Solid Particulate Matter Weight	Limits PM emissions based on process weight.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment
Rule 407 – Liquid and Gaseous Contaminants	Limits CO emissions from combustion sources.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment
Rule 409 – Combustion Contaminants	Limits emissions of combustion contaminants.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment
Rule 431 – Sulfur Content of Fuels	Limits sulfur content of liquid and solid fuels.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment
Regulation II– Permits	Sets forth permitting requirements for large stationary sources	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment. Once operations cease for both SEGS VIII and SEGS IX, the Title V permit will be retired.
Regulation XIII – New Source Review	Sets forth the preconstruction review requirements for new, modified or relocated facilities.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment

Table 4.1: LORS Applicable to Air Quality

LORS	Description	Comments
Regulation XV – Emission Standards for Specific Toxic Air Contaminants	Sets limits on toxic air contaminants from stationary sources.	No MDAQMD permits would be required for the decommissioning and demolition activities. If portable equipment requiring permits is used for the decommissioning activities, that equipment will be registered through the CARB PERP.
Regulation XVI- Prevention of Significant Deterioration	Sets forth the pre-construction review of all new Major Prevention of Significant Deterioration (PSD) Facilities and Major PSD Modifications requirements for stationary sources.	No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment

CARB = California Air Resources Board
CO = carbon monoxide
hp = horsepower
LORS = laws, ordinances, regulations, and standards
MDAQMD = Mojave Desert Air Quality Management District
NSPS = New Source Performance Standards
PERP = Portable Equipment Registration Program
PM = particulate matter
PSD = Prevention of Significant Deterioration
SEGS = Solar Energy Generating System

4.1.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-AQ-1 Prior to the issuance of decommissioning permits or approvals, the Project Owner shall develop a Dust Control Plan (DCP) per the requirements of Mojave Desert Air Quality Management District (MDAQMD) Rule 403.2. The DCP shall comply with MDAQMD Rules 403 and 403.2 to control fugitive dust, including particulate matter less than 10 microns in size (PM_{10}), by addressing objectives, key contacts, roles and responsibilities, dust sources, and control measures.

D-AQ-2 On-road trucks shall comply with United States Environmental Protection Agency (USEPA) 2010 on-road emission standards or better, unless the contractor can reasonably demonstrate that such equipment is unavailable to the satisfaction of the MDAQMD.

D-AQ-3 The Project Owner shall ensure that all applicable portable equipment used by the demolition contractor shall be registered through the California Air Resources Board (CARB) Portable Equipment Registration Program (PERP).

D-AQ-4 The Project Owner shall ensure that equipment used during decommissioning complies with Rule 401 to ensure visible emissions from applicable equipment would avoid visible emissions darker than Ringelmann #1 for periods greater than 3 minutes in any hour.

D-AQ-5 The Project Owner shall ensure that the Air Quality Supervisor (AQS) performs oversight of compliance with the decommissioning conditions and applicable laws, ordinances, regulations, and standards (LORS) during decommissioning and demolition activities.

4.2 BIOLOGICAL RESOURCES

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to biological resources that may result from the decommissioning of the Project. Decommissioning activities would take place within the existing Project footprint. The Project site perimeter is entirely fenced, preventing wildlife (e.g., desert tortoise) from entering the site. The desert tortoise fence that is in place will continue to be maintained during decommissioning activities and for the life of the future PV Project.

No sensitive biological resources or habitats occur on site. A biological resources survey report was prepared in 2018 as part of the CUP process for the future PV redevelopment Project. This report is included as Appendix D to this decommissioning plan. As illustrated in the Biological Resources Report and summarized in the County's Planning Commission Staff Report for the redevelopment of the SEGS VIII and IX facilities as a PV solar facility, "The Project site has been mostly disturbed by previous industrial or agricultural activities. A general biological survey was conducted to document all biological resources identified within the survey area and included a floral/fauna inventory, vegetation/land use mapping, and habitat suitability assessments to determine the potential for special-status plant and wildlife species and vegetation communities to occur within the survey area. No special-status plant or wildlife species or vegetation communities were observed within or surrounding the survey area. In addition, based on 9-quadrangle database record searches it was determined that ten special-status plant species and sixteen special-status wildlife species known to occur within the vicinity of the survey area are either not expected or have a low potential to occur within the survey area. Due to the highly disturbed areas of bare ground, open water and developed areas (i.e., solar fields and associated infrastructure, evaporation ponds and open areas) bird nesting opportunities and wildlife movements are limited and restricted. No U.S. Fish and Wildlife Service designated critical habitat has been mapped within the survey area."

Although bird nesting opportunities and wildlife movement are limited and restricted, implementation of the Project COCs will reduce potential impacts. The BRMIP will be updated to include preconstruction nesting bird surveys and protocol for measures to be implemented in the event of discovery of an active nest. In the event that active nests are discovered, a suitable buffer (distance to be determined by the designated biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

Per the existing COC BIO-4(h), the normal contractor orientation program for the Project includes worker environmental awareness program (WEAP) training. This training provides information on the possible presence of desert tortoise and other wildlife and the proper response to a sighting, per the project's existing COCs.

Although the obligation to allow the Bureau of Land Management (BLM) to pump up to 75 acre feet of water per year for the maintenance of the Harper Lake wetlands, as described in Harper Lake Water Agreement, per biological resources COCs BIO-9 for SEGS VIII and BIO-11 for SEGS IX, terminates with the de-certification of SEGS VIII & SEGS IX, the Project Owner would continue to allow the pumping of up to 75 acre feet of water a year for the maintenance of the Harper Lake wetlands, for the duration of the operation of the PV facility.

Per COC BIO-4(f), to prevent desert tortoise vehicular mortalities along Harper Lake Road attributable to project traffic, Luz Solar Partners VIII and Luz Solar Partners IX executed the Agreement for Mitigation of Impacts on Desert Tortoises Along Harper Lake Road By Luz Solar Partners Ltd. VIII and Luz Solar Partners Ltd. IX ("Master Agreement") on July 11, 1995. This Agreement included provisions for payment by Luz Solar Partners Ltd. VIII and Luz Solar Partners Ltd. IX of $489,300 for mitigation (the installation and continued maintenance of desert tortoise fencing along Harper Lake Road) and released the Partners from future mitigation for traffic impacts on Harper Lake Road and from incidental takes by vehicular mortality along Harper Lake Road. The executed agreement is included in Appendix E of this plan. Per the execution of this agreement and mitigation impact fee payment, the Project is released from future mitigation, and no further mitigation is required.

Adherence to the applicable biological resources COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to biological resources will ensure that potential impacts to biological resources would be less than significant.

Table 4.2 lists the LORS applicable to biological resources.

Table 4.2: LORS Applicable to Biological Resources

LORS	Description	Comments
Federal		
Migratory Bird Treaty Act (MBTA): 16 United States Code (USC) Sections 703-721	Prohibits the take of protected migratory birds.	Although no wildlife habitat is found on the Project site, structures throughout the site and the few mature trees around the perimeter provide potentially suitable nesting habitat for birds. To minimize potential impacts to birds from decommissioning and demolition, SEGS will update the BRMIP as appropriate for decommissioning and demolition.
Clean Water Act (CWA) of 1977 Title 33, USC, sections 1251-1376, and Code of Federal Regulations, part 30, sections 330.5(a)(26)	Prohibits the discharge of dredged or fill material into the waters of the United States without a permit.	SEGS submitted an application to obtain a CWA 404 permit issued by the USACE and a CWA 401 water quality certification issued by the L Lahontan RWQCB prior to construction of the Project. Compliance would be managed through use of the Construction Stormwater Pollution Prevention Plan (SWPPP).

Table 4.2: LORS Applicable to Biological Resources

LORS	Description	Comments
Endangered Species Act (ESA) of 1973 Title 16, United States Code, section 1531 et seq., and Title 50, Code of Federal Regulations, part 17.1 et seq.	Designates and provides for the protection of threatened and endangered plant and animal species, and their critical habitat. The administering agency is the United States Fish and Wildlife Service.	According to the original 1989 CEC Decision for Certification for SEGS VIII, biological resources in the Project region recognized as rare, threatened, endangered, or of special concern include the Mohave ground squirrel, desert tortoise, Barstow woolly sunflower, Mojave spineflower, desert cymopterus, Mojave monkey flower, Mojave indigo assemblage, and the Harper Lake marsh wetlands. Measure BIO-6 contained in the COC addresses proper reporting of impacts to rare, threatened, or endangered species. No sensitive biological resources or habitats occur on site.
State		
Native Plant Protection Act CDFW Code Sections 1900–1913	Prohibits taking of endangered and rare plants from the wild and requires that CDFW be notified at least 10 days in advance of any change in land use that would adversely impact listed plants.	Not applicable: decommissioning and demolition would be limited to previously disturbed and developed areas. No sensitive biological resources or habitats occur on site.
California Endangered Species Act of 1984, Fish and Game Code sections 2050 through 2098; California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3, sections 670.2 and 670.5	Identifies and protects California's rare, threatened, and endangered species.	SEGS will update the BRMIP as appropriate for decommissioning and demolition. Implementation of the revised BRMIP would avoid or reduce impacts to levels that are less than significant during decommissioning and demolition. No sensitive biological resources or habitats occur on site.
Fish and Game Code (CFGC) Section 3503.5	"It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."	SEGS would comply with this requirement through implementation of the Project BRMIP as may be modified for decommissioning.
Streambed Alteration Agreement: CFGC Section 1600 et seq.	Requires CDFW to review Project impacts to waters of the State (bed, banks, channel, or associated riparian areas), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances.	Not applicable, as decommissioning and demolition activities would be restricted to developed Project site which contains no waters of the state or state jurisdictional streambed features.

Table 4.2: LORS Applicable to Biological Resources

LORS	Description	Comments
Local		
San Bernardino County General Plan (2007) –Conservation Element	This General Plan contains general policies regarding the protection and preservation of habitat and sensitive plant and wildlife species.	Activities associated with decommissioning and demolition could further facilitate the introduction of weedy species as a result of ground disturbance, imported fill, or landscaping with nonnative species. Weedy plant species growth could suppress native vegetation and infest agricultural lands. However, the Project site is developed and there is little native vegetation in the immediate vicinity. Decommissioning and demolition activities would be restricted to developed Project site and therefore would not impact habitat.

BRMIP = Biological Resources Mitigation Implementation Plan
CEC = California Energy Commission
CDFW = California Department of Fish and Wildlife
COC = Condition of Certification
CWA = Clean Water Act
LORS = laws, ordinances, regulations, and standards
RWQCB = Regional Water Quality Control Board
SEGS = Solar Energy Generating System
SWPPP = Stormwater Pollution Prevention Plan
USACE = United States Army Corps of Engineers

4.2.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-BIO-1 If bird breeding season (typically January through July for raptors and February through August for other avian species) avoidance is not feasible, a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or adjacent to the area proposed project site. The extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, nesting bird surveys shall be performed twice per week during the three weeks prior to the scheduled project activities.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no demolition within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

D-BIO-2 The desert tortoise fence that is in place will continue to be maintained during decommissioning activities and for the life of the future PV Project.

D-BIO-3 The biological resources mitigation implementation plan (BRMIP) will be revised for specific circumstances related to project decommissioning to minimize or totally avoid impacts to biological resources.

D-BIO-4 The Project Owner shall ensure that all SEGS VIII employees, contractors, and visitors that will be on site during decommissioning and demolition receive the worker environmental awareness program (WEAP) training as outlined in Condition of Certification BIO-4(h).

4.3 CULTURAL RESOURCES

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to cultural resources that may result from the decommissioning of the Project. No cultural resources were identified within the Project boundary during construction of the existing SEGS VIII Project and decommissioning activities will occur entirely on site within previously disturbed Project footprint. If the earth disturbing activities associated with decommissioning and demolition extend into soils beyond what was previously disturbed on-site, a cultural monitor will be available to be on site during the excavation, as outlined in the existing cultural resources COCs. Adherence to applicable cultural resources COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to cultural resources will ensure that potential impacts to cultural resources will be less than significant.

Table 4.3 lists the LORS applicable to cultural resources.

Table 4.3: LORS Applicable to Cultural Resources

LORS	Description	Comments
Federal		
Section 106 of the National Historic Preservation Act, 54 United States Code § 300101- 320303; Code of Federal Regulations (CFR), 36 CFR Part 800 et seq.	Requires federal agencies to take into account the effects of their undertakings on historic properties through consultations beginning at the early stages of project planning.	No historic properties are on the Project site.
State		
California Code of Regulations, Title 14, section 4852	Defines the term "cultural resource" to include buildings, sites, structures, objects, and historic districts.	Decommissioning and demolition would not adversely affect cultural resources as the site is disturbed.
Public Resources Code, Section 5000	Establishes the California Register of Historical Resources (CRHR), establishes criteria for eligibility to the CRHR, and defines eligible resources.	Decommissioning and demolition would not adversely affect cultural resources. There are no registered historical resources on the site.
Local		
San Bernardino County General Plan (2007) –Conservation Element	The General Plan establishes a cultural resource sensitivity overlay map. Also, the General Plan establishes goals for identify and protect important cultural resources.	The Project's location is outside the cultural resource sensitivity area indicated on the overlay map. Also, decommissioning and demolition would take place on lands that were previously disturbed.

LORS = laws, ordinances, regulations, and standards

4.3.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-CUL-1 If the earth-disturbing activities associated with decommissioning and demolition extend into soils beyond what was previously disturbed on-site during project construction, a cultural monitor will be available to be on site during the excavation, as outlined in the existing cultural resources Conditions of Certification (COCs).

D-CUL-2 The Project Owner shall update, if necessary, the cultural resources worker environmental awareness program (WEAP) training (as outlined in condition CUL- 7) and present the WEAP training to all of its personnel and the personnel of its contractors and subcontractors who may be involved with ground clearance or earth moving, to develop an awareness of and sensitivity to potential project impacts on potentially significant cultural resources. This training shall include development of the ability to recognize potentially significant cultural resources.

D-CUL-3 The designated cultural resources specialist shall update the Project cultural resources monitoring and mitigation plan to minimize potential impacts to cultural resources for decommissioning and demolition. The plan shall include the following:

a. A provision that the designated cultural resources specialist be on call to inspect any potentially significant cultural resources found during ground clearance and excavation in areas of sensitivity identified in the monitoring and mitigation plan.

b. Specific measures proposed to mitigate impacts to particular types of cultural resources which may be discovered during earth-moving activities.

c. A provision that if potentially significant cultural resources are encountered during demolition activities, work in the immediate vicinity of the find shall be halted until the designated cultural resources specialist can determine the significance and sensitivity of the find. The Project designated cultural resources specialist shall act in accordance with the procedures set forth in the monitoring and mitigation plan. The Project Owner, or its designated representative, shall inform the appropriate overseeing agency (California Energy Commission [CEC] or County of San Bernardino [County]) within one working day of the discovery of any potentially significant resources and discuss the specific measure(s) proposed to mitigate potential impacts to the resources.

   The designated cultural resources specialist, representatives of the Project Owner, and the appropriate overseeing agency shall meet within seven working days of the notification of the CEC or County, if necessary, to discuss the disposition of any finds and any mitigation measures already implemented or to be implemented.

d. A provision that if human remains are encountered, work in the immediate vicinity shall stop and the County coroner and the jurisdictional agency (CEC or County) shall be notified. Work in the vicinity of the find shall remain stopped until the coroner has determined if the remains are Native American in origin and any necessary mitigation measures have been implemented. If the remains are determined to be of Native American origin, the Native American Heritage Commission and appropriate Native American representatives shall be notified immediately. Any necessary mitigation measures shall be discussed and agreed upon by the interested parties and approved by the jurisdictional agency.

4.4 GEOLOGY AND PALEONTOLOGY

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to geology and paleontology that may result from the decommissioning of the Project. Decommissioning activities would take place within the existing Project footprint. No paleontological resources were identified within the Project footprint during construction of the existing SEGS VIII Project and the decommissioning activities would take place entirely on site within the previously disturbed Project footprint. If the excavation depth for decommissioning and demolition activities extends into soils beyond what was previously disturbed during construction of the original project, applicable paleontological resources COCs would be implemented. Adherence to the applicable geological and paleontological resources COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to these resources would ensure that potential impacts to geological and paleontological resources would be less than significant.

Table 4.4 lists the LORS applicable to geology and paleontology.

Table 4.4: LORS Applicable to Geology and Paleontology

LORS	Description	Comments
Federal		
None	None	None
State		
The California Building Code (CBC), 1998 edition, is based upon the Uniform Building Code (UBC), 1997 edition.	The CBC is a series of standards that are used in project investigation, design (Chapters 16 and 18) and construction (including grading and erosion control as found in Appendix Chapter 33).The CBC supplements the UBC's grading and construction ordinances and regulations.	As no excavation is expected to go significantly below 3 feet, basic grading and erosion control of soils would be implemented. Shoring is not anticipated to be needed.
California Public Resources Code (PRC) 5097.5	This law protects paleontological resources and establishes criminal and civil penalties for violations.	As no paleontological resources were previously identified during project construction and operations, and decommissioning and demolition activities will occur within the existing disturbed site with excavation not expected to go below 3 feet, impacts to paleontological resources are not anticipated. If paleontological resources are

Table 4.4: LORS Applicable to Geology and Paleontology

LORS	Description	Comments
		encountered, the Project will comply with the standard procedures for appropriate handling, identification and reporting of findings of paleontological resources.
Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (Society of Vertebrate Paleontology, 2010)	Establishes procedures and standards for assessing and mitigating impacts to paleontological resources.	As no paleontological resources were previously identified during project construction and operations, and decommissioning and demolition activities will occur within the existing disturbed site with excavation not expected to go below 3 feet, impacts to paleontological resources are not anticipated. Therefore, new procedures and standards for assessment and mitigation of impacts are not required. If paleontological resources are encountered, the Project will comply with the standard procedures for assessing and mitigating impacts to paleontological resources.
Local		
County of San Bernardino Development Code Section 82.20.030 (2009 edition)	This section of the Development Code sets forth the requirements of paleontological resource mitigation programs for projects in the County. These requirements include a field survey prior to grading, monitoring during grading, appropriate handling and identification of specimens, and reporting of findings.	As no paleontological resources were previously identified during project construction and operations, and decommissioning and demolition activities will occur within the existing disturbed site with excavation not expected to go below 3 feet, impacts to paleontological resources are not anticipated. Therefore field surveys and monitoring during decommissioning and demolition activities are not required. If paleontological resources are encountered, the Project will comply with the County requirements for appropriate handling, identification and reporting of findings of paleontological resources.
County of San Bernardino General Plan, Section V – Conservation Element	This section of the General Plan outlines several programs for protecting paleontological resources during development, including requirements for surveys, monitoring, recovery, curation, and reporting of paleontological resources.	As no paleontological resources were previously identified during Project construction and operations, and decommissioning and demolition activities will occur within the existing disturbed site with excavation not expected to go below 3 feet, impacts to paleontological resources are not anticipated. Therefore field surveys and monitoring during decommissioning and demolition activities are not required. If paleontological resources are encountered, the Project will comply with the County requirements for appropriate recovery, curation and reporting of paleontological resources.

LORS = laws, ordinances, regulations, and standards

4.4.1 Proposed Conditions of Certification

The following construction-related COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-PAL-1 The Project Owner will have a paleontological specialist available on an as-needed basis, if the excavation depth for decommissioning and demolition activities extends into soils beyond what was previously disturbed during construction of the original project as outlined in the existing Conditions of Certification (COCs).

D-PAL-2 The Project Owner shall update, if necessary, the paleontological resources worker environmental awareness program (WEAP) training (as outlined in COC CUL- 7) and present the WEAP training to all of its personnel and the personnel of its contractors and subcontractors who may be involved with ground clearance or earth moving, to develop an awareness of and sensitivity to potential Project impacts on potentially significant paleontological resources. This training shall include development of the ability to recognize potentially significant paleontological resources.

D-PAL-3 The designated paleontologic specialist shall update the Project monitoring and mitigation plan (as outlined in COC CUL-3) to minimize potential impacts to paleontologic resources for decommissioning and demolition. The plan shall include the following elements:

a. A provision that if, during monitoring of demolition activities, the designated paleontologic specialist determines the likelihood of encountering fossil resources is slight, monitoring can be halted in that locality.

b. A provision that if fossil resources are encountered during demolition activities, work in the immediate vicinity of the find shall be halted until the designated paleontologic specialist can determine the significance and sensitivity of the find. The designated paleontologic specialist shall act in accordance with the procedures set forth in the monitoring and mitigation plan which has been approved by the overseeing agency (California Energy Commission [CEC] or County of San Bernardino [County]) prior to the start of construction.

c. The Project Owner, or its designated representative, shall inform the overseeing agency within one working day of the discovery of any potentially significant resources and discuss the specific measure(s) proposed to mitigate potential impacts to the resources.

d. The designated paleontologic specialist, representatives of the Project Owner, and the overseeing agency shall meet within seven working days of the notification, if necessary, to discuss the disposition of any finds and any mitigation measures already implemented or to be implemented.

e. A provision that all vertebrate fossil remains will be collected and any invertebrate fossil remains will be sampled. All fossil materials found shall be mapped, prepared, identified, and removed for analysis and duration in the retrievable storage collection at the San Bernardino County Museum, California.

4.5 HAZARDOUS MATERIALS

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to hazardous materials that may result from the decommissioning of the Project.

Decommissioning activities may entail the handling, recycling and disposal of hazardous materials. These materials are listed in Table 2.1 and 2.2 in Section 2.3. Any other operational chemicals listed as hazardous would be removed as part of the decommissioning activities. The Project Owner would recycle unused chemicals and gases where feasible. Equipment containing chemicals would be drained and shut down to ensure public health and safety and to protect the environment. Adherence to the applicable hazardous material COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to hazardous materials would ensure that any impacts related to hazardous materials would be less than significant.

Table 4.5 lists the LORS applicable to hazardous materials.

Table 4.5: LORS Applicable to Hazardous Materials

LORS	Description	Comments
The Superfund Amendments and Reauthorization Act of 1986 (42 United States Code [USC] §9601 et seq.)	Contains the Emergency Planning and Community Right to Know Act (also known as SARA Title III)	All materials on site during decommissioning are being handled and would be removed according to approved plans during decommissioning including any applicable SARA Title III requirements.
The Clean Air Act (CAA), Section 112 (42 USC 7401 et seq. as amended)	Established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous air pollutants.	All materials located on site during decommissioning are being handled and would be removed according to approved plans during decommissioning. If hazardous air pollutants trigger Section 112 reporting requirements, the reporting shall be completed.
State		
California Health & Safety Code §§ 25500 to §§ 25543; 19 California Code of Regulations §§ 2720 –2734	Directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the USEPA, and the designated local Administering Agency for review and approval.	All materials on site during decommissioning are being handled and would be removed according to approved plans during decommissioning including the existing site plan, if applicable.
California Uniform Building Code	Requirements regarding the storage and handling of hazardous materials	All materials stored on site during decommissioning are being handled and would be removed according to approved plans during decommissioning.

Table 4.5: LORS Applicable to Hazardous Materials

LORS	Description	Comments
Local		
The Certified Unified Program Authority (CUPA) with responsibility to review RMPs and Hazardous Materials Business Plans is the San Bernardino County Fire Department's Hazardous Materials Division	Requires a Consolidated Hazardous Materials Permit. The County has compliance codes that correspond with California Health and Safety Code Sections 25185, 25508 and 25280 that require CUPAs to inspect facilities that handle hazardous materials and/or generate hazardous wastes.	All materials on site during decommissioning are being handled and would be removed according to approved plans during decommissioning. The existing site CUPA permits and plans will be adhered to.

County = County of San Bernardino
LORS = laws, ordinances, regulations, and standards
USEPA = United States Environmental Protection Agency

4.5.1 Proposed Conditions of Certification

The following COC is proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-HAZ-1 The Project Owner shall update the Hazardous Materials Business Plan (HMBP) for decommissioning, as applicable, to reflect hazardous materials not previously used at the site.

4.6 LAND USE

This section presents an analysis of LORS compliance and potential impacts and benefits related to Land Use that may result from the decommissioning of the Project.

The Project property has a General Plan land use designation of RL, Rural Living, which is consistent with the Renewable Energy and Conservation Element (RECE) of the County of San Bernardino General Plan because the Project is an existing commercial solar energy facility. Additionally, the decommissioning and demolition of the existing thermal power facility and the redevelopment of the proposed PV solar facility within the existing solar site and with no expansion of the existing footprint is also consistent with the RECE of the General Plan (see the County of San Bernardino Planning Commission Final Staff Report dated October 3, 2019, that is included as Appendix B).

The findings in the Final Staff Report state that the proposed use and manner of development of the PV redevelopment Project are consistent with the goals, maps, policies, and standards of the County General Plan, Renewable Energy and Conservation Element (RECE), and any applicable Community or Specific Plan. The PV redevelopment Project specifically implements the following goals, policies, and objectives from the RECE adopted August 8, 2017 (amended February 2019):

Goal LU 1: The County will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

***Consistency*:** The Project site is in the same location as the thermal solar facility on SEGS VIII and IX to be decommissioned and will utilize existing infrastructure to the greatest extent possible. The facility is adjacent (north) to 1,750 acre Mojave Solar site. The Project is sufficiently separated from existing communities and rural residential areas such that adverse effects are avoided. The Project is not located within a quarter of a mile of any residential developments or single residences. The Project design includes setbacks from roads as well as fencing to shield the facility from public view. Decommissioning of the site will occur in compliance with Development Code Section 84.29.060, which requires removal of site facilities when operations cease. The requirement for a removal surety bond will be included in the Conditions of Approval to be adopted for the Project.

Goal CO 8: The County will minimize energy consumption and promote safe energy extraction, uses and systems to benefit local regional and global environmental goals.

***Consistency*:** The Project is located on the site of an existing energy generation site. The Project will include a new photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined 160 megawatt (MW) alternating current (AC) of renewable electrical energy and/or energy storage capacity on 1,073 acres. The use of clean air technologies on the Project site will ensure good air quality for the County residents, businesses, and visitors by way of safe energy extraction, uses, and systems.

RE Goal 5: Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.

***Consistency*:** The Project is located on the site of an existing energy generation site. The proposal is to convert from Thermal Solar generation to Photovoltaic (PV) Solar within the same footprint of the existing energy generation site in the unincorporated community of Hinkley. Considering features of the site design and the proximity to other solar generation facilities, the Project is appropriately sited and compatible with County standards, local values, community needs, and environmental and cultural resource protection priorities.

RE Objective 5.2: Utility-oriented Renewable Energy (RE) facilities will be subject to site selection criteria consistent with County priorities expressed in the RECE.

***Consistency*:** The Project is located on the site of an existing energy generation site.

RE Policy 5.2(x): Utility-oriented RE generation projects on private land in the unincorporated County will be limited to the site-type below, in addition to meeting criteria established in the RECE and Development Code: … (x). Existing energy generation sites.

Consistency: The Project is located on the site of an existing energy generation site. The proposal is to convert from Thermal Solar generation to PV Solar within the same footprint of the existing energy generation site in the unincorporated community of Hinkley. Considering features of the site design, the RECE, the Development Code, and the proximity to other solar generation facilities, the Project is appropriately sited and compatible with the surrounding area.

Decommissioning activities would not result in any change to the land use associated with the Project site and is consistent with existing zoning and applicable land use plans, policies, and regulations and would not affect farmlands. Therefore, the decommissioning would not result in impacts to land use.

Table 4.6 lists the LORS applicable to land use.

Table 4.6: LORS Applicable to Land Use

LORS	Description	Comments
Local		
County of San Bernardino General Plan, Amended 2014	The General Plan consists of a statement of development policies and must include a diagram and text setting forth the objectives, principles, standards and proposals of the document. Per State of California Government Code Section 65300, a General Plan must include seven mandatory elements including Land Use, Circulation (Transportation), Housing, Conservation, Open Space, Noise, and Safety. The Land Use Element of the General Plan provides land use designations, goals, and policies for the development and conservation of land within San Bernardino County.	The goals and policies of the Land Use, Conservation, Circulation and Infrastructure, Noise, Safety, and Economic Development Elements are applicable to the proposed decommissioning and demolition activities. However, these activities would not conflict with these elements, with the exception of the Economic Development Element. The Economic Development Element goals and policies do specify encouraging industrial/commercial development that would produce jobs. (Goal ED 1). Reuse/ replacement of the Project to photovoltaic solar is consistent with the plan's goal. Additionally, the future plan for the Project site to be redeveloped for solar PV is consistent with the RECE of the General Plan because the Project is an existing commercial solar thermal facility.

LORS = laws, ordinances, regulations, and standards
RECE = Renewable Energy and Conservation Element

4.6.1 Proposed Conditions of Certification

The decommissioning and demolition of the SEGS VIII Project will comply with the County of San Bernardino's conditions of approval, as outlined in the October 2019 Planning Commission Staff Report (included in Appendix B). No COCs related to land use are required. However, the following COC is proposed in accordance with the County condition of approval to obtain a demolition permit.

D-LU-1 The Project Owner will obtain a Demolition Permit from the County of San Bernardino prior to the start of demolition activities.

4.7 NOISE

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to noise that may result from the decommissioning of the Project. There are no sensitive noise receptors within 1 mile of the Project area.

The following are the distances from the SEGS VIII and IX Project boundary to the nearest receptors:

- Distance to nearest residence is 1.6 miles from the Project
- Distance to nearest business/off-site worksite is 10.2 miles from the Project (multiple gas stations and restaurants at Kramer Junction)
- Distance to nearest airport is 14.1 miles (Baron Airstrip)

Some temporary noise increases would occur with regard to demolition and decommissioning activities. Decommissioning activities will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, in accordance with the County of San Bernardino Development Code standards. Additionally, construction equipment shall be muffled in accordance with manufacturers' specifications. Given the temporary nature of demolition activities and the distance to the nearest sensitive receptor is over 1 mile from the Project site, demolition noise would not result in an increase above acceptable noise levels for residential areas. The Project will comply with occupational noise safety requirements and provide hearing protection to workers during demolition activities. Further, the Project would comply with the County of San Bernardino's Conditions of Approval related to noise, as outlined in the October 2019 Planning Commission Staff Report (included in Appendix B), and with all applicable LORS for noise. Therefore, the proposed decommissioning activities would not cause a significant adverse noise impact and would be considered less than significant.

Table 4.7 lists the LORS applicable to noise.

Table 4.7: LORS Applicable to Noise

LORS	Description	Comments
Federal		
Occupational Safety and Health Act of 1970. 29 USC Section 651 et seq. Title 29 CFR Section 1910.95	Regulates the worker noise exposure to 90 decibels (dBA) over an 8-hour work shift. Areas above 85 dBA need to be posted as high noise level areas and hearing protection will be required.	Decommissioning and demolition activities would comply with these requirements.
State		
Title 8 CCR Section 5095 et seq.	Establishes California Occupational Safety and Health Administration (Cal/OSHA) employee noise exposure limits. These standards are equivalent to the Federal OSHA standards. Worker noise exposure is limited to 90 dBA over an 8-hour work shift. Areas where worker noise exposure exceeds 85 dBA must be posted as a noise hazard zone and a hearing conservation program is required.	Decommissioning and demolition activities would comply with these requirements.
Local		
San Bernardino County General Plan (2007) Noise Element; SB County Development Code (Amended 2019)	Defines the land noise levels that are normally acceptable in residential areas as between 45 and 55 dBA.	Decommissioning and demolition activities would comply with these requirements.

CCR = California Code of Regulations
CFR = Code of Federal Regulations

4.7.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-NOISE-1 The Project will comply with occupational noise safety requirements and provide hearing protection to workers during demolition activities.

D-NOISE-2 All construction equipment used for decommissioning and demolition shall be muffled in accordance with manufacturers' specifications.

D-NOISE-3 Decommissioning activities will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, in accordance with the County of San Bernardino Development Code standards.

4.8 PUBLIC HEALTH

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to public health that may result from the decommissioning of the Project.

Decommissioning activities will result in short-term and localized air quality impacts from fugitive dust and diesel emissions of trucks and other equipment used in the decommissioning activities. The Project will adhere to best management practices (BMPs) and mitigation measures to control fugitive dust emissions and maintain diesel equipment emissions as discussed in Section 4.1 to ensure that significant and adverse impacts do not occur to air quality due to SEGS VIII decommissioning and demolition activities. Additionally, the Project Owner will ensure the safe handling and disposal of hazardous materials and adherence to worker safety and fire protection procedures and LORS during decommissioning, as described in Section 4.5 and Section 4.14.

Table 4.8 lists the LORS applicable to public health.

Table 4.8: LORS Applicable to Public Health

LORS	Description	Comments
LORS potentially applicable to public health during decommissioning and demolition are discussed in Section 4.1 Air Quality, Section 4.5 Hazardous Materials and 4.14 Worker Safety and Fire Protection. No other LORS related to public health are applicable or are anticipated.		

LORS = laws, ordinances, regulations, and standards

4.8.1 Proposed Conditions of Certification

See Air Quality Section 4.1.1, Hazardous Materials Section 4.5.1, and Worker Safety and Fire Protection Section 4.14.1 for COCs that are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS related to public health.

4.9 SOCIOECONOMICS

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to socioeconomics that may result from the decommissioning of the Project.

The proposed decommissioning would require construction contractors and labor for the demolition activities on the Project site. At its peak, the Project would require approximately 60 workers for a 6 to 8 month period. This short time period would not result in impacts to utilities and public services, schools, or housing needs. The Project area is near the unincorporated community of Lockhart in San Bernardino County. San Bernardino County has a population of 2,171,603.[1] Available skilled labor to support the decommissioning workforce positions should be available within the County. Therefore, the Project will not place an undue burden on the local workforce and impacts to socioeconomics would be considered less than significant.

Table 4.9 lists the LORS applicable to socioeconomics:

Table 4.9: LORS Applicable to Socioeconomics

LORS	Description	Comments
There are no socioeconomic LORS directly applicable to decommissioning and demolition.		

LORS = laws, ordinances, regulations, and standards

4.9.1 Proposed Conditions of Certification

No significant impacts to socioeconomics have been identified. Therefore, no COCs are warranted or proposed.

4.10 SOIL AND WATER RESOURCES

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to soil and water resources that may result from the decommissioning of the Project.

Decommissioning activities at the Project site would have a minimal effect on soil and water resources. Decommissioning would take place within the existing Project footprint, which is primarily graded or covered in gravel. No sensitive water or soil resources exist on site.

There would be less water usage and wastewater generated with the decommissioning of the SEGS VIII Project as the steam turbine generators would be shut down and removed. Existing water wells will continue to be utilized for non-potable water during decommissioning, while potable water will continue to be delivered via contract with Sparkletts or a similar provider. The existing Onsite Water Treatment System (OWTS) will continue to be utilized for the operation of SEGS IX.

[1] According to 2018 United States Census Bureau population estimates. Website: https://www.census.gov/quickfacts/fact/table/sanbernardinocountycalifornia,CA/PST045218.

The decommissioning of SEGS VIII does not affect the continued use and operation of the evaporation ponds by SEGS IX. The evaporation ponds will continue to operate until the eventual decommissioning of SEGS IX, at which time the ponds would be closed and decommissioned in accordance with Lahontan RWQCB regulations.

The Project Owner would implement the existing SPCC Plan and develop a SWPPP for decommissioning and demolition to mitigate potential water resource impacts during demolition activities. The SWPPP would also include BMPs to minimize soil impacts due to wind or water erosion. These BMPs include applying water to active excavations and disturbed soils, reducing vehicle speeds on site, and covering/treating soil piles. The implementation of the SWPPP and National Pollutant Discharge Elimination System (NPDES) would minimize soil and water resource impacts.

The decommissioning and demolition of the SEGS VIII Project would comply with the applicable County of San Bernardino Conditions of Approval related to soil and water resources, as outlined in the October 2019 Planning Commission Staff Report (included in Appendix B), and with all applicable LORS for soil and water resources. Therefore, the proposed decommissioning activities would have a less than significant impact on soil and water resources.

Table 4.10 lists the LORS applicable to soil and water resources.

Table 4.10: LORS Applicable to Soil and Water Resources

LORS	Description	Comments
Federal		
Clean Water Act (33 USC § 1251 et seq.)	Requires states to set standards to protect water quality through the regulation of point source and certain non-point source discharges to surface water.	Compliance would be managed through use of the Construction SWPPP.
State		
Porter-Cologne Water Quality Control Act of 1967, California Water Code Section 13000 et seq.	Requires the State Water Resources Control Board and the nine Regional Water Quality Control Boards to adopt water quality criteria to protect state waters.	Compliance will be managed through use of Construction SWPPP and NPDES Permit.
California Water Code Section 13551	Prohibits the use of "…water from any source of quality suitable for potable domestic use for nonpotable uses, including…industrial… uses, if suitable recycled water is available…"	Recycled water is not available for use at the site. Water for dust control would be obtained from the on-site water wells.
The Safe Drinking Water and Toxic Enforcement Act of 1986, Health and Safety Code section 25249.5 et seq.	Prohibits the discharge or release of chemicals known to cause cancer or reproductive toxicity into drinking water sources.	Compliance would be managed through the use of a Construction SWPPP and NPDES Permit.
State Water Resources Control Board Resolution No. 68-16 (the "Anti-Degradation Policy")	Declares the State's policy that, among other things, the discharging of wastes will not pollute or result in a nuisance.	Compliance would be managed through the use of a Construction SWPPP and NPDES Permit.

Table 4.10: LORS Applicable to Soil and Water Resources

LORS	Description	Comments
Local		
County of San Bernardino, 2007 Development Code, 87.02.070	Specifies criteria for Grading and Erosion Control and for design of storm water facilities; assesses a Flood Mitigation Fee to assist in providing revenue for establishing adequate community drainage facilities.	Contractor to obtain a County grading permit. Compliance would be managed through the grading permit and the use of Construction SWPPP and NPDES Permit.
Mojave Water Agency Regulations, §97-15	Requires a service agreement for providing a host of water and wastewater services to the Project.	Not applicable since public water and wastewater services are not available for the site. Potable water is obtained from on-site water production wells and wastewater goes to the Project septic system.
MDAQMD Rule 403	Specifies requirements for dust control.	Water for dust control would be obtained from the on-site water wells.

County = County of San Bernardino
CWC = California Water Code
LORS = laws, ordinances, regulations, and standards
MDAQMD = Mojave Desert Air Quality Management District
NPDES = National Pollutant Discharge Elimination System
SWPPP = Stormwater Pollution Prevention Plan
USC = United States Code

4.10.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-S&W-1 Prior to beginning site mobilization for decommissioning, the Project Owner shall submit a Notice of lntent for construction under the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activity to the State Water Resources Control Board (SWRCB).

D-S&W-2 The Project Owner shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for the decommissioning and demolition of the Project. The SWPPP shall identify erosion control measures to be implemented and maintained during decommissioning and demolition activities. The SWPPP shall be submitted to San Bernardino County for review and approval prior to the start of decommissioning activities.

D-S&W-3 Grading and Erosion Control plans shall be submitted for review and approved by the County of San Bernardino prior to the start of construction-related demolition activities.

4.11 TRAFFIC AND TRANSPORTATION

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to traffic and transportation that may result from the decommissioning of the Project. The temporary nature and limited number of vehicles associated with decommissioning and demolition activities would have little impact on existing traffic and transportation within the Project area.

The decommissioning and demolition work will require approximately 15 to 20 environmental specialists and 40 to 50 on-site demolition workers. Truck traffic will consist of flatbed and lowboy delivery trucks (5-axel) for mobilization and demobilization, and heavy haul trucks (4-axel) during the demolition phase of the Project.

The following table provides the total number of truck hauls for materials that will be hauled off site during decommissioning and the anticipated number of and hauls per day.

Materials to be Hauled Offsite During Decommissioning	Quantity of Material	Total Number of Truck Haul Trips During Decommissioning	Maximum Number of Haul Trips per day
Contaminated Concrete	32 tons	2	2
Glass	6,250 tons	313	5
Other non-recyclable waste	4,000 tons	286	5
Metal	7,500 tons	341	4
HTF Material	320,000 gallons	28	5
		Maximum Number of Hauls per Day	**21**

Decommissioning and demolition related vehicle ingress/egress would be scheduled to minimize traffic obstructions and not interfere with peak-hour traffic. Also, a flag person shall be retained to maintain efficient traffic flow and safety adjacent to existing roadways.

Additionally, as specified in the County of San Bernardino's Conditions of Approval (COAs) item number 56 for the PV redevelopment Project (see Appendix B), a Construction Management Plan is required prior to construction of the PV and BESS facility, which will ensure that all public roadways utilized during construction will be maintained. The COA specifies the following:

> *"The applicant's engineer shall provide a construction management plan to the Department of Public Works, Transportation Operations Division to determine if a maintenance agreement (during construction) with the County will be required. The construction management plan shall show the number of trucks, type of trucks (size), the total number of Equivalent Single Axle Loads (ESALs), and the truck routes to the site for construction. If it is determined that a maintenance agreement is required, the developer shall enter into a maintenance agreement with the County Department of Public Works to insure all County maintained roads utilized by the construction traffic shall remain in acceptable condition during construction. Prior to issuance of grading permits, the developer/contractor shall contact the Transportation Operations Division at (909) 387-7995 in order to process the*

maintenance agreement with the County. Please allow a minimum of 12 weeks for the processing of an agreement and obtain approval from the Board of Supervisors."

A Construction Management Plan will be prepared and submitted to the County for approval prior to the start of decommissioning activities.

The Project would continue to comply with applicable traffic and transportation COCs and all applicable LORS during decommissioning and demolition activities. A demolition permit will be secured from the County of San Bernardino and the contractor would be required to comply with all county demolition, disposal and recycling requirements and regulations. Further, the Project Owner would ensure that permits and/or licenses are secured from the California Highway Patrol and the California Department of Transportation (Caltrans) for construction-related transport of hazardous materials, and that federal and state regulations for the transport of hazardous materials are observed. Therefore, there would be no significant impacts to traffic and transportation.

Table 4.11 lists the LORS applicable to traffic and transportation.

Table 4.11: LORS Applicable to Traffic and Transportation

LORS	Description	Comments
Federal		
49 Code of Federal Regulations Chapter III, Subchapter B, Sections 350-399 on Motor Carrier Safety, Registration, and Transportation of Hazardous Materials	Establishes regulations affecting interstate motor carrier operations, routing registrations, insurance of vehicles and operational safety; describes transportation standards for radioactive and hazardous materials.	Decommissioning and demolition activities would comply with these requirements through implementation of proposed COC D-TRAFFIC-2 during decommissioning, and County Condition of Approval F94 during demolition activities associated with the future PV Project.
State		
California Vehicle Code Division 15. Size, Weight, and Load Section 35000- 35796	Provides requirements as to the size and licensing of vehicles on public highways.	Vehicles associated with the decommissioning and demolition activities would meet these requirements or obtain the required permits to exceed the requirements.
California Streets and Highway Code	Provides regulation pertaining to the modification of street infrastructure.	Because the decommissioning and demolition activities do not propose to remove, replace, or modify any facility within road rights-of-way, these requirements are not applicable.
Local		
San Bernardino County Congestion Management Plan	Industrial and warehouse truck uses must show the estimated number and distribution of truck trips (in Passenger Car Equivalents) for both peak hours and hours being studied.	A Traffic Impact Assessment is required if a project is forecasted to generate 250 two-way peak hour trips. Current traffic volume projections associated with decommissioning and demolition activities are not anticipated to require the preparation of a Traffic Impact Assessment. However, activities will maintain compliance with the Congestion Management Plan objectives and policies.

Table 4.11: LORS Applicable to Traffic and Transportation

LORS	Description	Comments
San Bernardino County General Plan, Threshold Standards Policy	The County's Threshold Standards Policy requires that LOS D or better be maintained on intersections under the County's jurisdiction.	A Construction Management Plan has been completed, and it is not anticipated that level of service at any intersections under the County's jurisdiction would fall below LOS D as a result of the decommissioning and demolition activity.
County Code, Title 5, Division 1, Highway Permit	Addresses permitting requirements for oversize/overweight vehicles.	All necessary permits for oversize/ overweight vehicles would be obtained.

COC = Condition of Certification
LORS = laws, ordinances, regulations, and standards

4.11.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-TRAFFIC-1 The Project Owner shall provide a Construction Management Plan (CMP) to the County of San Bernardino for review and approval prior to the start of decommissioning activities.

D-TRAFFIC-2 The Project Owner shall utilize only licensed haulers, using approved vehicles marked in an appropriate manner, for the transportation of all hazardous, toxic, and flammable materials. All such materials shall be transported in compliance with all applicable requirements of the U.S. Department of Transportation, the California Highway Patrol, and the California Department of Transportation (Caltrans).

4.12 VISUAL RESOURCES

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to visual resources that may result from the decommissioning of the project.

The existing mirrors that occupy the majority of the site are approximately 22 feet high and the tallest existing structure in the area of the power block is 88 feet high. The proposed decommissioning activities would be temporary and would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Decommissioning and demolition activities would not take place during nighttime hours; however, some nighttime lighting with existing facility lights would be used for the purposes of maintaining site security. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties.

The proposed future PV redevelopment Project will have less visual impacts with lower profile PV panels (approximately 12 feet in height), and the decommissioning of SEGS VIII will remove the power block and cooling tower and associated plume. SEGS VIII is adjacent to other existing solar

facilities and the future redevelopment of the SEGS VIII site to PV solar is compatible with the overall character of the area.

Further, the nearest residential parcel is more than 1 mile away from the Project area, and the Project is not within a sensitive viewshed. Therefore, the proposed decommissioning activities will not have a significant impact to visual resources.

Table 4.12 lists the LORS applicable to visual resources.

Table 4.12: LORS Applicable to Visual Resources

LORS	Description	Comments
San Bernardino County Zoning Ordinance 83.07	Ordinance implements the light pollution policies of the San Bernardino County General Plan.	Decommissioning and demolition activities would not take place during nighttime hours. Some night-time lighting with existing facility lights will be used for the purposes of maintaining site security. Lighting shall be shielded in compliance with the ordinance in order to preclude light pollution or light trespass onto adjacent property and roadways.

LORS = laws, ordinances, regulations, and standards

4.12.1 Proposed Conditions of Certification

The Commission Decision for the Project does not contain Visual Resources COCs that would be applicable during decommissioning. SEGS VIII decommissioning will conform with all applicable LORS, and no additional COCs are necessary or proposed.

4.13 WASTE MANAGEMENT

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to waste management that may result from the decommissioning of the Project.

After cessation of operations, all remaining nonhazardous wastes would be collected and disposed of in appropriate recycling centers, landfills or waste collection facilities according to all applicable LORS. Hazardous wastes would be disposed of according to all applicable LORS. The site would be secured 24 hours per day during the decommissioning activities.

Decommissioning would entail breakdown and removal of structures and facilities. Residual materials from these activities would be transported via heavy haul dump truck to the appropriate landfill identified. Debris would be placed in temporary on-site storage area(s) pending transportation to the recycling/disposal facilities. The debris and removed equipment would be cut or dismantled into pieces that could be safely lifted or carried with the on-site equipment being used. The vast majority of glass and steel would be processed for transportation and delivery to a scrap vendor or may be transported to the appropriate landfill and/or recycling center. Some

specific equipment such as gas-fired heaters, cooling towers and power block equipment may be transported as intact components or reduced in size on site.

San Bernardino County owned and operated sanitary landfills, and transfer stations are not permitted to accept asbestos-contaminated wastes; therefore, any debris generated by the demolition of structures are subject to asbestos clearance prior to disposal at any San Bernardino County disposal sites. Applicants are required to have a Certified Asbestos Consultant perform testing of all materials to be disposed. The Solid Waste Management Operations Section will provide the applicant with disposal authorization upon receipt of the report indicating that the debris is not contaminated. The Project Owner will comply with the County requirement to perform asbestos testing of demolition debris prior to disposal.

Hazardous materials containers would be rinsed clean when feasible and collected for off-site disposal. When possible, these materials would be placed directly into tanker trucks or other transport vessels and removed from the site at the point of generation to minimize the need for hazardous material and waste storage at the site.

Adherence to the applicable waste management COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to waste management will ensure that impacts would be less than significant.

Table 4.13 lists the LORS applicable to waste management.

Table 4.13: LORS Applicable to Waste Management

LORS	Description	Comments
Federal		
Resource Conservation and Recovery Act (42 USC. § 6922)	Establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal.	All hazardous wastes generated would be removed according to approved plans and appropriately documented. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 40, Code of Federal Regulations, Parts 239 through 282	These sections contain regulations promulgated by the USEPA to implement the requirements of the Resource Conservation and Recovery Act.	All hazardous wastes generated would be removed according to approved plans and appropriately documented. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Comprehensive Environmental Response, Compensation and Liability Act: (Superfund) Title 42, USC, §§ 9601, et seq.	Establishes mechanisms for the cleanup of accidental spills or releases of pollutants into the environment.	The facility SPCC plan outlines spill response and reporting procedures to be followed during decommissioning. Additionally, Waste Management COC 9 discusses accidental spills or releases of HTF; adherence to this COC will assure compliance with this Act.

Table 4.13: LORS Applicable to Waste Management

LORS	Description	Comments
State		
California Health and Safety Code, Section 25100 et seq. (Hazardous Waste Control Act of 1972, as amended)	Creates the framework under which hazardous wastes must be managed in California.	All hazardous wastes generated would be removed according to approved plans and appropriately documented. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 14, California Code of Regulations, Section 17200 et seq. (Minimum Standards for Solid Waste Handling and Disposal)	Establishes minimum standards for solid waste handling and disposal and guidelines to ensure conformance of solid waste facilities with county solid waste management plans as well as enforcement and administrative provisions.	All nonhazardous waste generated during facility decommissioning and demolition would be disposed of in manner that complies with this standards.
Title 22, California Code of Regulations, Section 66262.10 et seq. (Generator Standards)	Establishes requirements for generators of hazardous waste.	All hazardous wastes generated would be removed according to approved plans and appropriately documented. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 22, California Code of Regulations, Section 67100.1 et seq. (Hazardous Waste Source Reduction and Management Review)	Establishes reporting requirements for generators of certain hazardous and extremely hazardous wastes in excess of specified limits.	The requirements of this section apply to routinely generated wastes from ongoing processes or operations. If extremely hazardous waste is generated in excess of limits specified in this code section during decommissioning, this regulation would be applicable and all proper reporting would occur.
Title 24, California Code of Regulations, Part 11, Section 5.408 (California Green Building Standards Code)	Establishes standards for construction and demolition waste management and recycling or salvage of a minimum of 65% of nonhazardous construction and demolition waste.	SEGS expects to sell or recycle much of the Project's equipment and waste, satisfying the 65% diversion requirements.
Local		
San Bernardino County Fire Department, Hazardous Materials Division	Administers the California laws for hazardous wastes in the proposed Project area. This agency has been designated as the local hazardous waste Certified Unified Program Agency (CUPA) by the State of California.	All hazardous wastes generated would be removed according to approved plans and appropriately documented. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.

COC = Condition of Certification
LORS = laws, ordinances, regulations, and standards
SEGS = Solar Energy Generating System
SPCC = Spill Prevention, Control and Countermeasures
USC = United States Code
USEPA = United States Environmental Protection Agency

4.13.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-WM-1 The Project Owner will comply with the County of San Bernardino's (County) requirement to perform asbestos testing of demolition debris prior to disposal at a County owned and operated sanitary landfill and/or transfer station. Debris generated by demolition of SEGS VIII structures is subject to asbestos clearance prior to disposal at any County disposal site. The Project Owner or its contractor shall obtain disposal authorization from the County Solid Waste Management Operations Section prior to disposal of demolition debris at a County owned waste disposal facility.

D-WS-2 Hazardous decommissioning and demolition waste from SEGS VIII shall be disposed of by the Project Owner or its contractors at a Class I or Class II disposal facility or to a permitted treatment, storage, and disposal facility (TSDF) authorized to treat specified waste streams.

D-WS-3 Non-hazardous decommissioning and demolition wastes from SEGS VIII shall be disposed of by the Project Owner or its contractors at the Barstow Landfill or at facilities approved by the County of San Bernardino, or other appropriate agencies in counties where alternate disposal facilities may be located. The Project Owner shall obtain, or use contractors who have obtained, all applicable County permits for refuse collection and hauling.

D-WS-4 The Project Owner, or its contractor, shall update (if necessary) and utilize the solid waste management plan, which addresses the disposition of solid non-hazardous wastes from the SEGS facilities. The plan identifies all approved landfill sites in the region which the Project may use for solid waste disposal and describes the amount of waste to be sent to each facility. The plan also identifies non-hazardous demolition waste materials to be diverted from disposal by salvage, sale, recycling, or other form of disposal diversion.

4.14 WORKER SAFETY AND FIRE PROTECTION

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to worker safety and fire protection that may result from the decommissioning of the Project.

The Project is under the jurisdiction of the San Bernardino County Fire Department herein. Prior to any decommissioning-related construction occurring on site, the Project Owner shall contact the Fire Department for verification of current fire protection requirements. Decommissioning activities shall comply with the current Uniform Fire Code requirements and all applicable statutes, codes, ordinances and standards of the Fire Department. Per applicable COCs, the Fire Protection Element of the Project Safety Plan would be followed during decommissioning. The plan will be updated, if necessary, to conform with current Uniform Fire Code requirements and submitted to the Fire Department for review and comment.

All workers will undergo proper worker safety training consistent with the CEC license requirements. The Project Owner will ensure that the decommissioning contractor shall comply with federal, state and local worker health and safety regulations.

Adherence to the applicable Safety COCs for the Project through termination of CEC jurisdiction of the Project and compliance with the LORS applicable to worker safety and fire protection will ensure that impacts would be less than significant.

Table 4.14 lists the LORS applicable to worker safety and fire protection.

Table 4.14: LORS Applicable to Worker Safety and Fire Protection

LORS	Description	Comments
Federal		
Federal Occupational Safety and Health Act of 1970, Title 29 of the United States Code, section 651 (29 USC §§ 651 through 678) and implementing regulations, Title 29 of the Code of Federal Regulations (CFR), General Industry Standards, Sections 1910.1 - 1910.1500	Mandates safety requirements in the workplace.	All applicable worker safety regulations would be followed during decommissioning.
Department of Labor, Safety and Health Regulations for Construction Promulgated Under Section 333 of the contract Work Hours and Safety Standards Act, 40 USC 327 et seq. and 29 CFR 1926	Requires meeting employee health and safety standards for construction activities.	All applicable worker health and safety regulations would be followed during decommissioning.
State and Local		
California Occupational Safety and Health Act, 1973	Establishes minimum safety and health standards for construction activities and industrial facilities in California.	These sections provide federal approval of California's plan for enforcement of its own safety and health requirements in lieu of most of the federal requirements found in 29 CFR §1910.1 to 1910.1500.
California Building Code Title 24, California Code of Regulations (24 CCR § 3, et seq.)	Consists of 11 parts containing the building design and construction requirements relating to fire and life safety and structural safety. The Building Standards Code includes the electrical, mechanical, energy, and fire codes applicable to the Project. Local planning/building and safety departments enforce the California Building Code.	All applicable regulations would be followed during decommissioning.
California Fire Code, Part 9 of Title 24 of the California Code of Regulations	The Fire Code contains general provisions for fire safety.	All applicable requirements would be followed during decommissioning.
Uniform Fire Code (UFC) Standards, a companion publication to the California Fire Code	Contains standards of the ASTM and the NFPA. The San Bernardino County Fire Department administers the UFC.	All applicable requirements would be followed during decommissioning.

Table 4.14: LORS Applicable to Worker Safety and Fire Protection

LORS	Description	Comments
Industry Codes and Standards		
San Bernardino County General Plan (2007) Safety Element	Goal S3 of the Safety Element of the San Bernardino County General Plan reads "The County will protect its residents and visitors from injury and loss of life and protect property from fires". The Plan establishes policies and describes programs intended to accomplish this goal.	All applicable safety and fire requirements would be followed during decommissioning activities.
ANSI A10.6-1990	Safety requirements for demolition operations.	All applicable requirements would be followed during decommissioning activities.

LORS = laws, ordinances, regulations, and standards USC = United States Code
NFPA = National Fire Protection Act

4.14.1 Proposed Conditions of Certification

The following COCs are proposed to be implemented during decommissioning and demolition to ensure that activities conform with applicable LORS.

D-WS-1 The Project Owner, or its demolition contractor, shall prepare or update the existing Health and Safety Plan elements (including the fire protection element) to reflect the activities expected during decommissioning and demolition.

D-WS-2 The Project Owner shall ensure that all SEGS VIII employees, contractors, and visitors that will be on-site during decommissioning and demolition receive safety training.

4.15 ALTERNATIVES ANALYSIS

Under CEQA, an "Alternatives Analysis" is not required for demolition of facilities or decommissioning activities, except for the demolition of facilities of historical significance, which is not applicable here.[2] Decommissioning and demolition are ministerial. They are not a "project" as that CEQA term of art is defined. Additionally, the CEQA requirement to prepare an Environmental Impact Report, including the preparation of an alternatives analysis, is triggered when a proposed action requires a discretionary approval by a governmental agency and when there is substantial evidence that the action may result in a substantial adverse change in the environment.[3] Because the CEC's Certified Regulatory Program is CEQA-equivalent, an alternatives analysis for decommissioning and demolition is not required. However, because the CEC has requested such an analysis in COC DECOMMISSIONING-1, this section provides a discussion of alternatives.

[2] See 20 California Code of Regulations 15064.5(b) and 20 California Code of Regulations 15126.4(b).
[3] See Public Resources Code § 21080 and 14 California Code of Regulations §§ 15002, 15382.

4.15.1 No Project: Continued Operation of the Existing Facility

The continued use of the existing project as a solar thermal facility would be equivalent to "no project." The existing project is nearing the end of its useful life and operations and maintenance costs to maintain the project will continue to grow. In addition, the energy contract, which currently makes the project financial viable, is expiring. The no project alternative would not allow for the decommissioning and removal of certain project structures and equipment so that the project could convert from a concentrated solar thermal facility to a new PV solar facility. This alternative would not be the preferred alternative because operating conditions of the proposed PV solar project will have fewer environmental impacts (particularly regarding air emissions, water, aesthetics and hazardous materials) compared to the existing operating conditions. Additionally, the no project alternative would not allow for the beneficial use of site as a cleaner solar energy producing project.

4.15.2 Return Site to Pre-Project State

Returning the Project site to the pre-project state would involve the complete decommissioning and demolition of all project structures and equipment. This alternative would not be the preferred alternative because it would remove a renewable energy source from the State of California. The SEGS project assists the State in complying with the Renewables Portfolio Standard under Senate Bill 350, which requires that by December 31, 2030, 50 percent of all electricity sold in the State shall be generated from renewable energy sources. Additionally, the operation of the project provides employment to operations and maintenance personnel.

4.15.3 Decommissioning and Reuse of Existing Facility

Decommissioning of the existing concentrated solar thermal facility for reuse as a solar PV facility is the environmentally preferred alternative. Although decommissioning and demolition of the existing facility would result in some temporary impacts, operating conditions of the proposed solar PV Project would have fewer environmental impacts compared to the existing concentrated solar thermal project. The reuse of the Project as a solar PV facility would continue to provide San Bernardino County and the State of California with a renewable energy source that is on previously permitted and disturbed land. It would assist the state in complying with the Renewables Portfolio Standard under Senate Bill 350, which requires that by December 31, 2030, 50 percent of all electricity sold in the State shall be generated from renewable energy sources. The following are the benefits of the proposed reuse of the site as a PV solar facility:

- Develops a previously disturbed power-generating site that uses existing transmission infrastructure to minimize environmental impacts.

- Develops a solar PV facility that has the same or fewer environmental impacts than the facility currently in operation at the property.

    - Same development footprint

    - Fewer visual impacts with lower profile PV panels (the current solar mirror troughs are at least 20 feet tall and the new PV panels would be about 12 feet), no power block, and no cooling tower plume

  - Fewer air quality impacts with the shutdown of gas-fired heaters, exhaust towers and cooling towers
  - Less water use and wastewater generated with shutdown of the steam turbine generator
  - Less hazardous waste generated with no HTF needed for solar PV technology
  - Less potential of spills of hazardous materials due to the lack of heat transfer fluid
  - Less greenhouse gas generated with the shutdown of the existing gas-fired heaters
- Establishes solar PV power-generating facilities and energy storage technology of sufficient size and configuration to produce reliable electricity in an economically feasible and commercially financeable manner that can be marketed to different power utility companies.
- Uses proven and established PV and energy storage technology that is efficient, requires low maintenance, and is recyclable.
- Assists California in meeting its greenhouse gas emissions reduction goals by 2030 as required by the California Global Warming Solutions Act (Assembly Bill 32), as amended by Senate Bill 32 in 2016.
- The redevelopment of the site as a solar PV facility is consistent with the County of San Bernardino General Plan. The Renewable Energy and Conservation Element (RECE) of the General Plan, with the adoption of Policy 4.10, a newly proposed utility-oriented Renewable Energy (RE) Project is prohibited in Rural Living (RL) Land Use Districts. The future PV Project remains consistent with the RECE because the Project is an upgrade to an existing commercial solar energy facility. The Project includes the decommissioning and demolition of the existing thermal power facility and the redevelopment of the proposed PV solar facility entirely within the existing solar site, with no expansion of the existing footprint. The Project is consistent with RE Policy 5.2(x), adopted at the same time as Policy 4.10, which includes existing energy generation sites, like the Project site, as a suitable location for utility-oriented renewable energy generation projects.

APPENDIX A

CONDITIONS OF CERTIFICATION

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SEGS VIII (88-AFC-01C)
AIR QUALITY CONDITIONS OF CERTIFICATION

Requirements **1-1** through **1-6** are CEC Staff conditions while requirements **1-11** through **1-35** are SBCAPCD conditions included in the Final DOC filed February 27, 1988. Requirements **1-36** through **1-41** are EPA suggested conditions. The wording in bold letters are the corresponding SBCAPCD General and Special Conditions.

STAFF CONDITIONS

88-AFC-01C_IPC_19890814

1-1 Prior to June 1, 1990, Luz shall modify or replace the existing burners at the SEGS III, IV, and V units to achieve emissions of NOx concentration at or below 60 ppm at 3 percent O2. If Luz decides to replace the existing burners, Luz shall provide to the California Energy Commission Compliance Project Manager (CPM) copies of the low-NOx burner specifications received from the vendors, schedules for the purchase and installation of the new low-Nox burners and copies of the purchase orders for the new burners. If Luz decides to modify the existing burners, Luz shall provide technical data on the modification that includes the physical description of the changes, the expected NOx emissions, any source test emissions data, and a final burner specification. If the NOx concentration at SEGS III through V do not meet the 60 ppm limit, the Staff will determine whether a sufficient good faith effort has been made by Luz to achieve this level and will determine whether the emission reductions achieved by Luz are acceptable.

Verification: Within 90 days after CEC certification, Luz shall forward to the CPM for approval, copies of the Luz burner bid specifications received from the burner vendors. Within 180 days after CEC certification, Luz shall submit to the CPM all other information required above.

For new burners, Luz shall submit the schedules for the purchase and installation of the burners and copies of the purchase orders.

For modifying the existing burners, Luz shall submit the technical data described above.

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1-2 Deleted

1-3 Luz shall submit an emissions reduction plan to the CPM that shall include a technical approach and schedule of implementation to provide feasible mitigation that will result in a net emissions reduction of 11 lbs/hr of particulate matter less than 10 microns in diameter (PM10) from any or all of the SEGS III, IV, V, VI, VII, or VIII units or from other PM10 sources. Luz may choose any control strategy they wish that results in a net PM10 emissions reduction of 11 lbs/hr. Possible PM10 control strategies that Luz can utilize in whole or in combination include the following:

a. The installation of 0.002 percent cooling tower drift eliminators at SEGS III through VII.

b. Fugitive dust (PM10 fraction) control at SEGS III through VII.

c. The purchase of emission reductions from sources not affiliated with Luz. Any such PM10 mitigation suppliers must be located within a radius of 15 miles or 40 miles upwind (south through west) of the SEGS VIII site.

d. Any other control(s) that Luz chooses within a 15 mile radius of SEGS VIII.

If Luz, however, believes that there is no feasible mitigation available that will result in a net PM10 emission reduction of 11 lbs/hr, then Luz must submit an evaluation that includes technical analyses of each control method listed above in items a) through c), and the technical reasons that each control strategy cannot be applied as PM10 mitigation. In addition to the technical data, Luz may if it believes it appropriate, provide a detailed economic analysis as to why a particular control strategy is not feasible.

Verification: Within 90 days of CEC certification, Luz shall submit to the CPM for approval the documentation described above.

1-4 Prior to June 1, 1990, Luz shall have implemented PM10 control strategies which result in a 11 lb/hr reduction in PM10 emissions. Luz shall also provide a reporting plan, engineering calculations, or other documentation to demonstrate to the CPM's satisfaction that an 11 lb/hr reduction has occurred as a result of the chosen strategy. Luz shall provide schedules for the implementation of the selected PM10 control method(s), and copies of the purchase orders for any equipment purchased as part of the selected PM10 control method(s).

Based upon the performance levels achieved and/or the guarantees provided by the PM10 control methods chosen by Luz, CEC Staff and Luz will jointly propose appropriate conditions of certification to implement and reflect the net emissions reduction of 11 lb/hr of PM10.

If Luz chooses emission reductions from sources not affiliated with Luz (Item 3c in Condition 1-3), then Luz shall provide signed contracts effecting the reductions between Luz and the emission reduction supplier.

If the CPM determines that the control strategies listed in Condition **1-3** are not feasible, then both Conditions **1-3** and **1-4** shall be deemed satisfied.

Verification: Within 180 days after the submittal of the documentation for Condition 1-3, Luz shall provide to the CPM for approval the information described above.

1-5 After particulate matter (or PM10) compliance testing of the SEGS VIII heaters as required by Condition 1-28 (DOC Condition B.5.), the CPM shall revise, if necessary, the PM10 emission limit of the SEGS VIII heaters in Condition **1-28** (DOC Condition B.5.) to a figure mutually agreed upon by Luz and CEC Staff.

Verification: Within 60 days of submittal of the compliance source testing results to the CPM, Luz and the CEC Staff shall hold a workshop to agree upon a revised PM10 emission figure for Condition **1-28** (DOC Condition B.5.).

DISTRICT CONDITIONS

88-AFC-01C Order 89-0627-23b

1-11 Applicable District Rules. Luz is required to meet and comply with all applicable rules and regulations of the San Bernardino County Air Pollution Control District (SBCAPCD). Concurrent with filing a petition for a variance to the SBCAPCD Hearing Board, excluding petitions for a variance per SBCAPCD Rule 430(c), Luz shall submit that petition for CPM review. Luz shall also notify the CPM as to the Hearing Board order, including conditions thereof, resulting from that petition.

SBCAPCD Condition A.1.

Verification: In the Annual Compliance Report, Luz shall provide the CPM a statement attested to by the responsible Luz agent that the SEGS VIII project is in compliance with all air quality terms and conditions of certification.

Luz shall also submit to the CPM a summary of all Luz-SBCAPCD correspondence relative to any non-compliance or potential non-compliance if not otherwise provided. Luz shall submit to the CPM all petitions for variances as prescribed by Condition **1-11**.

1-12 Other Applicable Regulations. The owner and operator of SEGS VIII shall assure that the construction and operation of the proposed stationary source SEGS VIII is in compliance with all applicable provisions of federal (specifically, but not limited to, 40 CFR Section 60.7, 40 CFR Section 60.8, 40 CFR Section 60.13, 40 CFR Section 60.47a, 40 CFR Section 60.48a and 40 CFR Section 60.49a) and state air quality regulations, as well as those of the SBCAPCD.

SBCAPCD Condition A.2.

Verification: In the Quarterly Compliance Report, Luz shall provide the CPM status reports for the Code of Federal Regulation Requirements discussed above.

1-13 Permit Conditions: The New Source Review and SBCAPCD permits are considered by the SBCAPCD to be specific limitations for this proposed project. Any changes to the operations which change emissions will be subject to a separate and independent SBCAPCD and CPM review. Also, SBCAPCD required emission controls cannot be changed without the SBCAPCD's Executive Officer and CPM approval.

SBCAPCD Condition A.3.

Verification: Sixty (60) days before implementing any major change identified above, Luz shall submit to the SBCAPCD and the CPM the design details of the proposed

change and a discussion of the potential change in air emissions from the project. Luz shall receive written approval from the CPM prior to instituting said change.

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1-14 Best Available Control Technology (BACT) Requirement. The project owner shall be required to install and maintain heater burners to control NOx emissions and CO emissions accepted and shown by the MDAQMD current Permits to Operate. This requirement is more restrictive than BACT (80 ppmv) for NOx as previously determined by the MDAQMD. BACT for this particular application ~~is 100 ppm and~~ shall be verified by annual compliance test and maintained by good engineering practice and proper operating technique. Compliance with emission limits (lbs/hr) shall be met when the load level is equal to or greater than 20 percent of design capacity. As BACT for cooling tower particulate emissions control, the project owner shall be required to install drift eliminators designed for 0.0005 percent maximum drift rate.

Written approval from the MDAQMD's Executive Officer and the CPM is necessary prior to installing any change in previously approved BACT or more stringent controls specified herein. Such changes will be, in general, limited to revisions, which reduce emissions and/or improve air quality beyond the levels presented in this review.

Verification: Sixty (60) days before implementing any change to the NOx emissions control equipment, use of the equipment, or control efficiencies, the project owner shall submit to the MDAQMD and the CPM the design details (including "Approved for Construction" drawings), operation procedure changes, or control efficiency changes. The project owner shall not precede with any changes described above until written approval is received from the CPM.

The project owner shall submit to the CPM copies, when they are available, of the maintenance records for the cooling tower drift eliminators that includes the specification of 0.0005 percent maximum drift.

1-15 Design Changes. Any substantial changes to the design, as permitted, must be submitted to the SBCAPCD and the CPM for approval prior to incorporation into the facility design, construction and/or operation. A substantial change, as defined in this condition, includes any modifications to the design or operation of the air emissions control system (AECS), continuous emissions monitoring system (CEMS), or the air emissions computer control system (CCS).

SBCAPCD Condition A.5.

Verification: Sixty (60) days before implementing any change to the oil heater system, emergency generator, emergency fire pump or cooling tower, Luz shall submit to the SBCAPCD and the CPM the design details of the proposed change (including unapproved for Construction" drawings), and a discussion of the potential change in air emissions. Luz shall not proceed with any changes described above until receiving written approval from the CPM.

1-16 Deleted.

1-17 Notification of Commencement of Construction and Startup. Luz must notify the SBCAPCD Executive Officer and the CPM in writing of the anticipated date of initial start-up (as defined in 40 CFR 60.2(o)) of each functional subsystem or facility at SEGS VIII and the actual date of commencement of construction and start-up.

SBCAPCD Condition A.7.

Verification: Luz shall submit copies to the CPM of correspondence between Luz and the SBCAPCD Executive Officer in writing of the anticipated date of initial start-up not less than thirty (30) days prior to such date. Luz shall also notify the CPM of the actual dates of commencement of construction and start-up within fifteen (15) days after such dates.

1-18 Facilities Operation. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of the Commission Decision's Conditions of Certification shall, at all times, be maintained in good working order and operated as efficiently as possible consistent with minimum air pollutant emissions, and with the levels specified herein.

SBCAPCD Condition A.8.

Verification: Luz shall make the SEGS VIII site available for inspection by the SBCAPCD, CARB, and CEC staff.

1-19 Malfunction/Breakdown Provisions. The SBCAPCD shall be notified of any process anomaly, malfunction of any air pollution control equipment, or malfunction of process equipment, which results in a violation of applicable SBCAPCD rules, emission limits or conditions required herein. Notification shall be made promptly, and in accordance with SBCAPCD regulations (generally within one hour of the malfunction or within one hour of the time the malfunction reasonably should have been detected). The estimated time for repair or correction of the malfunction shall be reported as soon as possible thereafter. Typically, the SBCAPCD expects repairs to be completed within 24 hours or within a time determined to be reasonable by the SBCAPCD Executive Officer. In the event equipment repairs cannot be accomplished promptly, the owner/operator must either shut down the equipment, or petition the SBCAPCD Hearing Board with an amendment pending correction of the malfunction of the process or control equipment. Luz shall also notify in writing the CPM of the petition to the SBCAPCD Hearing Board. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense for any violations of the Commission Decision or of any law or regulations which such malfunction may cause.

SBCAPCD Condition A.9.

Verification: Luz shall notify the SBCAPCD, per the requirements of the SBCAPCD rules and regulations, of any malfunction described above. In the Quarterly Compliance Reports, Luz shall submit a summary of all malfunctions reported to the SBCAPCD and the appropriate actions taken. This information shall include, but not be limited to: a complete description of the malfunction including equipment failure(s) or procedural deviations, the time and day the malfunction occurred, the duration of the malfunction, the pollutant(s) and quantity of emissions as a result of the malfunction, and the mitigation measures employed to correct the malfunction. In the event Luz petitions the SBCAPCD Hearing Board for an amendment, Luz shall submit copies of the application for an amendment to the CPM.

1-20 Right to Entry. The Executive Officer of the SBCAPCD, the Executive Officer of the California Air Resources Board, the Administrator of the Environmental Protection Agency, and the Executive Officer of the California Energy Commission and/or their authorized representatives, upon the presentation of credentials, shall be permitted:

a. To enter upon the premises where the source is located or any location where records are required to be kept under the terms and conditions of the Commission Decision's Conditions of Certification or PTO; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of the Commission Decision's Conditions of Certification, or a PTO; and

c. To inspect any equipment, operation, or method required in the Commission Decision's Conditions of Certification, or a PTO; and

d. To test for or otherwise sample emissions from the source.

e. Luz shall make the SEGS VIII site and records available for inspection by the SBCAPCD, CARB, EPA and CEC during both construction and operation of the project.

SBCAPCD Condition A.10.

Verification: Luz shall make the SEGS VIII site and records available for inspection by the SBCAPCD, CARB, EPA and CEC during both construction and operation of the project.

1-21 Transfer of Ownership. In the event of any changes in control or ownership of facilities to be constructed or modified, the Commission Decision/Permit to Operate shall be binding on all subsequent owners and operators. Luz shall notify the succeeding owners and operators of the existence of the Commission Decision/Permit to Operate and its conditions by letter, with a copy forwarded to the SBCAPCD and the CPM.

SBCAPCD Condition A.11.

Verification: If control or ownership of SEGS VIII is transferred to new owners or operators, Luz shall notify the CPM in writing within 10 days of that change of ownership or operation responsibility.Luz shall forward copies of the notification to succeeding owners and include the appropriate Commission Decision/Permit to Operate correspondence to the SBCAPCD and the CPM.

1-22 Severability. The provisions of the Commission Decision are severable, and, if any provision of the Commission Decision is held invalid, the remainder of the Commission Decision shall not be affected thereby.

SBCAPCD Condition A.12.

Verification: No Verification.

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1-23 Emission Limits - Installation and Testing Phase.

a. During the plant installation, start up and acceptance testing phase, which shall continue through the completion of the MDAQMD's required compliance tests, the project owner shall be required to apply the best commonly accepted heater operating procedures and techniques to comply with emission limits of Tables A and B and statutory limits set forth in the MDAQMD Rules and Regulations..

TABLE A
Emission Concentrations/Factors (Vendor Supplied)

ITEM	PARTICULATE	NOX	SOX	CO
HTF Heater	5 lb/10^6 scf natural gas per EPA AP-42[a]	25 ppm	Negligible	35 pm
Diesel Generator	.25 gm/hp-hr	8.0 gm/hp-hr	Negligible	1.4 gm/hp-hr
Diesel Fire Pump	.25 gm/hp-hr	8.0 gm/hp-hr	Negligible	1.4 gm/hp-hr
Cooling Tower	.0005 % drift rate	0	0	0

TABLE B
Hourly Emissions Pounds per Hour at Maximum Continuous Rating

ITEM	PARTICULATE	NOX	SOX	CO
HTF Heater	5.2[ab]	30.6	Negligible	30.0
Diesel Generator	1.0	31.7	Negligible	5.6
Diesel Fire Pump	0.1	3.5	Negligible	0.6
Cooling Tower	3.5	0	0	0

b. HTF heater operations in excess of 16 hours per day at maximum rating may be allowed for acceptance testing and other testing required by Southern California Edison (SCE) as a prerequisite for connection to the SCE power grid. The project owner is required to submit a letter that

delineates the required testing and must obtain MDAQMD Executive Officer and CPM approval prior to the proposed tests.

c. The emission estimates are based on an emission factor of 25 ppm NOx. These emission factors are volumetric measures, which are corrected to 3 percent oxygen on a dry basis. The NOx emission limit, ~~per~~ in pounds per hour, based on these special conditions, will be verified by compliance source tests which shall be conducted in strict accordance with all the requirements of a compliance test as defined by federal and state methods.

d. If the 25 ppm limit is met during the engineering source tests, the MDAQMD and the CPM shall accept the test results as a demonstration/verification of compliance.

e. If the initial compliance test indicates that the gas fired HTF heater (using the Alzeta Pyrocore burner) emissions do not comply with the NOx emission limit of 25 ppm, the project owner shall be required to submit a report, within 60 days of submission of the compliance test report, describing the cause of the higher emission concentration and a plan which identifies appropriate technical changes of measures and the schedule that will be undertaken based on the Alzeta Pyrocore burner technology, to reach the NOx emission limit. Upon approval by the MDAQMD's Executive Officer and the CPM, the project owner shall implement the approved changes contained in that plan. After implementation of the approved plan and a good faith effort by the project owner (as determined by the MDAQMD's Executive Officer and the CPM), should compliance testing indicate that NOx emissions from the heater still cannot meet the 25 ppm limit, the MDAQMD's Executive Officer and CPM may modify the emissions limit to reflect the level which is achievable with the existing control equipment. Revision to the allowable emission limits shall be based solely on technical feasibility, and a demonstration that there be no significant environmental impact, and shall be subject to public notice and review. Final approval by the MDAQMD's Executive Officer and the CPM shall be issued by letter to all parties to the Commission Decision.

f. Emissions during the installation, acceptance, and testing phase shall be minimized and all instances of known or suspected emissions in excess of the total for the aggregate project as shown in **Table IIIA**, which are a result of installation/maintenance shall be reported as a breakdown, Rule 430, and in writing to the MDAQMD in a monthly summary letter report. Planned operations such as acceptance tests, demonstration of firm operation or any other testing or acceptance procedure that will cause a known exceedance of **Table IIIA** emissions as specified above shall be reported to the MDAQMD and the CPM in writing at least 15 days prior to the scheduled start of the test or procedure. The project owner may not commence with the subject test or procedure until written approval is granted by the CPM. Fuel usage will be recorded and reported as required by Condition **1-24**.

Verification: Refer to verification to Conditions **1-28**, **1-29** and **1-30**.

For Condition **1-23b**, the project owner must provide written notification to the CPM and receive written approval from the CPM prior to the proposed test.

For Condition **1-23e**, the project owner must provide to the CPM the information, if necessary, within 60 days of submission of the compliance test report.

For Conditions **1-23f**, the project owner must provide written notification to the CPM at least 15 days prior to the test or procedure and receive written approval from the CPM prior to the proposed test or procedure.

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1-24 Operational Phase. Upon completion of the installation, startup and acceptance testing phases, which includes the MDAQMD's required performance tests, the operation of the heaters, diesel generator and fire pump, and cooling tower shall conform to the emission concentration factors and hourly, daily and annual emissions contained in **Tables I, II** and **IIIA** & **IIIB**.

The operation of the cooling tower will be restricted to no more than 4000 hours per calendar year.

Verification: Refer to Verification to Condition **1-29**. The project owner shall provide in each quarterly report daily number of hours of operation of the cooling tower induced draft fans.

TABLE I
EMISSION CONCENTRATIONS/FACTORS (VENDOR SUPPLIED)

ITEM	PARTICULATE	NO_x	SO_x	CO
HTF Heater	5 lb/10^6 scf natural gas per EPA AP-42	67 ppm	negligible	350 ppm
Diesel Generator	.25 gm/hp-hr	8.0 gm/hp-hr	negligible	1.4 gm/hp-hr
Diesel Fire Pump	.25 gm/hp-hr	8.0 gm/hp-hr	negligible	1.4 gm/hp-hr
Cooling Tower	.0005 % drift rate	0	0	0

TABLE II
HOURLY EMISSIONS POUNDS PER HOUR AT MAXIMUM CONTINUOUS RATING

ITEM	PARTICULATE	NO_x	SO_x	CO
HTF Heater	5.2	81.2	negligible	248
Diesel Generator	1.0	31.7	negligible	5.6

Diesel Fire Pump	0.1	3.5	negligible	0.6
Cooling Tower	2.8	0	0	0

TABLE IIIA
DAILY AND ANNUAL MAXIMUM HEATER EMISSION SUMMARY
FOR SEGS VIII

Emission Rate	Particulate	NO_x	CO
Lb/day[a]	83.2	580	550
Ton/year[b]	2.6	27.9	26.5

a Based on maximum of 16 hours per day of operation of the RTF heaters at maximum continuous rating.
b Based on maximum of 1000 hours operation of the HTF heater at maximum continuous rating.

TABLE IIIB
DAILY AND ANNUAL MAXIMUM COOLING TOWER EMISSION SUMMARY

Emission Rate	Particulate
Lb/day[a]	45
Ton/year[b]	5.6

a Based on maximum of 16 hours per day of operation of the cooling tower,
b Based on maximum of 4000 hours of operations of the cooling tower.

1-25 The Commission's Decision Conditions of Certification only allow the use of commercial grade natural gas as a fuel for the HTF heater.

SBCAPCD Condition B.2.

Verification: Refer to Verification to Condition **1-24**.

1-26 Opacity Limit. Prior to the date of startup and thereafter, individual pieces of fuel burning equipment shall not discharge, or cause the discharge into the atmosphere of any emissions which exhibit an opacity of 10 percent or greater for any period or periods aggregating more than six minutes in any one hour, or exhibit an opacity of 20 percent or greater for any period or periods aggregating more than three minutes in any one hour.

SBCAPCD Condition B.3.

Verification: Luz shall provide the SBCAPCD and the CEC staff access to the SEGS VIII project site to verify/monitor visible emissions.

1-27 Continuous Emission Monitoring (CEM). The owner/operator must install and operate in-stack CEM equipment for NOx and O2 as required by 40 CFR Part 60, Subpart Da and Appendix B. The systems shall meet the applicable EPA monitoring performance specifications of 40 CFR 60.13, Appendix B.

Verification: At least 90 days prior to installation of the Continuous Emission Monitoring system, the project owner shall submit to the MDAQMD and the CEC CPM an emissions monitoring system plan demonstrating compliance with CFR Part 60, Subpart Da and Appendix B.

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1-28 Compliance Tests. Within sixty (60) days after achieving maximum electrical generation capability, but not more than 180 days after initial startup, the owner or operator of SEGS VIII shall conduct a compliance test on each installed unit to determine/verify the emissions with regard to compliance with the MDAQMD rules and Permit to Operate conditions. The project owner shall also perform annual compliance test in accordance with the MDAQMD Compliance Test Procedural Manual.

Standard EPA test methods or CARB Method 1-100 shall be used to conduct the compliance test for particulate (PM_{10}), NOx, CO, CO_2 and O_2. A test procedure plan must be submitted to the MDAQMD for approval thirty (30) days prior to the scheduled tests. Results shall be reported in concentration units (parts per million at standard conditions specified in applicable rules), pounds per hour, pounds per unit of fuel, and pounds per hour at the maximum hourly fuel rate. All volumetric concentrations (e.g., ppm) units shall be on a dry basis corrected to 3 percent oxygen.

Compliance tests on the SEGS VIII heaters for particulate will be conducted with the initial compliance testing and every five years thereafter or more often if required by the MDAQMD.

Verification: The owner(s) or operator(s) shall notify the MDAQMD Executive Officer and the CPM 30 days prior to the compliance test to afford the MDAQMD Executive Officer the opportunity to have an observer present. The owner or operator shall make available to the MDAQMD Executive Officer and the CPM such records as may be necessary to determine the conditions of the compliance tests.

The project owner shall furnish the MDAQMD Executive Officer and the CPM a written report of the results of each compliance test within 45 days from the completion of the test, but not later than six (6) weeks prior to the expiration date of the MDAQMD Permit to Operate. If the project owner submits a test plan for alternate test procedures, the project owner shall not conduct such compliance tests until written approval is received from the MDAQMD.

1-29 Monitoring Plan/Reporting Requirements. Luz is required to have a Monitoring Plan, approved by the SBCAPCD prior to startup, for the monitoring and recording of all natural gas consumed at the site, and the hours of operation for

SEGS VIII. Also this plan shall include quarterly reporting procedures of emission data from the continuous emission monitoring systems (CEMS) to verify compliance. A section of the Monitoring Plan shall address the requirement that the BTU's generated as a result of burning fossil fuel in each unit (heater) shall not exceed 25 percent of the energy supplied to each individual power block on an annual basis. This section shall, at a minimum, show a projection of how this 75 solar/25 fossil fuel ratio will be attained for the year on a month by month basis.

In reporting fuel consumption the actual fuel use shall be compared with the projection and the projection shall be updated based on the actuals. The actual hours of operation and therms used per day for the HTF heater shall be presented and the equivalent hours of operation at maximum continuous rating shall be calculated and presented. System specific natural gas flow or totalizing meters shall be certified, and recertified, in accordance with the servicing utility company's schedules for the same or equivalent meters. The Monitoring Plan shall describe the daily operating parameters that will be recorded, the method of recording and sample calculations of the use of this data to verify compliance with SBCAPCD requirements.

The Monitoring Plan shall include a reporting format and a schedule for reporting and submitting quarterly reports of daily plant operations to the SBCAPCD. This plan shall include, in addition to the fuel use data indicated above, the following emissions data: daily total pounds of emissions and the maximum emissions in both ppm, (at 3% O2, dry) and pounds/hour for the continuously monitored (CEM) pollutant NOx; quarterly total tons emitted for NOx based on CEM data and particulate and CO based on results of Compliance Test data and fuel consumption; number of exceedances of the permit condition limits and, for each exceedance, the number of hours of exceedance and the maximum value associated with the exceedance.

The First Quarterly Report shall cover all operations from start-up to the end of the calendar quarter. Subsequent quarterly reports shall be by calendar quarter.

SBCAPCD Condition B.6.

Verification: Thirty (30) days prior to the startup of the SEGS VIII heaters, Luz shall submit a Monitoring Plan for approval by the SBCAPCD and the CPM for the information required above. Luz shall submit quarterly reports that include the data required above, to the SBCAPCD and the CPM.

Each quarterly report shall be delivered to the SBCAPCD no later than 30 days following the end of the reported quarter.

1-30 Operating Logs. Luz is required to maintain the appropriate daily operating logs and charts at the site, and retain them for a period of not less than one year, and to make available such records for inspection by the SBCAPCD, CARB

and CEC staff on request. Logs shall provide all information as required by the monitoring plan of Condition **1-29**.

SBCAPCD Condition B.7.

Verification: Luz shall make the daily operating logs available at the site of SEGS VIII for inspection by the SBCAPCD, CARB, and CEC staff.

1-31 Luz shall continue to monitor ambient air quality at the site beyond the required minimum of one year, until sufficient data has been gathered to verify the modeling inputs to the satisfaction of the SBCAPCD's Executive Officer.

SBCAPCD Condition B.8.

Verification: Luz shall submit in the quarterly compliance reports to the CPM the ambient monitoring data summary reports. Luz may cease submitting the ambient monitoring data only after receiving written approval to do so by the SBCAPCD Executive Officer.

1-32 The control of fugitive dust during construction and operation shall be in compliance with the requirements of SBCAPCD rules 401, 402 and 403.

SBCAPCD Condition B.9.

Verification: Refer to Condition **1-20**.

1-33 The Diesel Generator Set and Diesel Fire Pump shall use only low sulfur diesel fuels which contain 0.5 percent or less sulfur by weight. SBCAPCD Condition B.10.

Verification: Luz shall include in the quarterly compliance reports submitted to the CPM, records of fuel oil purchased that shall include sulfur content, quantity and Btu content of the fuel oil.

1-34 Control of Unregulated Pollutants. Hexavalent chromium compounds, used as corrosion inhibitors, shall not be used in the cooling tower water circulating system.

The heat transfer fluid (HTF) which is an eutectic mixture of biphenyl (26.5 percent) and diphenyl oxide (73.5 percent) may decompose to yield benzene, a listed Toxic Air Contaminant (TAC). Since leaks, spills and venting of the ullage HTF tank can release the HTF into the atmosphere, appropriate precautionary measures and prompt response, as required in the "Safety Plan" developed by Luz and approved by the SBCAPCD and the CPM, shall be strictly adhered to.

In addition, because the identification of toxic or hazardous substances is an ongoing process, new control strategies and regulations are being developed and implemented which may impact existing permitted facilities. Should such substances be identified as emissions from the SEGS VIII facilities, the

SBCAPCD may, and the CPM will require that Luz provide additional analysis, data, or demonstration of compliance with such applicable regulations.

SBCAPCD Condition B.11.

Verification: For verification of cooling tower corrosion inhibitor compounds, refer to **Public Health Condition 6**.

For HTF containment, refer to **Public Health Conditions 1** and **2**. If current non-criteria substances become regulated as toxic or hazardous substances and are used or emitted by Luz, Luz shall submit to the CPM a plan demonstrating how compliance will be achieved and maintained with such regulations. Luz shall submit this plan concurrent with the first required submission to any governmental agency and within the time specified in any new toxic substance control regulations. This plan is subject to SBCAPCD approval.

1-35 Permit to Operate. Approval, denial, or modification of Permits to Operate for the SEGS VIII equipment will be made after inspection and appropriate tests to determine that equipment has been constructed in accordance with the Commission Decision's Conditions of Certification and that the equipment can be operated in compliance with the Rules and Regulations of the San Bernardino County Air Pollution Control District.

SBCAPCD Condition B.12.

Verification: Luz shall submit copies of the PTO for SEGS VIII to the CPM within 15 days after receipt of the PTO from the SBCAPCD.

EPA PERMIT CONDITIONS

1-36 Continuous Emissions Monitoring (CEM) Requirements. The CEM systems shall meet EPA monitoring performance specifications (40 CFR 60.13, 40 CFR 60, Appendix B, Performance Specifications 2 and 3, and 40 CFR 52, Appendix E).

Luz shall assure that the NOx CEM system monitors required and collect data during at least 85% of the boiler operating hours for each unit.

Verification: At least 90 days prior to installation of the Continuous Emission Monitoring system, Luz shall submit to the SBCAPCD and the CEC CPM an emissions monitoring system plan demonstrating compliance with CFR 60.13, CFR 60, Appendix B, Performance Specifications 2 and 3, and CFR 52, Appendix E. Also refer to verification to Condition **1-29**.

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1-37 The NOx emission controls of the Alzeta Pyrocore burners shall be fully operational upon startup of the heaters and shall be enforced by conditions including, but not limited to, the emission limits of Condition **1-38**.

Verification: Refer to verification to Condition **1-14**.

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1-38 Emission Limits. The NOx emissions (as NO2) from the aggregate of all equipment at SEGS VIII shall be limited to 547 pounds per day, calculated on a rolling annual average. (Day is defined as any 24-hour period beginning at midnight.) Sources of emissions included and subject to this limitation shall include the following:

1. HTF Heaters for SEGS VIII
2. Diesel Generator Set for SEGS VIII
3. Diesel Fire Pumps for SEGS VIII

Emissions shall be calculated as follows:

a. For the HTF heaters, NOx emissions shall be determined using the CEM data for NOx and flue gas flow rates for the aggregate of the four heater sub-units.

b. For the diesel generator sets, and diesel fire pumps, NOx emissions shall be determined using EPA Test Method 7, and calculated and recorded daily based on actual fuel consumption of that day.

Compliance with this emission limit shall be determined by using the CEM and fuel use data, and calculating an arithmetic average of the previous 365 days of emissions as defined in Condition **1-40**.

Particulate emissions from the heaters, diesel generator sets and diesel fire pumps are restricted to the values in Tables I, II, and III of this Commission Decision and shall be calculated based on compliance test results, fuel use data, and hours of operation.

Verification: Luz shall submit quarterly reports that include the data required above to the MDAQMD and the CPM.

1-39 Missing CEM data. For any period during which the heaters have combusted fuel, but for which the CEM system was not operative, NOx emissions shall be determined using the previous 24 hours of emissions data during which the heaters were operational to calculate an average emissions concentration (in pounds/million BTU). This average rate, and fuel use data for the period of missing data, shall be used to calculate the emissions for that period.

In addition, Luz shall meet the requirements of 40 CFR 60, Subpart Da, regarding the proper operation and maintenance of the monitors, or the reporting of the monitor malfunction. The above section does not provide defense for any violations of the 40 CFR 60 requirements.

Verification: Luz shall submit quarterly reports that include the data required above, to the SBCAPCD and the CPM.

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1-40 Notification and Record Keeping. The project owner shall meet all applicable requirements of 40 CFR 60.7, and the following additional requirements:

1. The project owner shall notify EPA and the MDAQMD by telephone and submit a written report of all excess emissions to EPA every calendar quarter for the first two years of HTF heater operation.
2. For the purpose of this condition, excess emissions shall be defined as any excess over the 547 pounds per day limit as defined in Condition **1-38.**
3. Excess emissions as defined in Condition **1-38**, and as measured by the CEM systems, shall be considered a violation of this permit for the purposes of MDAQMD and EPA enforcement.
4. The project owner shall maintain a file of the CEM data, all fuel use records, and all records and copies of source tests performed on any emissions unit at the SEGS VIII site. All information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurement, calculations, reports and records. EPA, MDAQMD, and the CEC CPM or their designated representatives shall be granted access to these records upon request.

Verification: Refer to verifications for Conditions **1-19**, **20** and **30**.

1-41 Prevention of Significant Deterioration (PSD) regulations. EPA has exempted the SEGS VIII project based on information provided by Luz and the Determination of Compliance issued by the SBCAPCD. Any change in equipment or conditions that increases the project's potential to emit above the applicable PSD threshold (100 tons per year) will require a full review of the source as though construction has not yet commenced on the source.

Should EPA determine, in the future, based on new or revised information, that the SEGS VIII project is a major source or major modification, then the SEGS VIII project will have to immediately apply for a federal PSD permit. All requirements of the PSD regulations will have to be satisfied even though construction may be complete. In the event, for example, that vendor guaranteed emissions rates are not achieved, it will still be Luz's responsibility to comply with all PSD regulations, or continued operation of SEGS VIII prior to receiving a final PSD permit may subject the SEGS VIII project to federal enforcement action pursuant to Section 113 of the Clean Air Act.

Verification: In the event SEGS VIII alters any equipment with the potential to result in changes in air emission rates, refer to verification to Condition **1-13**. If Luz fails to meet the 100 tons per year PSD limit, Luz shall notify the EPA, SBCAPCD and CEC CPM within 30 days after the rolling annual average period applicable to the 100 ton limit.

SEGS VIII (88-AFC-01C)
BIOLOGICAL RESOURCES CONDITIONS OF CERTIFICATION

The following conditions of certification apply to impacts associated with construction and operation of SEGS VIII.

REQUIREMENTS

Implementation of the mitigation measures in the following conditions of certification will reduce the significant biological impacts of the SEGS Unit VIII project to acceptable levels.

BIO-1 Luz shall provide for the purchase, enhancement, and management of suitable Mohave ground squirrel habitat to compensate for that eliminated or subject to long-term disturbance as a result of construction of SEGS VIII and any ancillary facilities. Such compensatory lands are to be at least equivalent to that originally found on the SEGS site in their ability to support Mohave ground squirrel populations and are to be acquired at a ratio of 5 acres for each acre permanently lost and 2 acres for each acre temporarily disturbed on non-cultivated land. Habitat shall be dedicated for this purpose in perpetuity.

Funds to purchase habitats shall include sufficient funds to undertake enhancement measures appropriate to the site (such as fencing, trash removal, reseeding) and to provide for continued management (e.g., patrolling) and maintenance activities (e.g., fence mending) at least for the project's lifetime. Such maintenance could be provided for by means of an endowment of principal in an amount sufficient to generate annual income at reasonably achievable interest rates or yields sufficient to provide for maintenance activities.

Luz shall also provide for the purchase, enhancement, and management of off-site habitats for desert tortoises at a ratio of 5 acres for each acre permanently lost, 2 acres for each acre temporarily disturbed on non-cultivated land (see above discussion for the Mohave ground squirrel), and 1.5 acres for each acre temporarily disturbed within 50 feet of Harper Lake Road; and maintain those habitats for the projectors lifetime.

Staff estimates there will be 27 acres of permanent habitat loss and 40.5 acres of temporary habitat loss for both the Mohave ground squirrel and the desert tortoise requiring 216 acres of habitat compensation.

Staff believes it will be feasible to identify habitats for compensation which will satisfy requirements for both the Mohave ground squirrel and the desert tortoise. In cases where habitat is to satisfy the needs of both species, the amount shall be based the animal with the greatest need.

The habitat shall be dedicated to the purpose of supporting Mohave ground squirrel, desert tortoise and other native wildlife and plants in perpetuity and the title of ownership of all suitable habitat parcels shall be transferred to a nonprofit land preservation organization approved by the CEC Compliance Project Manager (CPM) within 12 months of the date of certification.

Luz shall set aside funds for the enhancement and management of the habitat purchased. Management funding is to be guaranteed for the life of the project. The determination of the amount of management funding is to include the following:

1. the cost of identification and purchase of appropriate parcels if not purchased by Luz;
2. the cost of perimeter fencing to exclude sheep and other domestic livestock;
3. the cost of posting the property;
4. the cost of enhancements to the habitat (debris removal, restoration of disturbed sites);
5. the cost of maintaining the improvements (e.g., fence repair); and
6. the cost of periodic patrols to exclude trespassers and to monitor the integrity of the fencing and other conditions.

The estimated maintenance cost per acre can be provided through initial funding of an endowment for property maintenance or by a commitment by Luz to pay the estimated annual cost.

Verification: Luz Will provide to the CEC CPM written documentation that (1) title of ownership of a suitable parcel or parcels has been transferred to a land preservation organization acceptable to the California Energy Commission within 12 months of certification or (2) deposit of the funds for land purchase within 6 months of certification into an interest-bearing account for later transfer of principal and interest to a fund identified by CEC staff for this purpose.

In addition Luz shall provide the CEC CPM with a binding commitment for funds for management and enhancement of these lands either in the form of an endowment or a contract for annual maintenance Payments.

BIO-2 All documentation of activities recognized by CEC and CDFG as off-site mitigation, including land purchases or program funding, shall specifically acknowledge that funding for such purpose or activity was provided by Luz Development and Finance Corporation. Such acknowledgement shall be in the form of sign(s), letter(s), resolution(s) or other appropriate means to clearly communicate to the public that funding for the activity was provided by Luz to mitigate significant adverse impacts of their Project.

Verification: Luz Will submit a sample of all distinctive signs and copies of all letters and resolutions to the CEC CPM within periodic compliance reports.

BIO-3. Luz shall designate a qualified biologist to advise on the implementation of these conditions of certification, and to supervise or conduct mitigation, monitoring, and other compliance efforts. It shall be the designated biologist's responsibility to provide advice regarding any surface disturbance to be

carried out for this project that has not previously reviewed for biological resource implications. Until the action is approved by the designated biologist, work cannot proceed. Any such approvals shall be documented in writing. Minimum qualifications include

1. a bachelor's degree in biological science, zoology, botany, ecology, or a closely related field, and
2. current certification of a nationally recognized biological society, such as the Ecological Society of America or the Wildlife Society or a minimum of three years experience in field biology.

The biologist must demonstrate to the satisfaction of the staff appropriate education and experience for the biological tasks. The supervising construction or operation engineer will act on the advice of the biologist to ensure conformance with the biological resources mitigation implementation plan (BRMIP) and the terms and conditions of CEC certification.

Verification: At least 30 days before starting site preparation, Luz will provide to the CEC CPM for review and approval, the name, qualifications, address, and telephone number of the designated biologist. If there is to be a change in biologist, Luz shall notify the CEC CPM and provide the name, qualifications, address, and telephone number of the proposed replacement.

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BIO-4 Luz shall submit a detailed BRMIP to the CEC CPM before the initiation of any clearing, earth moving, or other construction activities on SEGS VIII. The BRMIP shall include details for designing and implementing the following measures:

a. Prior to any surface disturbance on SEGS Unit VIII (Figure 5) the designated biologist shall conduct or supervise the designation of off-limit areas where surface disturbance is to be avoided. Such areas shall be defined by temporary taping or flagging in conjunction with posting signs prohibiting entrance of construction crews. Surface disturbance to any native habitats shall be strictly controlled. Parking areas and temporary construction yards shall be sited on previously disturbed habitat to the maximum extent feasible.

   This measure shall be applied along the western and southern boundary of SEGS Unit VIII (Section 24) adjacent to the native habitats occurring in Sections 23 and 25. In addition, construction crews for the transmission line and natural gas pipeline shall be directed to avoid all surface disturbance unless specifically authorized. A directive to avoid surface disturbance in native habitats shall also be included in the employee environmental awareness program.

Any surface disturbance to be carried out for this project that has not previously been reviewed for biological resource implications and approved by the designated biologist shall not proceed until said biologist determines that the disturbance will cause no significant impacts and approves the action to be taken. All such approvals shall be documented in writing.

b. Off road travel shall be prohibited in all native habitats considered sensitive biological areas associated with the project during construction and operation. Such areas shall be posted prior to initiation of construction. Parking areas for the pipeline, and transmission line construction crews shall be designated. Limitation of off-road travel and reasons for restrictions shall also be discussed in the employee environmental awareness program.

   Off-road travel restrictions shall apply to native habitats adjacent to the SEGS Unit VIII project site and to native habitats on all other Luz property. Restrictions shall also be posted along the transmission line route and notices provided in the area of the Harper Lake wetlands.

c. A biologist familiar with the rare and sensitive plant surveys conducted along the transmission line right-of-way shall work with the transmission line engineering team and the on-ground survey staking crew to determine and fine tune final transmission line tower locations and pulling/tensioning sites. Any construction yards would be located at the SEGS Unit VIII construction site or at the Luz Kramer Junction facilities on previously disturbed areas. This is designed to avoid disturbance to the Barstow woolly sunflower and large concentrations of Mojave spineflower or Mojave indigo bush. Prior to construction, the transmission line contractor shall mark all areas proposed for disturbance. A botanist shall inspect all areas to determine if there is a possibility of impacts to sensitive plant species and to recommend alternative locations if feasible. In a situation where there is a question regarding the feasibility of the botanist's recommendation, CEC staff shall be consulted before any action is taken.

   This measure shall be applied to the entire transmission line route. The designated biologist shall work with the engineering team during final design and shall provide the chief engineer with detailed results of 1988 field surveys showing specified avoidance areas. The designated biologist shall then accompany the on-ground survey staking crew to fine tune locations of towers and mark temporary travelways for construction access. On-ground survey work shall be conducted during the flowering period for the sensitive plants (March/April 1989). The designated biologist or a qualified representative shall accompany the construction crew to assure compliance with the marked avoidance areas.

d. Temporary travelways for transmission line tower erection shall be designated based upon final tower locations and shall consist of flagged or chalked spur routes from the existing transmission line access road which parallels approximately 10 miles of the route. The temporary travelways shall be cleared of tall shrubs as necessary, by hand pruning or use of a brush hog or brush beater to leave shrub root systems intact. Any shrubs that have to be pruned or otherwise modified to improve access, shall first be inspected to assure that no animal is occupying the shrub base for cover. If so, the animal shall be rescued and released in an appropriate and safe place. Location of temporary travelways shall be determined in the field by the designated biologist or an appropriate representative and shall take into consideration rare plants and Joshua trees, desert tortoise burrows, and other wildlife use areas. Access to each tower site shall be limited to a single route;

   This measure shall be applied to all areas of native habitat (potential Mohave ground squirrel and desert tortoise habitat) and sensitive plant locations along the proposed transmission line where it parallels the existing transmission line. A new access road will be required immediately adjacent to the proposed transmission line along the two-mile north-south segment from SEGS Unit VIII south to its juncture with the existing line (Figure 5); there will be no spur travelways planned along this segment of the line.

e. Temporary travelways associated with the transmission line shall be sited, to the extent feasible, to avoid disturbance to active Mohave ground squirrel and desert tortoise burrows. If active burrows cannot be avoided, CEC staff shall be consulted and approval obtained before destruction of burrows can proceed. After flagging or chalking the travelways and prior to any vegetation removal or entry by construction crews the travelways shall be cleared of desert tortoise. Salvaged desert tortoises shall, under strict supervision of the designated biologist, be distinctively marked according to BLM standard methods for future identification and relocated to adjacent undisturbed habitats.

   The designated biologist shall instruct construction workers on the most suitable areas to move desert tortoise to relation to where they are collected.

   All employees shall be instructed to watch for and remove desert tortoise from harm during any and all construction activities as part of the employee environmental awareness program. If construction vehicles are left at worksites overnight, construction workers shall check underneath them for desert tortoise and other animals before moving the vehicles the next working day. Construction workers shall report to the designated biologist when, where, and how many desert

tortoise are so moved or relocated. The form shown in the Biology Appendix is acceptable for such reports.

Desert tortoise salvage and relocation shall be conducted within all areas of appropriate habitat on the transmission line travelways and along the new access road associated with the two-mile north-south transmission line segment.

In addition to desert tortoise clearance surveys, a qualified biologist shall be available to accompany the construction crews during periods of desert tortoise activity to provide continuing protection to desert tortoise and their burrows.

Even though there is no appropriate habitat for the desert tortoise associated with SEGS Unit VIII or the natural gas pipeline construction ROW, desert tortoise salvage surveys shall be conducted if there are any indications of desert tortoise utilizing those areas.

Prior to tortoise salvage and relocation, the designated biologist shall have obtained a Memorandum of Understanding from the California Department of Fish and Game.

f. To prevent desert tortoise vehicular mortalities along Harper Lake Road attributable to project traffic, Luz Solar Partners VIII and Luz Solar Partners IX shall execute the Agreement for Mitigation of Impacts on Desert Tortoises Along Harper Lake Road By Luz Solar Partners Ltd. VIII and Luz Solar Partners Ltd. IX ("Master Agreement"). This Agreement contains provisions for payment by Luz Solar Partners Ltd. VIII and Luz Solar Partners Ltd. IX of $489,300 for mitigation and releases the Partners from future mitigation for traffic impacts on Harper Lake Road and from incidental takes by vehicular mortality along Harper Lake Road.

g. Speed limits on and near the SEGS Unit VIII shall be posted and limits shall be developed with consideration for potential wildlife mortalities. Speed limits shall vary depending on the type of road and the degree of visibility. Speed limits are anticipated to be set between 15 and 20 miles per hour.

   Speed limits shall be established for the SEGS Unit VIII and for all Luz-owned property in the Harper Lake area. Speed limits shall also be applied to the transmission line construction crew for work along the proposed transmission line.

h. Luz shall develop an employee environmental awareness program to provide construction and operation employees with information to encourage awareness and preservation of the desert ecosystem and the key species and resources found at the Luz facilities and in the western Mojave Desert.

Luz shall prepare and print an educational brochure or pamphlet to be distributed to each employee at the time of hire. This information shall be distributed to and discussed with all Luz employees during employee orientation sessions. This information shall also be provided to all contractors or subcontractors that will be working on the job site. In addition, the material shall be available at a selected prominent location at the facilities. The pamphlet shall include all of the material developed for sensitive species and required protection and reporting actions as provided for the Kramer Junction site.

Luz has also developed a reporting form for observations of sensitive species by employees on the job. This form is shown as the Biology Appendix.

Luz shall have each employee who participates in the environmental awareness program sign an affidavit declaring that the individual understands and will adhere to the guidelines set forth in the program material.

i. Luz shall develop a strict trash and litter control program. Trash control is expected to increase a sense of responsibility in the work area and foster environmental awareness among employees. A litter control program shall consist of supplying an adequate number of covered trash and litter receptacles in all appropriate locations (including the water truck, water stations, and site exists) and encouraging employee use through the environmental awareness program, posters, and other means. Trash and litter disposal shall be in covered or buried dumpsters to avoid attracting ravens and thereby increasing and potential for raven predation on young tortoises.

j. Luz shall install anti-perching devices on the top of transmission line towers along the 2-mile north-south transmission line segment. Selection of appropriate anti-perching technology was accomplished through consultation with BLM. Luz shall use the material Nixalite architectural bird control or a similar product. This material consists of a flexible metal base strip with approximately 120 stainless steel wires per foot to prevent birds from perching on areas where the material is applied. Literature describing this material is provided in Attachment 5.

This measure shall be applied to the 2-mile north-south segment of the transmission line immediately to the south of SEGS Unit VIII. The material shall be installed on the tops of the poles and along the horizontal cross member of the H-frame structure.

The designated biologist shall check the transmission line from the project site to the Kramer Junction substation on a monthly basis during the raven nesting season to determine whether ravens (or any

other birds) are using the pole structures for nesting. This shall be done for at least five years or until the staff deems it unnecessary.

k. Lands that have been temporarily disturbed during project construction activities shall be restored and revegetated upon completion of SEGS construction. Restoration seed mixes and methods shall be keyed to the type of habitat where the disturbance has occurred. The seed mixture designated for planting in any given October shall be purchased and taken delivery of no later than the prior August 31. Each aspect of project construction, i.,e. Power plant, transmission line, cooling tower discharge pipeline, and natural gas pipeline shall have habitat restoration work begun as soon as possible after completion of that particular facility. Disturbance to native desert habitats shall be reclaimed to provide native species, including shrubs that are valuable for wildlife utilizing those habitats. Temporary disturbances to the abandoned farmlands shall be restored by planting dryland grasses, including the annual species which are presently found in the area. Any disturbances to other habitats shall be restored accordingly. Full details of reclamation planning shall be finalized once specific temporary disturbance areas are identified, but activities shall follow good reclamation practice including the following steps:

- any construction debris or other waste materials shall be disposed of in an appropriate manner;
- soil shall be ripped to relieve compaction, if necessary, then dished and leveled as appropriate to prepare a seedbed;
- a seed mixture consisting of plants adapted to the area and useful to wildlife species present shall be drill planted or broadcast. Fertilization will be used as appropriate; and
- the seed mixture designated for planting in any given October, shall be purchased and taken delivery of no later than the prior August 31.

Verification: At least 90 days prior to commencing site preparation activities, Luz shall submit the draft BRMIP to the CEC CPM for review and approval. Site preparation shall not begin until the final BRMIP is approved by the staff.

BIO-5 Luz shall discharge the SEGS VIII cooling tower blowdown to the northern portion of the Harper Lake wetlands (northern marsh) as an enhancement measure. All aspects of the cooling water discharge including, but not limited to physical facilities design, operation, and monitoring (including water quality, water quantity, and wildlife usage at the wetland area) shall be incorporated into a plan and submitted to the CEC staff for review and approval in consultation with CDFG. If during the life of the project, the northern wetland recreated by project operation is found to be detrimental to wildlife, Luz shall

construct evaporation ponds as necessary where ingress of birds and other animals can be strictly prevented. In order to minimize this situation's occurrence, Luz shall design the cooling tower blowdown discharge system so that well water can be mixed with the blowdown water.

Verification: The Luz BRMIP to be submitted to the CEC CPM will incorporate an element that describes the northern marsh restoration plan. The plan will include monitoring to determine the conditions of the recreated northern marsh as they relate to water quality and wildlife status.

BIO-6 Luz shall implement the monitoring and mitigation measures contained in the approved BRMIP and Commission Decision.

Verification: The approved BRMIP shall be submitted to the CEC CPM prior to site preparation on SEGS VIII.

Luz shall notify the CEC CPM, in writing, within 10 days of successfully satisfying each condition in the BRMIP. If any conditions of the plan are not successfully satisfied, Luz shall submit proposed corrective actions within 30 days to the CEC CPM for comment and approval.

The Luz qualified biologist shall submit to the CEC CPM semiannual statements verifying activities conducted in compliance with the approved BRMIP permit conditions listed here, and any additional portions of the CEC decision pertinent to biological resources. These semiannual statements shall be submitted beginning six months after the start of site preparation and shall continue until all compliance activities have been completed.

Luz shall report any adverse impacts on rare, threatened, or endangered species by telephone to the CEC CPM within two working days during the normal work week or by the end of the next working day following a weekend or holiday and shall submit a follow-up written report within 10 days after contact with CEC CPM.

BIO-7 Luz shall, in a timely manner, arrange for access by the CEC CPM or designated representative to inspect or monitor conditions of biological resources, impacts, mitigation measures, and study areas prior to and during preconstruction, construction and operation activities on the SEGS Unit VIII site and adjacent areas. The access shall be provided upon request and at the times necessary to conduct biological field observations.

Verification: Luz shall provide to the CEC CPM a letter of authorization to conduct site visits as specified above.

BIO-8 After SEGS VIII certification, Luz shall submit a protocol for a two year study of the central and southern marshes to develop baseline information on their hydrological dynamics and biota. Based on the study protocol approved by the CEC staff in consultation with CDFG and BLM, Luz shall conduct two years of investigations at the marshes to determine their seasonal dynamics

in relation to water quality, hydrology, and biota (particularly sensitive species) prior to discharging any cooling tower blowdown water to them so that appropriate operational discharge regimes can be determined and adopted as standard operating procedures. As determined by the CEC staff in consultation with CDFG, BLM, Rancho Percebu Duck Club, and the Audubon Society after completion of the two-year study, Luz shall provide cooling tower blowdown water for the central and southern marshes if appropriate.

Verification: Luz will submit the study protocol to the CEC CPM within 90 days of certification of the SEGS VIII Project.

BIO-9 For any decrease in agricultural drain water to the central or southern marsh due to the discontinuance of current agricultural activity, Luz shall provide well water to maintain comparable discharge volumes. The discharge quantity shall be based on historical agricultural sump pump use records and/or direct volumetric measurements. This condition will terminate two years after certification of SEGS VIII.

Verification: Luz will monitor agricultural discharge to the central and southern marsh and notify CEC CPM or staff of changes in the amount of agricultural discharge in relation to historical records and information developed during the two year study of the central and southern marsh. Information developed during the two year study will be utilized to the extent that it is available at such time that any critical need exists, as determined by CEC staff in consultation with CDFG, BLM Rancho Percebu Duck Club, and the Audubon Society.

BIO-10 Luz shall submit a "Biological Field Program' plan for the SEGS XII Unit during the SEGS IX proceeding and prior to the first month (March) of the spring in which biological inventories will be conducted for the SEGS XII AFC. This plan shall provide for determining biological resources and comparative potential project impacts on the proposed SEGS XII project site (Section 33) and it's alternate site (Section 25). The plan shall not be a factor in determining data adequacy for the SEGS IX AFC. It shall be subject to review and approval by the CEC staff in consultation with CDFG and BLM.

Verification: The plan will be submitted for CEC CPM approval during the SEGS IX proceeding and at least 90 days before the SEGS XII spring biological inventories are to begin.

BIO-11 Luz shall implement the terms of the November 23, 1988 "Stipulation Re: Biological, Cultural, and Paleontological Resources Mitigation for Kramer to Victor Transmission Line Impacts" between Luz and CEC staff. As part of the implementation of the stipulation, Luz shall submit for review and approval by the CEC CPM a detailed biological resources mitigation plan for transmission line impacts from the Kramer substation to the Victor substation. The general provisions and the special provisions for biological resources impact

evaluation and mitigation contained in the stipulation (see Appendix A) are incorporated as conditions of certification.

Verification: Luz will develop and submit on a date to be determined by the CEC CPM, after consultation with Luz, a detailed biological resources mitigation plan which incorporates the transmission line mitigation measures for approval by the CEC staff.

SEGS VIII (88-AFC-01C)
CIVIL ENGINEERING CONDITIONS OF CERTIFICATION

1 Luz shall design, construct and inspect the SEGS Unit VIII project (the project) in accordance with applicable LORS identified herein, under the sections entitled Applicable Laws, Ordinances, Regulations and Standards, and the design criteria for industry standards identified in pertinent portions of Luz's documents listed under Project Evaluation (Summary of Proposal).

Verification: Fourteen (14) days prior to the start of commercial operation, Luz shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) a statement of verification that all design, construction and inspection requirements of the applicable LORS and the Commission's Decision have been met for the area of civil engineering.

2 Luz shall assign to the project a responsible, qualified civil engineer(s) registered in California who shall:

- be directly responsible for the design of secondary containment facilities, the proposed earthwork and related civil works facilities including, but not limited to, site preparation and grading, excavation, design and construction of drainage facilities, underground utilities, culverts, site access roads and sanitary sewer systems;
- prepare (or directly supervise the preparation of) and sign plans calculations and specifications for erosion and sediment control, structure foundations and related civil work facilities at the plant site, to comply with the Commission's Decision:
- monitor construction progress to ensure compliance with the design intent;
- evaluate and recommend necessary changes in the design of the civil works facilities and changes in the construction procedures; and
- be responsible for the conformance of all civil work construction with applicable LORS, Luz proposed criteria and approved plans and specifications.

Verification: At least 14 days prior to the submittal of the proposed plans, specifications and calculations for grading, erosion and sediment control and related civil works to the CBO[1], Luz shall submit to the CEC CPM and the CBO the name, qualifications and registration number of the responsible civil engineer, assigned to the project to perform the duties set forth above. If the civil engineer is subsequently reassigned or replaced, Luz shall, within 10 days, submit the name, qualifications and registration number for the newly- assigned individual to the CEC CPM and the CBO.

3 Luz shall assign to the project a qualified civil engineer registered in California and fully competent and proficient in soils mechanics, who shall:

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[1] The CBO is the City or County Building Official, his/her representative or CEC's duly appointed representative.

- prepare the soils engineering reports required by Chapter 70 of the UBC:
- be present, as required, during site grading and earthwork to provide consultation and to monitor compliance with the requirements set forth in Appendix F.1.1 to the AFC and the 1988 edition of Chapter 70 of the UBC;
- recommend field changes to the responsible civil and construction engineers; and
- prepare a final soils grading report.

This civil engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations.

Verification: At least 14 days prior to the start of site preparation, Luz shall submit the name, qualifications and registration number of this civil engineer to the CBO and CEC CPM for approval. If the civil engineer(s) is subsequently reassigned or replaced, Luz shall submit, within 10 days, the name, qualifications and registration number for the newly assigned individual to the CEC CPM and the CBO.

4 Prior to the start of site grading on the project, Luz shall submit to the CBO for review and approval:

- the proposed Grading Plan to conform to the requirements of San Bernardino Ordinance No. 2815, combined with the erosion and sediment control plans (combined grading plan), and the specifications and calculations signed by the responsible civil engineer;
- a statement signed by the responsible civil engineer that the proposed combined grading plan, drainage structures, calculations and specifications comply with the applicable LORS and with the civil engineering criteria and requirements set forth in the Commission's Decision; and
- a Soils Engineering report and Engineering Geology report.

Verification: At least 14 days prior to the start of site grading, Luz shall submit to the CBO the above described documents, including 5 copies of the Grading Plan and 3 copies each, of the specifications and calculations. When the work described in the combined grading plan conforms with all applicable requirements, Luz shall obtain from the CBO one complete set of the submitted plans, stamped and signed with the CBO's approval, and Luz shall submit a letter to the CEC CPM verifying that the documents conform to said requirements and have been approved.

5 Prior to the start of construction of each major structure foundation or civil work facility, Luz shall submit to the CBO and CEC CPM each of the following:

- geotechnical report, field exploration, laboratory tests and engineering analyses detailing the nature and extent of the site soil that may be

susceptible to rapid settlement or collapse when the soil becomes saturated under load;

- report on foundation investigation to comply with UBC, Chapter 29, Subchapter 2905 (b, c and d);
- the proposed final design plans including soil classification and design bearing capacity (ASTM D698, D1556, D1557);
- calculations, specifications, soil reports and quality control procedures, signed by the responsible civil engineer, to verify that the proposed bearing capacity and the foundation settlement values as presently proposed are still valid and applicable; and
- a signed statement that the proposed plans comply with the criteria and all the requirements for civil engineering set forth in the Commission's Decision.

Verification: At least 30 days prior to the start of construction of major structure foundations, Luz shall submit five copies of the above documents to the CBO and one copy to the CEC CPM. Luz shall obtain one complete set of the original submittal stamped and signed with the CBO's approval. Luz shall submit a letter to the CEC CPM verifying that the proposed foundation plans, specifications and calculations conform with the requirements of the AFC and that the CBO has approved them.

6 After completing foundation excavations, Luz's responsible civil engineer for plant site activities shall submit to the CBO for review land approval, per UBC requirements, supplementary soil grading and geologic grading reports, as-graded grading plans and a signed statement that any modifications in foundation design required by site geotechnical conditions were incorporated in the modified foundation
plans approved by the CBO.

Verification: Luz shall provide the CEC CPM with the CBO review comments and approvals, in the next monthly construction report.

7 Luz shall make payments to the CBO equivalent to the fees listed in Chapter 70, Section 7007(a) and (b), Table No. 70-A and 70-B of the UBC for the plan review. If San Bernardino County has adjusted the UBC fees by codes or ordinances, Luz shall pay the adjusted fees (UBC 1988, Sections 7007(a) and (b), Table No. 70-A and 70-B).

Verification: Luz shall make payments to the CBO at the time of submittal of the plans, calculations and specifications and the soils report. Luz shall send a copy of the transmittal letter to the CEC CPM at the time of submittal to the CB0.

8 All plant site grading operations shall be subject to inspection by the CBO and the CEC CPM or designate (CCR, Title 8, Chapter 4, Division of Industrial Safety; UBC 1988 edition, Chapters 29 and 70).

Verification: If the inspector finds that the work is not being done in accordance with the approved plans, the discrepancies shall be reported immediately to the CBO, the CEC CPM, and the Luz responsible civil engineer. The inspector shall then prepare a written report, detailing the discrepancies and non-compliance items and send copies to the CBO, the CEC CPM and the Luz responsible civil engineer. If the CBO delegates inspections to Luz, their inspectors shall file monthly progress reports with the CBO and the CEC CPM.

9 Luz's responsible civil engineer for plant site activities shall, as appropriate, stop all earthwork and construction in the affected area when Luz's engineering geologist identifies unforseen adverse geologic conditions. Luz shall prepare and submit modified plans, specifications, and calculations to the CBO, based on these new conditions.

Verification: Within 10 days after receipt of the design changes, the CBO, in consultation with the CEC CPM, shall approve or disapprove the changes. Upon approval of the revised design, the CBO shall authorize Luz to resume earthwork and construction in the affected areas and Luz shall provide a copy of such approval to the CEC CPM.

10 Luz shall keep the CBO and the CEC CPM informed of the plant site construction progress.

Verification: Luz shall prepare and submit, on a monthly basis, the construction progress reports to the CEC CPM and the CBO.

11 After completion of finish grading and erosion and sedimentation control facilities, the Luz responsible civil engineer(s) shall submit to the CBO:

- a final as-graded plan and final erosion and sedimentation control plans;
- a signed statement that these documents conform with the approved combined grading plans;
- the soils grading and geologic grading reports;
- a summary of soil compaction tests; and
- a statement in writing that the work is ready for final inspection (1988-UBC).

Verification: Within 30 days after completion of finish grading and erosion and sedimentation control facilities, the Luz responsible civil engineer(s) shall submit the above documents to the CBO for review and approval and shall submit copies of transmittal letters to the CEC CPM. Luz shall seek final approval from the CBO only after all required submittals are received and reviewed and after all work, including installation of all drainage facilities and their protective devices and all erosion control measures, have been completed in accordance with the final approved combined

grading plan. Luz shall notify the CEC CPM of the CBO's final approval in the next monthly construction report.

12 Luz shall submit to the CBO for review the plans, calculations and specifications for the concrete or lined earth berm spill containment facilities for the power block and chemical storage areas. The design, plans and calculations shall be signed and stamped by the responsible civil engineer.

Verification: At least 30 days prior to the start of construction of the spill containment facilities, Luz shall submit the above documents including 5 copies of plans and 3 copies of codes and specifications to the CBO for review and a copy of the transmittal letter to the CEC CPM. Luz shall submit written notice to the CEC CPM (prior to beginning work) that the spill containment facilities have been approved by the CBO and conform to the applicable requirements.

13 After construction of the spill containment facilities, Luz shall submit the as-built plans and a signed statement by the responsible civil engineer that the work was done in accordance with the final approved plans and that the spill facilities are adequate for their intended function.

Verification: Within 30 days after completion of the spill containment facilities, Luz shall submit said documents to the CBO for review. Luz shall file with the CEC CPM a copy of such review comments and approvals.

14 Luz shall submit to the CBO for review the, plans, calculations and specifications for the transmission line pole foundations and guy anchors. The design plans and calculations shall be signed and stamped by the responsible civil engineer.

Verification: At least 30 days prior to the start of construction of the transmission line poles, guy anchors, access roads and crossings, Luz shall submit copies of the above documents including 5 sets of plans and 3 sets of codes and specifications to the CBO for review and a copy of the transmittal letter to the CEC CPM.

SEGS VIII (88-AFC-01C)
CULTURAL RESOURCES CONDITIONS OF CERTIFICATION

1 Luz will have a paleontologic specialist monitor excavation and construction activities on the SEGS Unit VIII site, on an as-needed basis as defined in the monitoring and mitigation plan for paleontological resources. Luz also will be responsible for the recovery, preparation for analysis, analysis, and duration of any paleontologic or cultural resource materials encountered during construction at the Luz SEGS Unit VIII site.

Information copies of communications related to any paleontologic or cultural resources monitoring and mitigation work being conducted at the LUZ SEGS Unit VIII site shall be submitted to CEC staff. Such communications may include contacts with San Bernardino County, staff of the San Bernardino County Museum, LUZ contractors or sub-contractors, and/or other parties interested in the monitoring and mitigation work.

Verification: LUZ shall submit to the CEC Compliance Project Manager (CPM), copies of communications related to any paleontologic or cultural resources monitoring and mitigation work being conducted at the LUZ SEGS Unit VIII site, within 30 days after certification of the LUZ SEGS Unit VIII project or 30 days prior to the start of any construction-related vegetation clearance or ground disturbance at LUZ SEGS Unit VIII.

2 Luz shall submit the name and qualifications of their designated paleontologic specialist (e.g., someone with a graduate degree in geology or paleontology and field experience) to the CEC CPM for review and approval. The CEC CPM must review the qualifications of and approve in writing, Luz's designated paleontologic specialist prior to any ground clearance or disturbance at Luz SEGS Unit VIII site. After CEC approval, the paleontologic specialist shall be available to monitor, as needed, all site preparation and construction activities related to the Luz SEGS Unit VIII site.

Verification: Luz shall provide to the CEC CPM for review and written approval, the name, resume, telephone number, and commitment to availability for its designated paleontologic specialist within 30 days after certification of the Luz SEGS Unit VIII project or 30 days prior to the start of any construction-related vegetation clearance or ground disturbance at Luz SEGS Unit VIII.

3 The designated paleontologic specialist shall prepare a monitoring and mitigation plan to minimize potential impacts to paleontologic resources. The plan shall be submitted to the CEC CPM for review and approval in writing. The plan shall include the following elements:

a. A provision that if, during monitoring of construction activities, the designated paleontologic specialist determines the likelihood of encountering fossil resources is slight, monitoring can be halted in that locality.

b. A provision that if fossil resources are encountered during construction activities, work in the immediate vicinity of the find shall be halted until the designated paleontologic specialist can determine the significance and

sensitivity of the find. The designated paleontologic specialist shall act in accordance with the procedures set forth in the monitoring and mitigation plan which has been approved by the CEC CPM prior to the start of construction.

Luz, or its designated representative, shall inform the CEC CPM within one working day of the discovery of any potentially significant resources and discuss the specific measure(s) proposed to mitigate potential impacts to the resources.

The designated paleontologic specialist, representatives of Luz, and the CEC CPM shall meet within seven working days of the notification of the CEC CPM, if necessary, to discuss the disposition of any finds and any mitigation measures already implemented or to be implemented.

c. A provision that all vertebrate fossil remains will be collected and any invertebrate fossil remains will be sampled. All fossil materials found shall be mapped, prepared, identified, and removed for analysis and duration in the retrievable storage collection at the San Bernardino County Museum in Redlands, California.

d. A provision that the CEC CPM shall have access to the Luz SEGS Unit VIII site to observe paleontologic resources monitoring and data recovery activities.

Verification: Luz shall submit a monitoring and mitigation plan for paleontologic resources to the CEC CPM for review and written approval. The plan shall be submitted to the CEC within 30 days after certification of the Luz SEGS Unit VIII project or 30 days prior to the start of any construction-related vegetation clearance or ground disturbance at the Luz SEGS Unit VIII site.

4 Luz shall submit the name and qualifications of its designated cultural resources specialist (e.g., someone with a graduate degree in anthropology, history, or cultural resource management and field experience) to the CEC CPM for review and approval. The CEC CPM must review the qualifications of and approve of in writing, Luz's designated cultural resources specialist before any ground disturbance may begin. After CEC approval, the designated cultural resources specialist shall be on call during site preparation and construction activities for the Luz SEGS Unit VIII project.

Verification: Luz shall submit to the CEC CPM for review and written approval, the name, resume, telephone number, and commitment to availability for its designated cultural resources specialist within 30 days after certification of the Luz SEGS Unit VIII project or 30 days prior to the start of any construction-related vegetation clearance or ground disturbance at Luz SEGS Unit VIII.

5 The designated cultural resources specialist shall prepare and submit to the CEC CPM for review and approval, a monitoring and mitigation plan to minimize potential impacts to cultural resources. The plan shall include the following:

a. A provision that the designated cultural resources specialist be on call to inspect any potentially significant cultural resources found during ground clearance and excavation in areas of sensitivity identified in the monitoring and mitigation plan.

b. Specific measures proposed to mitigate impacts to particular types of cultural resources which may be discovered during earth moving activities.

c. A provision that if potentially significant cultural resources are encountered during construction activities, work in the immediate vicinity of the find shall be halted until the designated cultural resources specialist can determine the significance and sensitivity of the find. Luz's designated cultural resources specialist shall act in accordance with the procedures set forth in the monitoring and mitigation plan which has been approved by the CEC staff prior to the start of construction, Luz, or its designated representative, shall inform the CEC CPM within one working day of the discovery of any potentially significant resources and discuss the specific measure(s) proposed to mitigate potential impacts to the resources.

   The designated cultural resources specialist, representatives of Luz, and the CEC CPM shall meet within seven working days of the notification of the CEC, if necessary, to discuss the disposition of any finds and any mitigation measures already implemented or to be implemented.

d. A provision that if human remains are encountered, work in the immediate vicinity shall stop and the county coroner and the CEC CPM shall be notified. Work in the vicinity of the find shall remain stopped until the coroner has determined if the remains are Native American in origin and any necessary mitigation measures have been implemented. If the remains are determined to be of Native American origin, the Native American Heritage Commission and appropriate Native American representatives shall be notified immediately. Any necessary mitigation measures shall be discussed and agreed upon by the interested parties and approved by the CEC CPM.

e. A provision that the CEC staff shall have access to the Luz SEGS Unit VIII site to observe cultural resources monitoring and data recovery activities.

Verification: Luz shall submit a monitoring and mitigation plan for cultural resources to the CEC CPM for review and written approval. The plan shall be submitted to the CEC within 30 days after certification of the Luz SEGS Unit VIII project or 30 days prior to the start of construction-related vegetation clearance or ground disturbance at the Luz SEGS Unit VIII site.

6 Luz shall perform detailed site specific field and data base paleontologic and cultural resource surveys of the realignment of the western end of the transmission line prior to the start of construction.

Verification: At least 90 days prior to the start of construction, Luz shall submit the survey reports to the CEC CPM for approval.

7 Luz shall prepare and present paleontologic and cultural resources training to all of its personnel and the personnel of its contractors or subcontractors who may be involved with ground clearance or earth moving, to develop an awareness of and sensitivity to potential project impacts on potentially significant cultural and paleontological resources. This training shall include development of the ability to recognize potentially significant cultural and paleontologic resources.

Verification: At least 90 days prior to the start of construction, Luz shall submit a copy of the written materials to be used in its training program to the CEC CPM. Within 30 days of receipt of the materials, the CEC CPM shall respond as to the adequacy of the training program. Prior to the start of ground clearance or earth moving, Luz shall submit to the CEC CPM evidence of presentations to all personnel who may be involved with ground clearance or earth moving activities.

8 Luz shall implement the terms of the November 23, 1988" Stipulation Re: Biological, Cultural, and Paleontological Resources Mitigation for Kramer to Victor Transmission Line Impacts" between Luz and CEC staff. As part of the implementation of the stipulation, Luz shall submit for review and approval by the CEC CPM detailed cultural and paleontological resources mitigation plans for transmission line impacts from the Kramer substation to the Victor substation. The general provisions and the special provisions for cultural resources and paleontological resources impact evaluation and mitigation contained in the stipulation (see Appendix A) are incorporated as conditions of certification.

Verification: Luz shall develop and submit on a date to be determined by the CEC CPM, after consultation with Luz, detailed cultural resources and paleontological resources mitigation plans which incorporate the transmission line mitigation measures for approval by the CEC staff.

SEGS VIII (88-AFC-01C)
DECOMMISSIONING CONDITIONS OF CERTIFICATION

1 Prior to commencing decommissioning activities for SEGS Unit VIII, Luz shall file a decommissioning plan with the California Energy Commission (CEC) Compliance Project Manager(CPM). The decommissioning plan shall:

- identify and discuss the proposed decommissioning activities and schedule for the power plant site, transmission line corridor, and all appurtenant facilities constructed as a part of/or because of the project:
- identify all applicable laws, ordinances, regulations, standards, (LORS) and local/regional plans applicable at that time:
- discuss how the specific proposed decommissioning activities will comply with those identified LORS and plans;
- contain an analysis of all decommissioning alternatives considered, including restoration of the site to its preconstruction, natural state; and
- discuss the reasons for selecting the preferred proposal.

Prior to submittal of the decommissioning plan, a prefiling workshop shall be held with Luz and CEC staff, and other interested parties, for the purpose of determining the specific contents of the plan. Luz shall be responsible for requesting the CEC CPM to schedule the prefiling workshop.

In the event that significant issues are associated with the plan's approval, or the desires of local officials or interested parties are inconsistent with the plan, the CEC may hold workshops and/or public hearings as part of its approval procedure.

Luz shall not commence decommissioning activities of the Luz SEGS Unit VIII until approval of the decommissioning plan is obtained from the CEC CPM. Luz shall comply with any requirements incorporated by the CEC as a condition of the decommissioning plan.

Verification: At least twelve (12) months prior to commencing decommissioning activities at the SEGS Unit VIII facilities, Luz shall file the above described decommissioning plan with the CEC CPM.

At least six (6) months prior to filing the decommissioning plan with the CEC CPM, Luz shall request, in writing, that the CEC staff schedule a prefiling workshop to determine specific contents and scope of the decommissioning plan.

SEGS VIII (88-AFC-01C)
ELECTRICAL ENGINEERING CONDITIONS OF CERTIFICATION

1 Luz shall design, construct and install the electrical equipment in accordance with the legally required LORS identified in the section entitled Compliance with Applicable Laws, Ordinances, Regulations, and Standards.

Verification: Sixty days prior to the start of commercial operation of SEGS Unit VIII, Luz shall submit to the CEC Compliance Project Manager (CPM) a statement that all design, manufacturing and installation requirements of all legally required electrical LORS have been met.
Luz shall also provide a statement that Industry Standards have been followed.

2 The California registered electrical engineer, responsible for the electrical design of SEGS Unit VIII, shall sign and stamp all final design drawings, plans, specifications, calculations and applicable quality control procedures. The engineer's name, signature, registration number and registration expiration date shall appear on all the above documents. A statement containing the engineer's name, registration number and registration expiration date shall be sent to the County Chief Building Official[1] (CBO) and the CEC CPM.

Verification: Luz shall submit the statement to the CBO and the CEC CPM no later than 30 days after certification.

3 Luz shall submit to the CBO the following items:

a. Final design plans to include:
   - one-line diagrams for the 220 kV, 13.8 kV, 4.16 kV and 480 V systems;
   - system grounding drawings;
   - general arrangement or conduit drawings; and
   - other plans as required by the CBO.

b. Final calculations to establish:
   - short-circuit ratings of equipment;
   - ampacity of feeder cables;
   - coordination study calculations for fuses, circuit breakers and protective relay settings;
   - light energy calculations; and
   - other calculations as-required by the CBO.

c. A signed statement by the registered electrical engineer certifying that the proposed final design plans and specifications conform to requirements 1 and 2.

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[1] CBO is the County Chief Building Offical, other designated authority or CEC's duly authorized representative.

Verification: Thirty days before start of electrical equipment installation, Luz shall submit to the CEC CPM a copy of the transmittal letter to the CBO, verifying that five copies of the items listed above were transmitted to the CBO.

4 Luz shall construct from plans which have been reviewed and approved by the CBO. These plans, together with design changes and design change notices shall remain on the site at all times. Luz shall request the CBO to inspect the installation to ensure compliance with the requirements of applicable LORS.

Verification: Luz shall submit electrical inspection reports to the CEC CPM in the monthly construction report. At least 30 days prior to initial turbine roll, Luz shall submit to the CEC CPM a statement signed by the CBO that the electrical equipment has been installed in accordance with applicable LORS.

SEGS VIII (88-AFC-01C)
ENGINEERING GEOLOGY CONDITIONS OF CERTIFICATION

1 Luz shall assign to the project an engineering geologist(s), Certify by the State of California, to carry out the duties required by the Uniform Building Code (UBC) section 7006(c).

Verification: No later than 60 days following certification, Luz shall submit to the CEC Compliance Project Manager (CPM) and the CBO for approval the name of the certified engineering geologist(s) assigned to the project. The CEC CPM will notify Luz of approval/disapproval within 20 days of receipt, by the CEC CPM, of the submittal. If the engineering geologist(s) is subsequently replaced, Luz shall, within 10 days, submit for approval the name(s) and license number(s) of the newly assigned individual to the CEC CPM. Notification of approval/disapproval will be given by the CEC CPM within 10 days of receipt of the notice of personnel change.

2 The assigned engineering geologist shall be responsible to carry out the duties required by UBC section 7006(c) including:

a. prepare the "Engineering Geology Report" required by UBC section 7006(c):

> "Section 7006(c) Plans and Specifications. When required by the building official, each application for a grading permit shall be accompanied by two sets of plans and specifications, and supporting data consisting of a soils engineering report and engineering geology report. The plans and specifications shall be prepared and signed by a civil engineer when required by the building official."
>
> That report shall contain that information described in UBC section 7006(f):
>
> "Section 7006(f) Engineering Geology Report. The engineering geology report required by Subsection (c) shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading."
>
> "Recommendations included in the report and approved by the building official shall be incorporated in the grading plans or specifications."

b. monitor geologic conditions during construction and approve actual mitigation measures used to protect the facilities from geologic hazards.

c. prepare the final "Geologic Grading Report" after completion of grading as required by UBC section 7015(a)3;

> Section 7015(a)3. "A geologic grading report prepared by the engineering geologist, including a final description of the geology of the site and any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved

grading plan. He shall render a finding as to the adequacy of the site for the intended use as affected by geologic factors."

Verification:

a. Within 10 days of submittal of the application(s) for grading permit(s) to the County Chief Building Official (CBO), other designated authority or CEC's duly authorized representative, Luz shall submit a signed statement to the CEC CPM stating that the Engineering Geology Report has been submitted to the CBO as a supplement to the plans and specifications and that the recommendations contained in the Report are incorporated into the plans and specifications;

b. Within 90 days following completion of final grading, Luz shall submit a copy of the geologic grading report required by UBC section 7015(a)3 to the CEC CPM.

SEGS VIII (88-AFC-01C)
FACILITY DESIGN CONDITIONS OF CERTIFICATION

1 Luz shall design, construct, and inspect the Solar Energy Generating Facility (SEGS) Unit VIII in accordance with applicable LORS identified herein, under the section entitled "Applicable Laws, Ordinances, Regulation and Standards," with the proposed modifications of this testimony, and with the pertinent portions of the section of this testimony entitled "Summary of Applicant's Proposal".

Verification: Luz's project manager shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) a statement of verification that all design, construction, and inspection requirements of the applicable LORS and the Commission Decision have been met for the area of facility design. The statement shall be submitted thirty (30) days (or a lesser number of days if mutually agreeable to the Chief Building Official (CBO) and the CEC CPM) prior to the date of commercial operation.

2 Luz shall assign to the project a design engineer who is either a registered structural engineer with the authority to use the title "Structural Engineer" in California or a registered California Civil Engineer who is fully competent and proficient in the design of power plant structures and equipment supports.

The design engineer shall:

1. Be directly responsible for design of proposed structures and equipment supports;
2. Provide consultation to the responsible construction engineer during design and construction of the project;
3. Monitor construction progress to ensure compliance with the design intent;
4. Evaluate and recommend necessary changes in design; and,
5. Prepare and sign all necessary building plans, specifications and calculations (Business and Professions Code; Chapter 7, Division 3).

Verification: At least 60 days (or a lesser number of days if mutually agreeable to the county CBO and CEC CPM) prior to submittal of building plans, Luz shall identify to the CBO and the CEC CPM the name and set forth the qualifications of the responsible design engineer who has been assigned to the project and will perform the duties set forth above.

3 For each project facility foundation structure, equipment support, or equipment anchorage, for field fabricated tanks, cooling tower, turbine/generator, HTF heater, ASME pressure vessel, switchyard equipment, and power piping Luz shall submit proposed final design plans and the specifications, calculations, soils report, and quality control procedures for each foundation structure, equipment support, or field fabricated tank, cooling tower, foundation, turbine/generator, boiler, ASME pressure vessel, switchyard equipment, and power piping to the CBO with a copy of a complete transmittal package (plans, calculations, specifications, soils report, and quality control procedures) to the CEC CPM.

Luz shall ensure that all field fabricated tanks shall be designed, fabricated, and installed in accordance with API 650 or AWWA D-100 and Title 8 CCR, Chapter 4. If there are conflicting requirements, the most conservative shall govern (i.e., highest loads, lowest allowable stresses.

Plans, calculations, and specifications for foundations that support structures should be filed concurrently with the structure plans, calculations, and specifications. The final plans, calculations, and specifications shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design and be signed and stamped by the responsible design engineer. In addition, the responsible design engineer shall submit a signed statement to the CBO and to the CEC CPM that the proposed final design plans, specifications and calculations conform with all of the requirements set forth in the Commission's Decision.

Verification: Luz shall submit four (4) copies of the plans and three (3) copies of the specifications, calculations, and other required documents to the CBO and one (1) copy of each to the CEC CPM at least 90 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start of fabrication and installation of each structure, equipment support, or foundation. If the CBO discovers nonconformance with the stated requirements, he shall notify Luz's responsible design engineer within 75 days of the submittal date and shall return the nonconforming portion of the plans to Luz for correction. Luz shall resubmit the corrected plans within 30 days of the return to Luz of the nonconforming submittal.

LUZ shall submit written notice to the CEC CPM that the proposed building plans, specifications, and calculations have been determined by the CBO to be in conformance with the requirements set forth in the applicable laws, ordinances, regulations and standards and that he has approved them.

4 Luz shall make payments to the CBO equivalent to the fees listed in the Uniform Building Code (UBC) Chapter 3, Section 304 and Table No. 3-A, for the plan review and permit. If San Bernardino County has adjusted the UBC fees by county ordinance or code, Luz shall pay the adjusted fee.

Verification: Luz shall make payment to the CBO at the time of submittal of the plans, specifications, calculations and soils report, and notify the CEC CPM that the payment has been made.

5 Luz shall apply for and obtain an "in-lieu" building permit and upon receipt of payment and approval of the proposed building plans, the CBO shall issue the permit to Luz.

Verification: Within seven (7) days after issuance, the CBO shall notify the CEC CPM that an "in lieu" building permit has been issued to Luz.

6 Luz shall keep the CBO informed regarding the status of construction.

Verification: Luz shall submit a weekly construction progress report to the CBO within five (5) days after the end of each week. All material testing reports and all inspection reports shall be submitted to the CEC CPM on a routine weekly submittal schedule.

7 Inspections shall be performed in accordance with Chapters 3 and 70 of the UBC (1985 edition). Luz shall assign as a resident engineer, a registered civil engineer in the State of California, who shall be present on site as required to monitor construction activities, who shall have authority to halt construction and to require changes or remedial work if the work does not conform to the applicable requirements and who shall be responsible for the special and continuous inspections required by UBC Section 306.

All welding (including structural piping, tanks, and pressure vessels) shall be inspected by a certified weld inspector (AWS and/or ASME as applicable). Names and qualifications of the resident registered civil engineer, the certified weld inspector, and the other special inspectors shall be submitted to the CBO and to the CEC CPM at least 60 days (or a lesser number of days mutually agreeable to the CEC CPM and CBO) prior to start of any activity requiring special inspection in accordance with UBC Section 306 (UBC, Chapters 3 and 70).

Verification: Prior to issuance of the "in lieu" building permit, Luz shall identify the resident civil engineer, the certified weld inspectors, and the certified special inspectors to the CBO and to the CEC CPM. Luz shall notify the CEC CPM of all CBO approvals or disapprovals of the resident registered civil engineer, weld inspectors, or special inspectors.

8 All structural work shall be subject to inspection by the CBO and CEC CPM. Luz shall accord access to the jobsite, at any reasonable times, to the CBO or his designated representatives and to the CEC CPM or his designated representatives for the purpose of performing the inspection functions described in these Conditions of Certification.

Verification: Luz shall notify the CBO and CEC CPM in writing at least 15 days prior to when the work is ready for inspection.

9 If any changes to the approved final plans are deemed necessary, Luz shall file with the CBO and CEC CPM design changes to the final plans as required by UBC, Section 303, submitting the revised drawings, specifications, calculations, and a complete description of and supporting rationale for the proposed change to the CBO, and shall notify the CBO of the intended filing (UBC, Chapter 3).

Verification: Luz shall notify the CBO at least 15 days prior to the intended filing of design changes and shall submit three (3) sets of revised drawings and two (2) copies of the other abovementioned documents to the CBO, with one(1) set of all these to the CEC CPM.

The CBO shall return two sets of submittals stamped and signed with his/her approval to Luz within 30 days (or a lesser number of days mutually agree able to the CBO and CEC CPM), provided the plans comply with the stated requirements and shall notify the CEC CPM that he/she has approved the revised plans.

10 Upon completion of any structure, Luz's responsible design engineer shall submit to the CBO and to the CEC CPM: (a) a written notice that the structure is ready for final inspection, and (b) a signed statement that the structure conforms to the final approved building plans. The marked up "as-built" drawing for the construction of structural and architectural work shall be submitted to the CBO. Changes approved by the CBO shall be identified on the as-built" drawings.

Verification: When the work and the 'as-built" plans conform with the approved final building plans, the CBO shall issue final approval. Luz shall notify the CEC CPM of such approval. If the San Bernardino County Chief Building Official is used as the CBO, he/she shall also issue a Certificate of Occupancy after final approval.

11 Luz shall submit weekly to the CBO two sets each of the following data:

- Concrete cylinder strength test reports, (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, mix design designation and parameters).
- Concrete pour sign-off sheets.
- Bolt torque inspection reports (including location of test, date, bolt size, recorded torques).
- Field weld inspection reports, (including type of weld, location of weld, inspection of NDT procedure and results, welder qualifications, certifications, qualified procedure description or number [ref: AWS and ASME]).
- Reports covering other structure activities requiring special inspections in accordance with UBC, Section 306.

Verification: The CBO shall review the above reports and shall indicate his/her approval/disapproval to Luz within 30 days with copies to the CEC CPM, provided specific test results comply with identified requirements. If disapproved, the CBO shall immediately advise the CEC CPM of the reason for disapproval.

12 At least 195 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start date of the first increment of construction (the first increment of construction is excavation for foundations), Luz shall furnish to the CBO and the CEC CPM a schedule of structural plan submittals, a Master Drawing List, and a Master Specifications List. The schedules shall contain a description and list of proposed submittal packages of

structural plans, calculations, and specifications for critical electrical and mechanical equipment and the estimated date of submittal.

Verification: Luz shall submit the schedule, Master Drawing List, and Master Specifications List to the CBO and to the CEC CPM and provide updates at least monthly.

13 Prior to the start of final design of pile foundations, Luz shall submit to the CBO and the CEC CPM for approval the method proposed to calculate the value of the soil springs for the lateral pile model. Prior to the start of final design of foundations, structures, equipment supports and equipment anchorages in the power block area, Luz shall submit to the CBO and CEC CPM for approval load combinations and load factors for combinations including truck loads, vibration loads, and construction loads.

Verification: At least 45 days prior to the start of final design, Luz shall submit to the CBO and the CEC CPM for approval the above information. The CBO and CEC CPM shall review and approve the requested information within 30 days (or lesser number of days mutably agreeable to the CBO and the CEC CPM) of receipt of the data.

SEGS VIII (88-AFC-01C)
LAND USE CONDITIONS OF CERTIFICATION

1 Luz shall obtain site approval, if necessary, from San Bernardino County, and adhere to any conditions (e.g., traffic access lighting and dust control) required by the County.

Verification: 30 days prior to the start of construction of SEGS VIII, Luz shall provide evidence to the CEC Compliance Program Manager (CPM) that San Bernardino County's conditions have been met.

SEGS VIII (88-AFC-01C)
MECHANICAL ENGINEERING CONDITIONS OF CERTIFICATION

1 Luz shall design, construct and operate SEGS Unit VIII in accordance with the mechanical engineering applicable LORS and industry standards identified herein under the section entitled Compliance with Applicable LORS and identified in the AFC. Luz shall submit proposed final design plans, specifications, calculations and quality assurance/quality control (QA/QC) procedures to the County Building Official (CBO).

The responsible engineer in charge, registered to practice mechanical engineering in the State of California, shall sign the documents and submit a signed statement to the CBO and to the California Energy Commission (CEC) Compliance Project Manager (CPM) certifying that the mechanical calculations, plans, specifications and documents submitted to the CBO conform to all applicable LORS.

Verification: Prior to the start of any increment of construction, Luz shall submit four sets each of the proposed final design plans, specifications, calculations and quality control procedures for SEGS Unit VIII to the CBO with a copy of the transmittal letter to the CEC CPM.

2 Luz shall design and install all piping, other than domestic and refrigeration, to the appropriate code: American National Standards Institute (ANSI) B31.1 (Power Piping Code), ANSI B31.2 (Fuel Gas Piping Code), ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code) or ANSI B31.8 (Gas Transmission and Distribution Piping Code), and National Fire Protection Association (NFPA).

Prior to the start of any increment of construction, Luz shall submit the proposed final design drawings, specifications, calculations, and applicable quality control procedures for each plant piping system to the CBO with a copy of the transmittal letter to CEC CPM. The final plans, specifications, and calculations shall reflect clearly the inclusion of approved criteria, assumptions, and methods used in the design.

The responsible engineer, registered to practice mechanical engineering in the State of California, shall submit a signed and stamped statement to the CBO and to the CEC CPM that the proposed final design plans, specifications, and calculations conform with all of the piping requirements set forth in the Commission Decision.

The responsible engineer also shall submit a signed and stamped statement to the CBO and to the CEC Staff that all of the other piping systems, except domestic and refrigeration, have been designed, fabricated, and installed in accordance with all applicable ordinances, regulations, laws, and industry standards.

The principal piping systems for which design plans, specifications, calculations, and quality control procedures shall be submitted are:

a. condensate/feedwater system;

b. main steam system;

c. NOx control system;

d. natural gas supply system;

e. heat transfer fluid system;

f. fire water system; and

g. acid and caustic system.

Verification: Luz shall submit 3 copies of the required documents, including a copy of the signed and stamped engineer's certification, to the CBO at least 90 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start of any increment of construction or fabrication. Luz shall submit a letter to the CEC CPM with copies of the CBO comments and approvals to certify completion of both the plan-check and installation.

The CBO may require, as necessary, Luz to employ special inspectors to report directly to the CBO to monitor shop fabrication or equipment installation.

3 Luz shall ensure that all pressure vessels are designed, fabricated and installed in accordance with American Society of Mechanical Engineers (ASME) Section VIII, and CCR, Title 8, Chapter 4, including those prefabricated vessels furnished by vendors.

Prior to the intended start of fabrication, installation or construction, Luz shall submit the proposed final design plans, specifications, calculations, and quality control procedures for each pressure vessel to the CBO with a copy of the transmittal package to the CEC CPM. In addition, the responsible design engineer, registered to practice mechanical engineering in the State of California, shall stamp and sign all pressure vessel drawings, specifications, and calculations.

The responsible design engineer shall submit a statement to the CBO and the CEC CPM that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the CCR, Title 8 and ASME Boiler and Pressure Vessel Code Section VIII. For all pressure vessels installed in the plant, Luz shall submit to the CBO and Cal/OSHA, prior to installation, certified code papers and other documents required by standards, ordinances, and laws.

Verification: Luz shall submit 6 sets of the plans, and 3 sets each of the calculations, specifications, and quality control procedures (including a copy of the signed and stamped engineer's certification) to the CBO and the CEC CPM at least 90 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start of fabrication, construction, or installation. Luz shall request written notification from the CBO that the plan check and installation are in accordance with the code requirements. In addition, Luz shall request Cal/OSHA to verify the proper implementation of the above codes through on-site inspection. Luz shall send copies of

CBO and Cal/OSHA comments and approvals to the CEC CPM in the following monthly Construction Progress Report. Luz shall furnish the CBO and CEC CPM with the code certification papers and any other documents required by the code at least 30 days prior to the initial operation of each pressure vessel.

4 Luz shall ensure that the gas-fired HTF heater is designed, fabricated, and constructed in accordance with ASME Section I, and ANSI B31.1.

Verification: At least 90 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start of construction, Luz shall submit 3 copies each to the CBO the documents pertaining to the above and a certification by the vendor certifying compliance with the applicable standards, ordinances, and laws.

Luz shall request written notification from the CBO as to whether the plan check and the installations are in accordance with the code requirements.

Luz shall send copies of CBO and Cal/OSHA comments and approvals and Cal/OSHA inspections results to the CEC CPM in the following monthly Construction Progress Report.

5 Luz shall design and install all heating, ventilating, air conditioning, and refrigeration systems within buildings and related structures in accordance with the Uniform Mechanical Code and other applicable standards, ordinances and laws.

Prior to the intended start of construction, Luz shall submit the proposed final design plans, specifications, calculations, and quality control procedures for the heating, ventilating and air conditioning (HVAC) system to the CBO, with a copy of the transmittal letter to the CEC CPM. The final plans, specifications, and calculations shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design.

In addition, the responsible mechanical design engineer, registered to practice mechanical engineering in the State of California, shall sign all plans, drawings, and calculations and submit a signed statement to the CBO and to the CEC CPM that the proposed final design plans, specifications, and calculations conform with all applicable standards, ordinances, and laws.

Verification: At least 90 days (or a lesser number of days mutually agreeable by the CBO and CEC CPM) prior to the intended start of construction, Luz shall submit the three (3) copies of the required HVAC and refrigeration calculations, plans, and specifications (including a copy of the signed and stamped statement from the design engineer certifying compliance with the applicable standards, ordinances, and laws) to the CBO.

Luz shall request the CBO perform the plan check and inspection required to ascertain that the above HVAC and refrigeration systems have been fabricated and installed in accordance with the Uniform Mechanical Code and other applicable standards, ordinances, and laws.

Luz shall request written notification from the CBO as to when the HVAC system is ready for operation.

Luz shall send copies of CBO comments and approvals to the CEC CPM in the next monthly Construction Progress Report.

6 Luz shall design, fabricate, and install:

a. Plumbing in accordance with Title 24, CCR, Division 5, Part 5, and Uniform Plumbing Code.

b. Potable water system in accordance with Title 24, CCR, Division 5, Part 5, Article Pro, and Uniform Plumbing Code.

c. Drainage system including sanitary drain and waste system in accordance with Title 24, CCR, Division 5, Part 5, Articles P4, P5, P6, and P7, and the Uniform Plumbing Code.

d. Toilet rooms and number of toilet rooms in accordance with the Uniform Plumbing Code, Appendix C, and Title 24, CCR, Part 2.

e. Energy conservation system in the control and maintenance building in accordance with Title 24, CCR, Division 5, Chapter 2-53, Part 2.

f. Temperature and ventilation systems in accordance with Title 24, CCR, Division 5, Chapter 2-53, Part 2.

Prior to the intended start of each increment of construction, Luz shall submit the proposed final design plans, and the specifications, calculations, and quality control procedures for each of the above mechanical systems to the CBO including water and sewer connection permits issued by the city or counts with a cops of the transmittal Package to the CEC CPM.

The final plans, specifications, and calculations shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical design engineer, registered to practice mechanical engineering in the State of California, shall stamp and sign all plans, drawings, and calculations and submit a signed statement to the CBO and to the CEC CPM that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the Commission Decision.

Verification: At least 90 days (or a lesser number of days mutually agreeable to the CBO and CEC CPM) prior to the intended start of construction, Luz shall submit 3 copies each the documents (including a copy of the signed and stamped statement from the design engineer certifying compliance with the applicable standards, ordinances, and laws) to the CBO, with a copy of the transmittal letter to the CEC CPM.

Luz shall request approval from the CBO confirming that the cited sanitary facilities have been designed, fabricated, and installed in accordance with the cited applicable standards, ordinances, and laws.

Luz shall request the CBO return two complete sets of the approved submittal. Luz shall request written notification from the CBO as to when the sanitary facilities are ready for operation.

Luz shall send copies of CBO comments and approvals to CEC CPM in the next monthly Construction Progress Report.

SEGS VIII (88-AFC-01C)
NOISE CONDITIONS OF CERTIFICATION

1 Luz shall develop a noise complaint resolution procedure for handling public complaints during both the construction and operational phases of the proposed project. The program shall include, at a minimum, procedures for logging complaints, identifying contact personnel, a schedule for responding to complainants, and investigating the resolution of the complaint. The intent of this procedure shall be for Luz to promptly document and determine the nature and cause of the complaint and take immediate and reasonable measures to eliminate its cause.

Verification: Not later than 60 days after certification, Luz shall submit for review and approval to the CEC Compliance Project Manager (CPM) and San Bernardino County Department of Environmental Health, a protocol for handling public complaints. Luz shall request that the San Bernardino County Noise Regulatory Officer, within 15 days of receipt of the protocol, notify Luz and the CEC CPM regarding the acceptability of the procedure.

2 Luz shall conduct a project traffic and community noise survey. The community noise sampling, unless otherwise specified, will be monitored at locations acceptable to CEC CPM and San Bernardino County Department of Environmental Health. The noise levels (day and night) shall be measured for a period of at least 24 hours at each location, under the above operating conditions. The hourly Leq and the statistical descriptors, L10, L50, L90, Lmax, and frequency distribution in 1/3 octave bands shall be reported. Based upon complaints or any significant changes in noise emissions due to changes at the Luz facility additional surveys may be required by San Bernardino County or CEC CPM during the life of the project.

Luz shall prepare a report(s) on the survey(s) which will be used for comparison with pre-project background noise levels and projected plant noise levels. In the event that the measured levels substantially exceed the projected levels, the report shall contain details of a mitigation plan, if necessary, which Luz will implement following review and approval by the San Bernardino County Department of Environmental Health.

Verification: Within 60 days (or another time period acceptable to the CEC CPM) of Luz reaching an output rating of 80 percent or greater, Luz shall conduct the above described noise study.

Within 30 days of completing the initial and any other required noise survey, Luz shall submit the noise survey report to the CEC CPM and San Bernardino County. The County shall notify Luz and the CEC CPM, in writing, within 30 days of receipt of the report about the acceptability of the survey. If the report indicates that further mitigation is required, the CEC CPM shall so inform T.117.

3 Luz shall conduct occupational noise surveys to identify the noise hazardous areas in the facility. The surveys shall be conducted after full operation is reached. The surveys shall be conducted by a qualified person in accordance

with the provisions of Title 8 of the California Administrative Code, Sections 5095-50100 (Article 105) and Title 29, Code of Federal Regulations, Part 1910. The survey(s) results shall be used to determine the magnitude of employee noise exposure, Luz shall prepare a report on the survey(s) results and proposed mitigation measures, if necessary, that will be employed to comply with California and Federal regulations.

Verification: The above noise surveys shall be conducted within 90 days(or another time period acceptable to the CEC CPM) after full operation is reached but no less than 180 days after the unit has reached at least 50 percent of rated output. Within 60 days of the occupational noise surveys, Luz will submit the above report on the survey to the CEC CPM. Luz shall make this report available to Cal/OSHA upon request.

4 Luz shall maintain all internal combustion engine driven equipment used for the project in good working order and shall equip such equipment with appropriate mufflers so as to control noise emissions. Construction activity utilizing such equipment shall be limited to daylight hours to the extent feasible.

Verification: No later than 60 days after certification, Luz shall submit to the CEC CPM a letter which certifies that all internal combustion engine driven equipment has been fitted with appropriate mufflers.

SEGS VIII (88-AFC-01C)
PUBLIC HEALTH CONDITIONS OF CERTIFICATION

1 Luz shall provide a plan for the protection of all piping which contains heat transfer fluid (HTF) (phenyl ether, diphenyl oxide mixture) located near roadways from vehicle impact. Each barrier should be designed to withstand a 20 mile per hour impact from the heaviest vehicle which will be utilized on the road.

Verification: Prior to beginning construction Luz shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) a plan for protection of HTF piping located near roadways. All analysis of barrier design shall be signed by a registered civil engineer verifying that design of physical barriers comply with the criteria described above.

2 Prior to construction of the HTF piping system Luz shall provide a plan which addresses measures to minimize the potential for large releases (100 gallons or more) of HTF. This plan shall address the following:

- Methods to rapidly detect and announce major leaks in the collector field, supply and return headers, and in expansion/storage vessels.
- Methods to minimize response time in isolating and stopping HTF discharge from portions of the system which could develop major leaks;
- Methods to reduce discharge of vapors to the atmosphere from a spill;
- Methods to determine where offsite impacts may occur during a major release: and,
- Methods to reduce any public impacts that could result from major spills.

The plan shall be submitted and approved by the CEC CPM prior to filling the piping system with HTF. Luz shall also implement all design changes and procedures agreed to prior to operation of SEGS Unit VIII.

Verification: Luz shall submit and obtain approval of the plan described above from the CEC CPM prior to filling of any piping with HTF.

3 Luz shall submit a personal protective equipment program and a respiratory protection plan for construction with sufficient detail to allow for review and approval by Cal/OSHA and the CEC staff. Luz shall revise these plans as necessary based on comments made by Cal/OSHA and shall implement the plan, including the purchase and installation of all required equipment and training of personnel, prior to commencement of construction.

Verification: Prior to commencement of construction at the SEGS Unit VIII facility, Luz shall:

1. provide a copy of a detailed personal protective equipment program and a respiratory protection plan, applicable to construction of SEGS Unit VIII, to the CEC CPM and Cal/OSHA;
2. forward a copy of comments made by Cal/OSHA to the CEC CPM; and,

3. submit modified plans which reflect all CEC and Cal/OSHA comments to the CEC CPM prior to construction of SEGS Unit VIII.

4 Luz shall submit a personal protective equipment program and a respiratory protection plan for operation of the SEGS Unit VIII facility, which contains sufficient detail for review and approval by Cal/OSHA and the CEC staff. LUZ shall revise these plans as necessary based on comments made by Cal/OSHA and shall implement the plan, including the purchase and installation of all required equipment and training of personnel, prior to commencement of operation at SEGS Unit VIII.

Verification: Prior to commencement of operation at the SEGS Unit VIII facility, LUZ shall:

1. provide a copy of a detailed personal protective equipment program and a respiratory protection plan, applicable to operation of SEGs Unit VIII, to the CEC CPM and Cal/OSHA;
2. forward a copy of comments made by Cal/OSHA to the CEC CPM; and,
3. submit modified plans which reflect all CEC and Cal/OSHA comments to the CEC CPM prior to operation of SEGS Unit VIII.

5 Luz shall at all times ensure that protective equipment and procedures recommended in material safety data sheets be followed when handling materials listed in **Table 2** of the Safety Plan for SEGS Unit VIII. All procedures and equipment necessary to comply with vendor recommendations shall be in place prior to construction of SEGS Unit VIII.

Verification: Luz shall provide to the CEC CPM a list of equipment purchased and specific procedures that will be used in handling all the m aterials listed in **Table 2** prior to construction of SEGS Unit VIII.

6 Luz shall use only the materials listed in **Public Health: Table 2** for treatment of cooling tower water. Luz may use materials other than those listed in **Table 2** if written approval is obtained from the CEC CPM.

Verification: Luz shall obtain written approval from the CEC CPM prior to use of any material not listed in **Public Health: Table 2** for treatment of cooling tower water.

SEGS VIII (88-AFC-01C)
QUALIFYING FACILITY STATUS CONDITIONS OF CERTIFICATION

1 The facility shall be operated in accordance with the requirements of Title 18 CFR, section 292.204(b)(2). Total energy input into the SEGS Unit VIII project shall be monitored continuously by Luz. Monitored data shall include electrical energy deliveries to the purchasing utility, solar energy input, natural gas energy input, total energy input, monthly and annual plant availability, monthly and annual plant equivalent availability, and monthly and annual capacity factor for each utility period (peak, mid-peak and off-peak).

Verification: Luz shall file an annual report with the California Energy Commission (CEC) Compliance Project Manager (CPM) which is signed by the project operations supervisor under whose supervision the data were obtained and the report prepared, attesting to the veracity of the data and showing each of the above parameters, by month, for SEGS Unit VIII.

2 Luz shall submit to the CEC CPM FERC Qualifying Facility (QF) Orders for SEGS Unit VIII.

Verification: Within 30 days after receipt of FERC Qualifying Facility Orders for SEGS Unit VIII, Luz shall submit to the CEC CPM three (3) copies of said FERC Qualifying Facility Orders.

SEGS VIII (88-AFC-01C)
RELIABILITY CONDITIONS OF CERTIFICATION

1 Luz shall have in place a comprehensive preventive and restorative-maintenance program having the following features:

- an inventory management plan for assurance that adequate spare parts are on hand;
- maintenance tools, factory repair manuals, and repair facilities adequate to perform on-site repair and maintenance of equipment;
- a training program for mechanics and maintenance personnel in the operation and maintenance of plant systems and major equipment;
- optimized scheduling of preventive maintenance; and
- QA/QC control over purchase specification and acceptance of spare parts and equipment.

Verification: Within 180 days after the Commission Decision, Luz shall provide a statement signed by the project manager attesting to compliance with the condition. The statement shall be submitted to the CEC Compliance Project Manager (CPM).

2 Luz shall maintain logs of equipment failure data and operational data for all major equipment, including SCA's, turbine-generator, gas-fired HTF heaters, condenser and cooling towers, pumps, and major valves and control devices. These logs shall include mean time between failures (MTBF), mean downtime (MDT), monthly and annual availability, and equipment availability and capacity factors.

Luz shall further maintain monthly data sets of the following information:

- time of plant start-up and shut-down and duration of operation;
- forced outage durations and causes;
- average daily solar insolation;
- net solar energy delivered to the steam generator; and
- net natural gas consumed for steam generation and for HTF evening-hour temperature maintenance.

Verification: Luz shall include the information listed above in each annual report to the CEC CPM.

SEGS VIII (88-AFC-01C)
SAFETY CONDITIONS OF CERTIFICATION

1 Luz shall submit their SEGS Unit VIII Safety Plan to the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) for review and comment regarding compliance of the Plan with the provisions of Title 8, CCR, Section 1509 (Construction Safety Orders, Accident Prevention Program) and Section 3203 (General Industry Safety Orders, Accident Prevention Program) and Title 29, CFR 1910. Any and all comments by Cal-OSHA shall be incorporated into the Plan. Luz shall implement the Safety Plan consistent with comments and requirements of Cal-OSHA and San Bernardino County.

Verification: At least 10 days prior to beginning any construction, Luz shall submit to the CEC CPM a letter containing Cal-OSHA's comments regarding the compliance of the Safety plan with Title 8, CCR, sections 1509 and 3203 and a statement verifying that any and all comments or recommendations by Cal-OSHA have been incorporated into the SEGS Unit VIII Safety Plan.

The CEC CPM shall be accorded access to the project area, facilities, and all safety records at any reasonable time during construction and operation of the facility to verify implementation of the plan.

2 Luz shall submit for approval their fire protection element of the Safety Plan to the San Bernardino County Forestry and Fire Warden Department and to the local fire department at Helendale. All comments from the fire departments shall be incorporated into the plan.

Verification: At least 10 days prior to beginning construction, Luz shall submit to the CEC CPM copies of written Fire Protection Plan approvals from the San Bernardino County Forestry and Fire Warden Department and from the local fire department at Helendale.

The CEC CPM or designate shall be accorded access to the project area, facilities, and fire protection records at any reasonable time during construction and operation of the facility.

SEGS VIII (88-AFC-1C)
SOCIOECONOMICS CONDITIONS OF CERTIFICATION

1 Luz shall institute a program for Luz and its contractors and subcontractors to maximize the use of the existing labor pool in the local area. Luz shall not recruit out of the local area or out-of-state until all elements of the local hiring program have been fully implemented. Luz shall submit the program to the CEC CPM for approval.

Verification: Within 15 days after certification of SEGS Unit VIII, or a date mutually agreeable to Luz and the CEC CPM, Luz shall submit to the CEC CPM for approval a detailed plan specifying the efforts that Luz will make to maximize the use of the existing labor pool in the local area. Such a plan shall describe the procedures that Luz will use to recruit from the local labor pool and previous SEGS employees currently living in the local area. In addition, the plan shall describe the procedures Luz shall use to work with the State Employment Development Department and local employment agencies. The plan shall also specify the local and non-local media that Luz will advertise in and the timing for each advertisement.

Prior to advertising for workers from out of the local area or out-of-state, Luz shall document to the satisfaction of the CEC CPM that it has implemented the approved plan. The program shall also include an implementation schedule and procedures for reporting on the effectiveness of the program.

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2a Luz shall make payments of $2,500 per student to school districts which are expected to incur impacts due to the enrollment of children of employees who immigrated to work on Luz SEGS projects and will work on SEGS VIII. Luz shall make preliminary payments as follows, based on Luz' initial employee surveys.

School District	50% of Projected Impact Students	Payment
Muroc Joint Unified School District		$53,750
Barstow Unified School District	67	$131,250
Mojave Unified School District	13	$10,000
Lancaster Elementary School District	5.5	$4,000
Victor Elementary School District	11.5	$16,000
Adelanto Elementary School District		$8,000
Helendale Elementary School District		$16,500
Victor Valley Union High School Dist	1.5	$20,000
Apple Valley Unified School District	5.5	$4,000
Hesperia Unified School District	2	$4,000
Total	**107**	**$267,500**

Verification: Within seven days of the CEC CPM's approval of this change, Luz shall provide the CEC CPM proof of payment to the school districts.

2b Luz shall assist Barstow Unified School District, Muroc Unified School District, Victor Elementary School District, Victor Valley Union High School District, Lancaster Elementary School District, Antelope Valley Union High School District, Apple Valley Unified School District, Hesperia Unified School District and Mojave Unified School District in conducting annual surveys of their students to determine which students have immigrated and created impacts as a result of the construction or operation of SEGS Unit VIII and any future SEGS units at Harper Lake, and any of the SEGS units (III-VII) at Kramer Junction. Luz shall assist the districts by providing the names of the contractors and subcontractors for the project by September 1 of each year that the project is under construction or in operation and all conditions of certification related to schools from the SEGS Units III-VIII Decisions. If a school district desires an updated list of contractors and subcontractors after September 1, Luz shall provide it.

Verification: Luz shall respond to any request from a school district within 15 days and shall send a copy of the school districts' request and Luz's response to the CEC CPM. In each quarterly compliance report, Luz shall inform the CEC CPM of the status of the student surveys, any district's responses regarding impacts and provide copies of any survey data collected by the school districts or Luz.

2c Upon completion of the school districts' surveys, Luz shall calculate the actual cost to the district for impact students using the formula of $2.500 X peak number of impact students = calculated district costs. If the amount paid to the district in Condition 2a is less than calculated cost, Luz shall pay the balance to the district within 30 days. If the amount paid to the district in Condition 2a is more than the calculated cost, the balance shall be retained by the district and considered a mitigation credit in anticipation of impacts of future Luz projects in the area.

Verification: No later than 30 days after Luz has passed peak employment on SEGS Unit VIII, Luz shall collect new student surveys from the school districts and provide copies of the surveys and the peak number of students to the CEC CPM for review and approval.

Within 30 days following CEC CPM approval, Luz shall submit to the CEC CPM documentation that payment has been made to the school district(s).

3 Luz shall develop and implement a program for SEGS Unit VIII and any future SEGS units at Harper Lake to encourage nonlocal construction employees and their families to reside in communities which can readily accommodate them and their families, so as not to cause or contribute to a housing shortage, which is defined as a vacancy rate below five percent. Such a program shall include but not necessarily be limited to identifying the communities that can readily accommodate the workers and their families, providing weekly real estate and rental listings, and may include travel allowances and free bus/van pools for workers living in approved communities. The program shall also include an

implementation schedule and procedures for reporting on the effectiveness of the program.

Verification: Within 15 days of certification of SEGS Unit VIII, Luz shall submit to the CEC CPM for comment and approval, a detailed description of the proposed program to mitigate the potential housing impacts due to the construction of SEGS Unit VIII.

4 Luz shall implement its proposed mitigation to offset potential impacts on local public health services by making available to its construction employees and their dependents health insurance coverage for medical and hospital expenses with eligibility after no more than 30 days of employment. Luz shall pay that portion of the health insurance premium, which would be appropriate for the area and craft or job classification.

Verification: Within 14 days of certification, Luz shall submit to the CEC CPM the proposed health insurance plan for review and verification.

In addition, Luz shall submit an explanation on how the plan(s) comply with the condition. The provisions of an appropriate plan shall include, but not be limited to, options of 80% company contribution/20% employee contribution with eligibility for the coverage after 30 cumulative days of employment and $200 deductible per person (maximum two deductibles per family). The eligibility requirement shall be waived for any subsequent periods of employment on SEGS Unit VIII.

5 In consultation with the CEC CPM and potentially affected cities and counties law enforcement authorities including the Kern County Sheriff's Department (Boron Substation) and the City of Barstow Police Department, LUZ shall develop and implement a program to benefit law enforcement in the desert communities.

Verification: Within of 45 days of certification LUZ shall submit the to the CEC CPM program for approval prior to implementation.

6 Luz shall use its best efforts to obtain a complete entry questionnaire upon employment and an exit questionnaire upon leaving employment (see attached example) from each construction employee hired by Luz, its contractor or subcontractor. Each questionnaire shall be numbered sequentially and a copy(s) of each questionnaire shall be maintained by Luz. Shall maintain the questionnaires in a manner that will permit Luz or the CEC CPM to check the accuracy of the questionnaires. Every time an employee is rehired, the dates of employment and any other changed information shall be updated. Luz shall require an officer or other responsible official of each contractor or subcontractor to sign a declaration stating that the company has used its best efforts to obtain a complete and legible entry and exit questionnaire from each construction employee who has worked on SEGS Unit VIII.

Verification: Within 5 working days after the end of each month of construction, a copy of each questionnaire which has been completed or updated, along with the associated declarations, and a listing of the number of construction employees for each day of that

month, shall be filed with the CEC CPM. Any changes in the example questionnaires shall be approved by the CEC CPM in consultation with Luz and Intervenor District Council 16 or its representative.

7 Luz shall mitigate any impacts caused by the construction or operation of SEGS Unit VIII to local fire protection agencies. Such impacts, if any, and appropriate mitigation shall be determined by the use of records of the demands placed on these agencies by the project.

Verification: In each quarterly compliance report Luz shall identify each demand that construction or operation of SEGS Unit VIII placed on a local fire protection agency. Luz shall also specify the extent to which costs incurred by that agency were paid by Luz, its contractors or subcontractors, or workers employed by these entities.

After a determination by CEC staff, in consultation with the local agency, of any needed mitigation, Luz shall compensate the agency within 30 days of notification by the CEC CPM.

SEGS VIII (88-AFC-01C)
SOILS CONDITIONS OF CERTIFICATION

1 During construction, Luz shall water down or apply dust suppressants to all disturbed areas and primary roadways to minimize erosion and suppress fugitive dust. During excessively windy days all construction activities shall halt.

Excessive wind speed shall be based on the determination upon the basis of the Air Quality Conditions of Certification.

Verification: In their periodic compliance reports Luz shall include a record of water and/or chemical dust suppressants applied to site soils during the reporting period and the areas of the site to which these materials were applied.

2 Luz shall submit a revegetation plan to the CEC for review and approval. If appropriate, this plan shall identify the type and application rate of seed, fertilizer, and mulch used to restore areas temporarily disturbed during construction of the transmission line and pipeline. The plan shall also identify the measures used to protect topsoil during construction of the pipeline. Luz shall implement the approved revegetation plan.

Verification: Sixty (60) days prior to construction of the transmission line and natural gas pipeline, Luz shall submit the revegetation plan to the CEC Compliance Project Manager (CPM). The CEC CPM shall review and comment on the plan within twenty working days of the receipt of the plan.

Within 30 days after implementation of the specified measures in the approved plan Luz shall provide written notification to the CEC CPM verifying completion of the revegetation plan.

3 Once construction is completed, exposed surfaces of flood control dikes, berms, and roadways shall be stabilized through use of a soil sealant.

Verification: Thirty days prior to operation, Luz shall submit a letter to the CEC CPM verifying that this condition has been implemented.

SEGS VIII (88-AFC-01C)
TRANSMISSION LINE SAFETY AND NUISANCE CONDITIONS OF CERTIFICATION

1 Luz shall obtain a statement from the responsible electrical engineer, registered in the state of California, indicating that the SEGS VIII transmission line will be constructed in accordance with CPUC GO-95 and with Title 8 CCR.

Verification: Luz shall submit the required statement covering the transmission line to the California Energy Commission (CEC) Compliance Project Manager(CPM) within 60 days before the start of construction of the SEGS Unit VIII line.

2 Luz shall ensure that all ungrounded metallic fences, gates, roofs, or building sidings or other large permanent metallic objects within the right-of-way, regardless of ownership or location, are grounded in conformance to procedures defined in the National Electrical Safety Code.

In the event that an owner will not permit the grounding of a metallic object, Luz shall so notify the CPM. Notification shall include, when possible, the owner's written objection. Upon receipt of such notice of objection, the CPM will waive the requirement for grounding of that object.

Verification: Within 30 days prior to scheduled energization of the transmission line associated with SEGS Unit VIII, Luz shall file a statement with the CEC CPM verifying compliance with these grounding procedures. The filing shall include, where applicable, an owner's objection to the required grounding.

3 Luz shall notify all property owners, within or adjacent to the transmission line right-of-way of the nature and operation of the transmission line. This notification shall inform the property owner of Luz's responsibility for, and intent to, ground all ungrounded metallic fences, gates, roofs, building sidings or other large permanent metallic objects within the right-of-way, regardless of ownership or location.

Luz shall also include a statement to the property owners informing them of their responsibility to notify Luz in the event that the property owner adds or installs a metallic object which requires grounding as described above. Further, this notification shall include a statement that the refueling of vehicles or equipment under the transmission line is not recommended.

Verification: Luz shall file a letter containing a list of property owners, including proof of notification, with the County Chief Building Official (CBO)[1] and the CEC CPM within 30 days after certification.

4 Luz shall investigate all complaints from property owners or the public regarding problems due to induced voltages on vehicles, portable objects, metallic roofs, metallic building sidings, gutters, fences, irrigation equipment or other objects within the right-of-way. Luz shall, at its own expense, take all measures to correct these problems.

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[1] CBO is the County Chief Building Official, other designated authority or CEC's authorized representative.

Luz shall also respond, within 10 days, to an owner's notice of additional objects being placed within the right-of-way and requiring grounding. The response shall include completion of the required grounding or establishment of a date within 30 days for such completion.

Verification: Luz shall maintain a record of activities (grounding, notifications and correspondence) related to this requirement. These records shall be summarized in the Annual Compliance Reports. Upon request, these records shall be made available to the CEC CPM or an authorized representative.

5 Luz shall make every reasonable effort to locate and correct, on a case-by-case basis, all causes of radio and television interference attributed to the transmission line facilities. In addition to any necessary transmission line repairs, corrective action shall include, but shall not be limited to, adjusting or modifying receivers, adjusting, repairing, replacing or adding antennas, antenna signal amplifiers, filters or lead-in cables.

Verification: Luz shall maintain records of complaints and corrective actions and shall, upon request, make these records available to the CEC CPM or an authorized representative. All complaints shall be recorded including explicit notations of the corrective actions performed. Complaints which did not result in corrective action or resolution shall be defined and justified. The record shall be signed by the owner's authorized representative and also by the complainant to indicate concurrence with the corrective action or with the justification of no corrective action. All such records shall be summarized in the Annual Compliance Reports.

6 Luz shall keep each transmission line pole site free of waste material and rubbish as required by PRC 4292, Title 14 CCR section 1250 and Division II Uniform Fire Code 4292.

Verification: Luz shall provide information about the inspection, cleanup and fire protection activities around the transmission poles in the semi-annual Compliance Report.

7 Luz shall file FAA Form 7460-1 identifying the location of the proposed transmission line with the FAA Office in Hawthorne, California.

Verification: Luz shall file copies of FAA Form 7460-1 with the CEC CPM within 60 days after certification.

8 If there are complaints of noise or interference from the transmission line on the Atchison, Topeka and Santa Fe (AT&SF) Railroad's railway signal circuits, Luz shall conduct noise measurements with the transmission line both in an energized and in a de-energized state. If such measurements show that objectionable noise or interference is present due to the transmission line, Luz and AT&SF will enter into negotiations to determine the sum necessary to correct the interference to AT&SF's communications and signal system.

Verification: Upon completion of the interference measurements, Luz shall provide the CPM with the results of the measurements and conclusions reached during the negotiations. If mitigation is required because of interference, Luz shall send to the CEC CPM proof that the necessary mitigation has been implemented.

SEGS VIII (88-AFC-01C)
TRAFFIC CONDITIONS OF CERTIFICATION

1 Luz shall comply with the San Bernardino County and Caltrans restrictions on oversize or overweight limit vehicles. Luz shall obtain necessary transportation permits from the county and Caltrans.

Verification: In its quarterly compliance reports, Luz shall notify the CEC Compliance Project Manager (CPM) of any transportation permits obtained during the reporting period.

2 Luz shall comply with San Bernardino County and Caltrans requirements for encroachment on a public right-of-way. Luz shall obtain necessary encroachment permits from the county and Caltrans.

Verification: In its quarterly compliance reports, Luz shall notify the CEC CPM of any encroachment permits obtained during the reporting Period.

3 Luz shall implement its Transportation System Management (TSM) program (Luz, 1988), including, but not limited, to ridesharing and staggering of work hours elements. The goal of the TSM will be to reduce the total number of vehicles traveling the same section of road at a riven time.

Verification: In its quarterly compliance reports, Luz shall notify the CEC CPM of the ongoing results of the TSM program, and of any additional measures needed to more effectively implement the TSM program.

4 Luz shall notify Caltrans, 60 days prior to beginning construction, of the pending construction of SEGS Unit VIII and the expected traffic volume.

Verification: In its quarterly compliance reports, Luz shall notify the CEC CPM of the results of its meetings with Caltrans.

5 Luz shall monitor traffic on SR 58 to determine peak traffic times.
Luz shall schedule shift changes for operations employees at SEGS Units III-VII, so as not to coincide with shift changes for construction employees at SEGS Unit VIII and shall schedule all types of shift change so as not to coincide with morning and evening peak traffic hours on SR 58, based on the results of the monitoring.

Verification: Prior to the start of construction, Luz shall submit to the CEC CPM documentation of monitoring for peak traffic on SR 58 in the project vicinity, and a schedule for shift changes for operations employees at SEGS Units III-VII and construction employees at SEGS Units VIII. Construction of SEGS Unit VIII shall not begin until the CEC CPM has approved the schedule.

6 Luz shall negotiate, and reach agreement with, the San Bernardino County Transportation and Flood Control Department, for the mitigation of traffic and transportation impacts on San Bernardino County roads in the SEGS Unit VIII project vicinity.

Verification: Prior to the start of construction, Luz shall submit to the CEC CPM a letter from San Bernardino County specifying the agreed on mitigation measures for traffic and transportation impacts on San Bernardino County roads.

7 Luz shall monitor the occurrence of accidents on the four San Bernardino County roads serving the SEGS Unit VIII project and shall report the results to the CEC CPM and the San Bernardino County Flood Control and Transportation Department. If the results of the monitoring indicate that further mitigation measures may be necessary, Luz shall consult with San Bernardino County and the CEC staff to determine the extent of any additional measures that may be required.

Verification: In its quarterly compliance report, Luz shall report the results of its monitoring to the CEC CPM and the San Bernardino County Flood Control and Transportation Department.

If consultation regarding additional mitigation measures is necessary Luz shall, in its next quarterly compliance report, report to the CEC CPM the progress of such consultation, and in subsequent quarterly reports shall report on the current status of such consultations or agreed upon mitigation measures.

8 To mitigate for traffic and transportation impacts on SR 58 prior to the completion of the SR 58 upgrade, Luz shall provide intersection channelization and signing on SR 58 at the Harper Lake Road intersection. These facilities shall be constructed as approved by CalTrans District 8, in consultation with the San Bernardino County Transportation and Flood Control Department, Traffic Division. Luz shall complete this work within 60 days after the start of construction of the power plant.

Verification: Within 10 days of receiving an encroachment permit, Luz shall submit a copy to the CEC CPM, along with a copy of the proposed schedule for completion of the facilities. Luz shall report completion and acceptance by Caltrans in its next subsequent periodic compliance report.

9 In the event that installation of the mitigation facilities on SR 58 is not completed prior to the award by Caltrans of the contract for the upgrade of SR 58, Luz shall coordinate its installation of the mitigation facilities with the Caltrans Resident Engineer and contractor in order to minimize conflicts with construction activities associated with the upgrade of SR 58.

Verification: In its periodic compliance reports, Luz shall report any contracts with the Caltrans Resident Engineer and Contractor, and the results of these contracts.

10 During the period which SR 58 upgrade construction is underway, Luz shall coordinate its construction traffic, particularly heavy truck traffic, with the Caltrans Resident Engineer in order to minimize conflicts with SR 58 construction activities.

Verification: In its periodic compliance reports Luz shall report any contacts with the Caltrans Resident Engineer and the results of these contracts.

11 Prior to the start of construction of the SEGS Unit VIII project, Luz shall negotiate and reach agreement with the Atchison Topeka and Santa Fe Railroad for installation of ago crossing gates, signals and lights at the Harper Lake Road crossing of the AT&SF railroad.

Verification: Prior to the start of construction, Luz shall submit the agreement, which will specify the details of the installation of the crossing gates, signals, and lights at the Harper Lake Road/AT&SF railroad crossing. Luz shall submit to the CEC CPM prior to beginning construction, a letter indicating that agreement has been reached, and will provide a schedule for the installation of the crossing gates.

12 Luz shall maintain Hoffman Road from the intersection of Harper Lake Road and Hoffman Road to the western boundary of SEGS Unit VIII. Luz shall insure that its flood control activities will not interfere with east-west travel on Hoffman. Road and not interfere with access to properties west of SEGS Unit VIII.

Verification: Prior to the operation of SEGS Unit VIII, Luz shall submit a plan for the maintenance of Hoffman Road and access to properties as described above to the CEC CPM for review and approval in consultation with affected property owners.

13 Luz shall utilize only licensed haulers, using approved vehicles marked in an appropriate manner, for the transportation of all hazardous, toxic, and flammable materials. All such materials hall be transported in compliance with all applicable requirements of the U.S. Department of Transportation, State of California agencies including the California Highway Patrol, the California Department of Motor Vehicles, and the Department of Health Services, and pertinent local agencies. Such applicable requirements shall include at least:

1. Title 40 Code of Federal Regulations (CFR), Chapter II, Subchapter C, and Chapter III, Subchapter B,
2. California Vehicle Code Division 13, Chapter 5, Article 1 Hazardous Materials, sections 31300, 31303 et seq.,
3. California Vehicle Code Division 14, Transportation of Explosives, sections 31600 et seq.,
4. California Health and Safety Code sections 12113, 12114, and 12220 et seq., transportation of quantities of explosives under 1000 pounds,
5. California Vehicle Code Division 14.7 Flammable and Combustible Liquids, sections 34000 et seq.,
6. California Vehicle Code Division 14.8 Safety Regulations, sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34502-7, 34510-11,

7. California Vehicle Code sections 2500-2505, issuance of licenses for hazardous materials, and
8. California Vehicle Code sections 12804-12804.5 licensing of drivers.

Verification: Luz shall, in the first periodic compliance report to the CEC CPM, certify that they and their contractors and subcontractors will comply with the above requirements.

14 Luz shall prepare and submit to the CEC CPM for review and approval a comprehensive plan for the transport of hazardous materials to and from the project. Such a plan shall include:

1. a comprehensive listing of all hazardous, toxic, explosive, poisonous, or highly flammable materials or wastes which are routinely, though not necessarily frequently, delivered to the project site,
2. directions for the identification of such materials at an accident site,
3. directions for containment, fire suppression, or container transfer measures, if appropriate,
4. description of potential interactions with the environment, with other substances commonly present in a highway setting, or in the presence of fire and the appropriate safety measures to be taken in the event of such interaction,
5. identification of the public health risks by any pathway from the release of such substances,
6. identification of the symptoms and the appropriate medical treatment of persons subjected to a health risk from the release of such substances; and
7. the identification of police, fire, medical facilities, and private contractors having the capability of providing assistance in the event of the release of such substances.

Upon CPM approval of the plan after consultation with the California Highway Patrol and other appropriate state and local agencies, Luz shall provide the plan to the appropriate agencies. Luz shall keep the plan updated to include any additional hazardous materials, and shall provide such updates to the appropriate agencies.

Verification: No later than 30 days after certification, Luz shall submit the plan to the CEC CPM.

Luz shall submit updates to the plan with the next periodic compliance report.

SEGS VIII (88-AFC-01C)
TRANSMISSION SYSTEM ENGINEERING CONDITIONS OF CERTIFICATION

1 Luz shall ensure that the design, construction, and operation of the proposed transmission outlet facilities will conform to requirements a through e listed below. The substitution of "or equal" equipment and equivalent switching station configurations is acceptable. Failure to establish "or equal" status shall be a violation of certification.

a. Approximately 12 miles of 220 kV single circuit wood pole or equivalent metal pole transmission line shall be installed between the SEGS Unit VIII switching station and Kramer substation. Two 1-1590 kCM ACSR conductors shall be installed from the SEGS Unit VIII switching station to the Kramer substation. The route shall not substantially deviate from the corridor shown in the Project Description Figure 5.

b. The bus configuration for the Kramer substation shall be subject to Southern California Edison (SCE) approval. The equipment shall have suitable continuous, emergency and interruption current ratings subject to SCE approval.

c. The transmission facilities shall meet or exceed the requirements of GO-95 Rules 37 And 38.

d. The Interconnection facilities shall be designed, operated and maintained in accordance with SCE tariff rule 21.

e. No other generating unit or transmission circuit may be connected to the SEGS Unit VIII switchyard or outlet transmission circuits without prior authorization of the California Energy Commission (CEC) staff or certification by the CEC.

Verification: No later than 60 days prior to construction of the transmission outlet facilities, Luz shall submit for approval to the CEC Compliance Project Manager (CPM) electrical one-line diagrams signed and sealed by a registered electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by Requirements 1a, 1b, 1c, 1d and 1e above. The substitution of "or equal" equipment and substation configurations shall be identified and justified by Luz.

2 Luz shall submit a request for a variance from Requirement 1 above, and items a through i below to the CEC CPM for approval. The request shall contain information appropriate to describe and justify any proposed changes. Approval must be obtained from CEC staff before the change (variance) is implemented. This request shall include any proposed changes to the following:

a. Route Specified: The route may not significantly deviate from the proposed route approved by the Commission.

b. Connection Point: SCE Kramer substation.

c. Conductor Size: 1590 kCM ACSR.

d. Number of Conductors: Two per phase.

e. Number of Circuits: One.

f. Voltage Level: Nominal 220 kV phase-to-phase.

g. Structure Types: Single-circuit wood poles or steel pole.

h. Termination of outlet at Kramer: Single circuit termination to be connected in a breaker and a half scheme.

i. Any other change that may significantly affect the capacity, reliability, economics, or energy losses of the transmission system.

Verification: Luz shall inform the CEC CPM of any impending changes which may not conform to Requirement 2 and request approval of CEC staff to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. No changes shall be made without written approval of the CEC CPM.

After receipt of a complete submittal, Staff will within 45 days review and advise Luz of CEC staff's approval or disapproval.

The 45-day period shall not start until Staff has determined that adequate information to review the change was provided.

3 Luz shall be responsible for the inspection of the proposed transmission facilities during and after construction for conformance to Requirements 1 and 2 above, and any subsequent CEC CPM approved changes thereto, and for conformance with CPUC GO-95 and SCE tariff rule 21. In case of nonconformance, Luz shall inform the CEC CPM in writing within 10 days of discovering such nonconformance and describe the corrective actions to be taken.

Verification: Within 60 days following first successful energization of SEGS Unit VIII, Luz shall transmit to the CEC CPM an engineering description(s) and one-line drawings of the "as-built" facilities referred to in Requirements 1 and 2 above, signed and sealed by a registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 and SCE tariff rule 21 shall be concurrently provided.

SEGS VIII (88-AFC-01C)
VISUAL RESOURCES CONDITIONS OF CERTIFICATION

1 Luz shall paint SEGS VIII and all future SEGS units at Harper Lake so as to minimize contrast with the surrounding environment.

Verification: 90 days prior to completion of construction Luz shall submit to the CEC CPM for approval a color plan for SEGS VIII and all future SEGS units at Harper Lake. The plan shall include at least three color options which are acceptable to Luz and which are designed to minimize the contrast which the project will create with the surrounding environment. Luz shall not begin operating SEGS VIII until the color plan has been approved by the CEC CPM and implementing by Luz.

2 Luz shall design all lighting so as not to shine directly at nearby residences or State Route 58.

Verification: 90 days prior to completion of construction Luz shall submit to the CEC CPM for approval a lighting plan for SEGS VIII. Luz shall not begin operating SEGS VIII until the lighting plan has been approved by the CEC CPM and implemented by Luz.

SEGS VIII (88-AFC-01C)
WASTE MANAGEMENT CONDITIONS OF CERTIFICATION

1 Non-hazardous construction and operation wastes from SEGS Unit VIII shall be disposed of by Luz or its contractors at the Barstow Landfill or at facilities approved by the LRWQCB, the San Bernardino County DEHS, or other appropriate agencies in counties where alternate disposal facilities may be located. Luz shall obtain, or use contractors who have obtained, all applicable county permits for refuse collection and hauling.

Hazardous wastes generated during construction and operation shall be disposed of at CDHS approved hazardous waste facilities, if not treated on-site following CDHS and CEC CPM approval of the treatment process.

Verification: At least 30 days following the Commission Decision, Luz shall submit a letter to the California Energy Commission (CEC) Compliance Project Manager (CPM) verifying that Luz intends to:

1. dispose of all construction and operation non-hazardous wastes at the Barstow Landfill or at facilities approved by the LRWQCB and San Bernardino County DEHS and
2. dispose of construction and operation-related hazardous wastes at a CDHS approved hazardous waste facility.

In the Annual Compliance Reports Luz shall provide the CEC CPM verification that all wastes have been disposed of in the appropriate landfills.

2 Luz shall obtain a Hazardous Waste Generator Permit from the California DHS and a Harardous Waste Generator/Handler Permit from the San Bernardino County Department of Environmental Health Services for the management of hazardous wastes from SEGS Unit VIII.

Verification: Within 30 days after commencing commercial operations of SEGS Unit VIII, Luz shall submit to the CEC CPM a copy of the Hazardous Waste Generator Permit for SEGS Unit VIII or a letter from the DHS stipulating a waiver for this permit.

3 If Luz uses an anticorrosive agent other than Powerline 1200 and Powerline 3040 in the condensate/feedwater system and the cooling tower as proposed, Luz shall analyze the HTF heater cleaning waste and cooling tower blowdown to determine if they are hazardous under Title 22 of the CCR and verify that their use would present no health hazard to humans or the environment. Luz shall notify DHS, CEC CPM and LRWQCB of the results of this analysis. Luz shall then obtain a waste discharge permit from the LRWQCB if required, and dispose of these wastes in a manner permitted by the LRWQCB.

Verification: Luz shall provide a copy of the permit to the CEC CPM at least 30 days before discharge. In addition, Luz shall verify that the use of the new anticorrosive agent will not present a health hazard to humans or the environment.

4 If Luz stores hazardous wastes on-site for more than 90 days, Luz shall obtain a determination from the DHS that the requirements of a hazardous waste storage

or disposal facility permit have been satisfied. Storage and disposal of such wastes shall be in accordance with the DHS regulations.

Verification: Luz shall notify the CEC CPM within 7 days if Luz applies for and/or obtained a Hazardous Waste Facility Permit from the DHS.

5 Luz shall dispose of sanitary wastes in a manner approved by the LRWQCB and the San Bernardino County DEHS.

Verification: Thirty (30) days prior to commercial operation of SEGS Unit VIII, Luz shall submit to the CEC CPM, verification that the sanitary wastes will be disposed of in a manner approved by the LRWQCB and the San Bernardino County DEHS.

Ninety (90) days before commercial operations of SEGS Unit VIII, Luz shall submit to the CEC CPM verification that the plans and specifications for its as-built sanitary waste disposal system, at SEGS Unit VIII, plans and specifications have been approved by the LRWQCB and the San Bernardino County DEHS

6 Luz shall annually prepare a report on all project-related hazardous wastes along with all waste disposal methods and the facilities used. The report shall also include the quantities of each type of waste generated and disposed of.

Verification: Luz shall submit a hazardous waste report to the CEC CPM in the Annual Compliance Report.

7 Luz shall notify the CEC of any waste management-related enforcement action taken or proposed action to be taken against Luz, and any action against the waste hauler or disposal facility operator (that Luz has knowledge of) during the construction and operation of the proposed project.

Verification: Luz shall notify the CEC CPM within 10 days of learning of any such impending enforcement action.

8 Because of the hazardous nature of the heat transfer fluid (HTF), Luz shall maintain records of all shipments of HTF to SEGS Unit VIII. All HTF must be accounted for in the Annual Compliance Report.

Verification: Within 90 days following certification, Luz shall submit an HTF accounting plan to the CEC CPM for comment and subsequent approval.

9 Luz shall immediately notify the CEC CPM of any HTF spill estimated by them to be 20 gallons or more.

Verification: Within 48 hours of a 20 gallon or greater spill, Luz shall notify the CEC CPM of the spill, and shall submit written verification to the CEC CPM of the spill and cleanup measures initiated.

10 If there are HTF spills at SEGS Unit VIII, Luz will clean up the hazardous waste to a level that is less than the 3,000 mg/kg of HTF in the soil as verified by a DHS

certified laboratory or a CEC and DHS approved methodology. If DHS determines at a later date, that the HTF in the soil is hazardous at a level less than 3,000 mg/kg, Luz shall undertake additional clean up measures as prescribed by DHS. If DHS determines at a later date, that the HTF in the soil is not hazardous at a level of 3,000 mg/kg but some higher level, Luz shall modify its cleanup procedures as prescribed by DHS.

Verification: Within 30 days of an HTF spill, Luz shall submit to the CEC CPM a map depicting the HTF spill location and a report describing the cause of the spill, volume of HTF spilled, the volume of hazardous material removed, the level of clean up achieved and actions taken to prevent a similar spill. Within 90 days of an HTF spill, Luz shall submit to the CEC CPM a manifest of the disposed HTF.

11 Luz shall develop and utilize a solid waste management plan which addresses the disposition of solid non-hazardous wastes from all Luz SEGS facilities including future plants at Harper Lake. The plan shall identify all approved landfill sites in the region which Luz may use for solid waste disposal and describe the amount of waste to be sent annually to each facility. The plan shall ensure that neither the capacity or remaining life of any facility is unduly impacted by the cumulative generation of solid waste from Luz facilities.

Verification: Within 6 months of project certification, Luz shall submit a solid waste management plan to the CEC CPM.

SEGS VIII (88-AFC-01C)
WATER RESOURCES CONDITIONS OF CERTIFICATION

WATER SUPPLY

1 For each well Luz drills, develops or uses for extracting water from the Harper Valley Basin, Luz shall provide the following:

- driller's well log, if available;
- drawdown-discharge curve and recovery test; and
- a 1:24,000 map depicting the location of the well.

Verification: The information specified in this condition shall be provided to the California Energy Commission (CEC) Compliance Project Manager (CPM) within 30 days after completion of or initiation of use of a well to supply SEGS Unit VIII.

2 For each Luz well extracting groundwater from Harper Valley Basin, Luz shall annually provide the following:

- pre-and-post pumping standing water levels;
- pumping rates in gallons per minute; and
- total extraction in acre-feet.

Verification: Luz shall forward a copy of the records specified above to the CEC CPM in the Annual Compliance Report.

3 Luz shall install in-line flow meters on all water wells supplying SEGS Unit VIII.

Verification: After completion of each well, Luz shall submit to the CEC CPM as-built drawings which depict the installation of in-line meters on each water supply well.

WATER QUALITY

4 Luz shall file an application with and obtain an NPDES Permit, if required, from the LRWQCB for cooling tower blowdown wastes discharged to the holding ponds and released to the Harper Lake Wetlands, prior to the start of operations.

Verification: Prior to commercial operation of SEGS Unit VIII, Luz shall provide a copy of the NPDES Permit or a statement that a permit was not required to the CEC CPM.

5 Luz shall file applications for and obtain waste discharge requirements from the LRWQCB for cooling tower blowdown wastes and liquid wastes discharged to the holding or evaporation ponds for SEGS Unit VIII before the start of operation.

Verification: Prior to commercial operation of SEGS Unit VIII, Luz shall submit to the CEC CPM a copy of waste discharge requirements.

6 For liquid wastes discharged to the holding or evaporation ponds, Luz shall notify the CEC CPM of any change in the waste discharge requirements issued by the LRWQCB.

Verification: In its annual compliance report to the CEC CPM, Luz shall indicate the status of the current waste discharge requirements and attach the quarterly reports required by the LRWQCB for SEGS Unit VIII.

FLOOD HAZARD

7 Luz shall implement measures adequate to protect flood control channels and related structures from scouring and erosion.

Verification: Prior to any construction activity Luz shall submit an erosion control plan to the CEC CPM which includes detailed plans and drawings delineating protective measures for flood and drainage control channels and dikes. The CEC CPM shall review and provide approval, rejection or necessary modification within 15 working days after receipt. This submittal shall be timed to allow the CEC CPM an adequate period for complete review and comment.

8 Luz shall implement measures adequate to protect adjacent private property from flooding, scouring, and erosion as a result of the construction and operation of SEGS Unit VIII.

Verification: Luz shall submit to the CEC CPM a written statement that they have complied with the above condition in their annual compliance report. Luz shall also include a description of any road maintenance or other required repairs on adjacent properties as a result of flooding, scouring, or erosion.

9 To protect SEGS Unit VIII site from flood flows along its western boundary Luz shall design, construct and maintain the following facilities:

- a dike capable of withstanding and diverting floods generated by a 1 in 100-year recurrence interval storm; and
- a low flow channel at the west toe of the dike capable of carrying flows generated by a 1 in 5-year recurrence interval storm.

Verification: Prior to initiation of power generation at the SEGS Unit VIII facility, Luz shall submit to the CEC CPM a plan, profile and cross-sectional as-constructed drawings of the dike and channel.

10 To protect SEGS Unit VIII site from flood flows along its southern boundary, Luz shall design, construct and maintain a dike and a diversion channel capable of withstanding and diverting flows generated from a 1 in 10-year recurrence interval storm.

Verification: Prior to initiation of power generation at the SEGS Unit VIII facility, Luz shall submit to the CEC CPM a plan, profile and cross-sectional as constructed drawings of the dike and channel.

11 Luz shall extend the 1 in 100-year storm flow criteria flood control dike and the 1 in 5-year low flow channel along the west side of the site to the south section line

of section 25 within two years of the completion of the SEGS Unit VIII flood control facilities regardless of the construction scheduling of SEGS Unit IX.

Verification: Prior to construction of the SEGS Unit VIII facility Luz shall certify in writing to the CEC CPM that even if SEGS Unit IX is not built, that the flood control dike to accommodate 1 in 100-year storm flows and channel to contain 1 in 5-year storm flows will be extended to the southwest corner of section 25 (T11N R5W SBBM) within a two year time period beginning upon completion of SEGS Unit VIII flood control facilities regardless of the construction scheduling of SEGS Unit IX.

12 Luz shall acquire in fee or easement a strip of land approximately 1,700 feet in width which runs parallel to and lies westerly of the west protective dike to be constructed along the west side of section 24, T11N, R5W, SBBM.

Verification: Prior to the start of construction of the dike or channel, Luz shall provide the CEC CPM with a copy of the Grant Deed (fee or easement) for, or which includes, the strip of land described above.

13 Luz shall obtain, prior to the start of construction of the dike and low flow channel extension into Section 25 (T11N, R5W, SBBM), a right-of-way or flow easement over any and all lands not owned by Luz west of the westerly section line of Section 25 subject to overflow or meander of surface flows generated by a 1 in 100-year recurrence interval storm.

Verification: Prior to the start of construction of the dike or channel, Luz shall provide to the CEC CPM record documents with the San Bernardino County Recorder showing title to or flow easements over all properties west of Section 25 subject to the overflow or meander of surface flows generated by a 1 in 100-year recurrence interval storm and shall within 30 days of recordation furnish the CEC CPM with copies of all such recorded documents.

14 Luz shall obtain a permit from the San Bernardino County Department of Environmental Health for all wells drilled in the County.

Verification: Luz shall submit all copies of the well drilling permits as specified above to the CEC CPM in its Annual Compliance Report.

APPENDIX B

COUNTY OF SAN BERNARDINO FINAL STAFF REPORT

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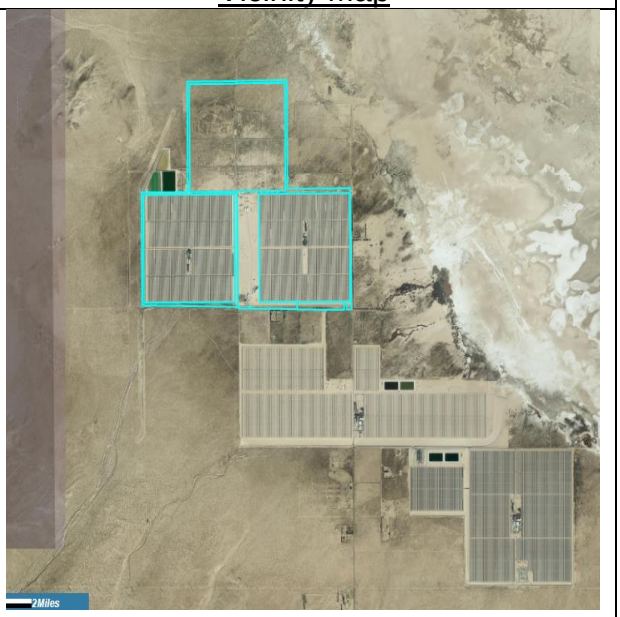
LAND USE SERVICES DEPARTMENT
PLANNING COMMISSION STAFF REPORT

HEARING DATE: October 3, 2019	**AGENDA ITEM #4**
Project Description	Vicinity Map

APN: 0490-101-55 (Multiple Parcel Associations)
Applicant: SIMON DAY/LOCKHART SOLAR PV, LLC
Community/ Supervisorial District: HINKLEY 1ST SUPERVISORIAL DISTRICT
Location: 43880 HARPER LAKE ROAD HINKLEY, CA 92347
Project No: P201900125
Staff: ANTHONY DELUCA/SENIOR PLANNER
Rep: NOELLE STEELE/MICHAEL BAKER INTERNATIONAL
Proposal: A CONDITIONAL USE PERMIT TO DECOMMISSION AN EXISTING 160 MW SEGS VIII AND IX CONCENTRATED THERMAL SOLAR FACILITY AND REDEVELOP AS A PHOTOVOLTAIC (PV) SOLAR FACILITY AND ASSOCIATED INFRASTRUCTURE WITH NO EXPANSION OF THE 1,073 ACRE SITE OR CAPACITY



Hearing Notices Sent On: September 20, 2019 **Report Prepared By: Anthony DeLuca**

SITE INFORMATION

Parcel Size: **1,073 Acres**
Terrain: **Gently sloping**
Vegetation: **Developed site**

SURROUNDING LAND DESCRIPTION:

AREA	EXISTING LAND USE	LAND USE ZONING DISTRICT
Site	Developed Thermal Solar Facility	Rural Living (RL)
North	Vacant	Rural Living (RL)
South	Vacant/Water Well Site	Rural Living (RL)
East	Vacant	Rural Living (RL)
West	Vacant	Rural Living (RL)

	AGENCY	COMMENT
City Sphere of Influence:	N/A	N/A
Water Service:	N/A	Existing On site well
Sewer Service:	N/A	Existing Septic System

STAFF RECOMMENDATION:

That the Planning Commission **ADOPT** the Notice of Exemption, **ADOPT** the Findings, **APPROVE** the Conditional Use Permit based on the recommended findings and subject to the Conditions of Approval, and **DIRECT** Staff to File a Notice of Exemption[1].

[1] In accordance with Section 86.08.010 of the San Bernardino County Development Code, this action may be appealed to the Board of Supervisors.

VICINITY MAP AND OFFICIAL LAND USE DISTRICT MAP

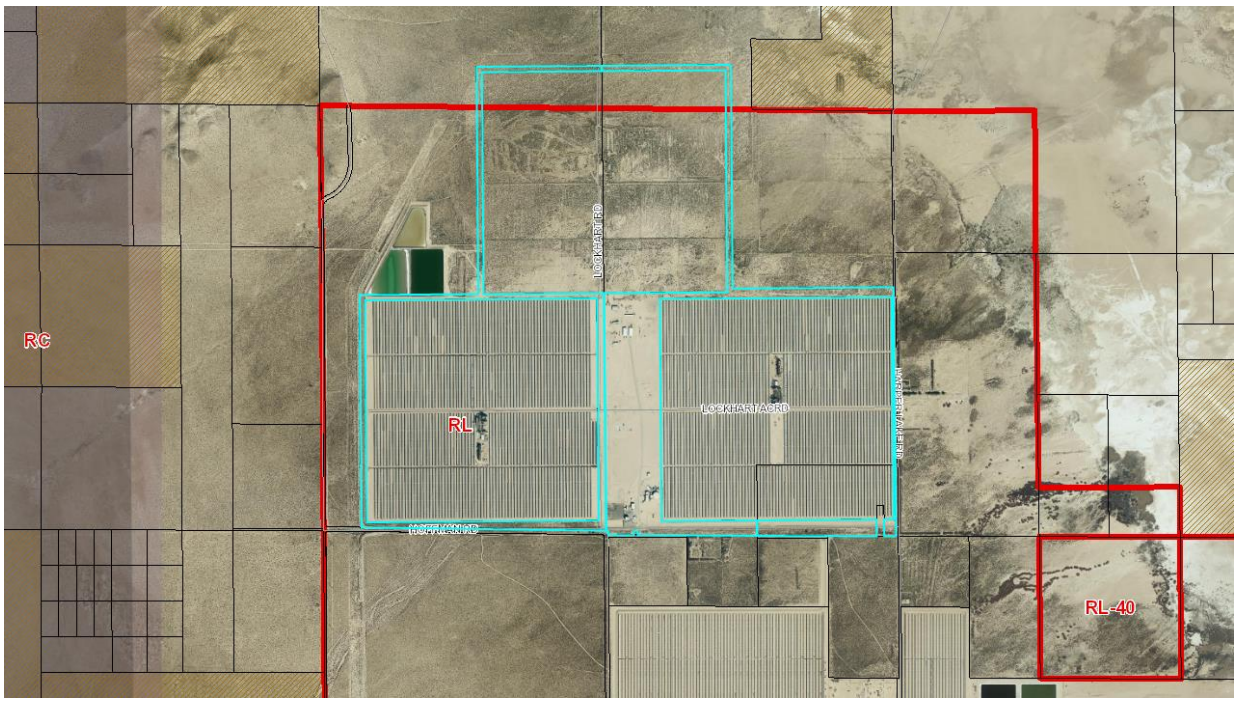
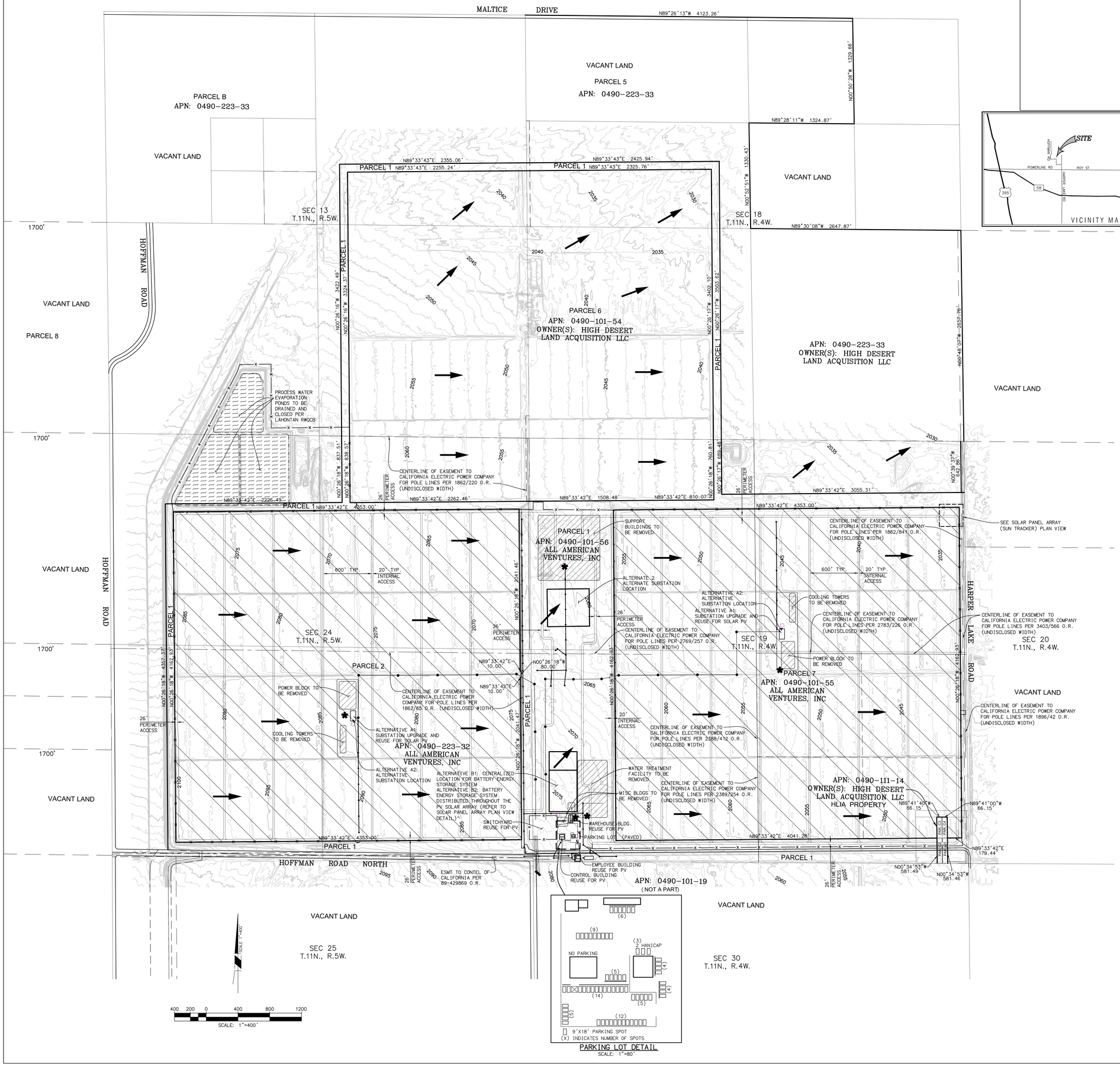
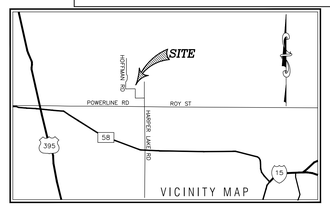


Figure 1 Land Use Designations

Figure 2 Area of Proposed Reconstruction





OFFICIAL USE ONLY

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO AND DESCRIBED AS FOLLOWS:

PARCEL A:
PARCEL NO. 1 OF PARCEL MAP NO. 12194, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
EXCEPTING ALL OIL AND GAS AND TO IT OR PERSONS AUTHORIZED BY IT THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME, UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT FROM THE UNITED STATES OF AMERICA TO JAY HUBERT MARSHALL, RECORDED MAY 11, 1927, IN BOOK 231, PAGE(S) 86 OF OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.
EXCEPT ONE-HALF IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950 IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-101-56

PARCEL B:
PARCEL NO. 2 OF PARCEL MAP NO. 12194, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
EXCEPT ONE-HALF INTEREST IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950, IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-223-32

PARCEL NO. 7 OF PARCEL MAP NO. 12194, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, INCLUSIVE, OF PARCEL MAPS, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
ALSO EXCEPT ONE-HALF IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950 IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-101-55

PARCEL C:
PARCEL C-1
THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF
SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
EXCEPTING THEREFROM THE EASTERLY 2 ACRES.
PARCEL C-2
THE EASTERLY ONE-FIFTH OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
PARCEL C-3
THE SOUTHERLY THREE-QUARTERS OF THE EASTERLY ONE-FIFTH OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT.
PARCEL C-4
THE SOUTHERLY THREE-QUARTERS OF THE WESTERLY ONE-FIFTH OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
APN: 0490-111-14

UTILITIES:

WATER:
POTABLE WATER TRUCKED IN BY SPARKLETTS,
NON-POTABLE WATER PROVIDED BY ON-SITE WELL

SEWAGE:
SEPTIC SEWER SYSTEM

GAS:
PACIFIC GAS & ELECTRIC
ADDRESS: PO BOX 997300, SACRAMENTO, CA 95899-7300
PHONE #: 1-800-743-5000

ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
ADDRESS: PO BOX 800, ROSEMEAD, CA 91770
PHONE #: 1-800-655-4555

PHONE:
FRONTIER COMMUNICATIONS
ADDRESS: 401 MERRIT 7, NORWALK, CT 06851
PHONE #: 1-877-730-7106

CABLE TV:
NO CABLE SERVICE REQUIRED

PARKING SUMMARY:

BUILDING: 10,320 SF
REQUIRED: 1 SPACE/ 1,000 SF = 11 SPACES
PROVIDED: 54 STANDARD SPACES
3 ADA SPACES
57 TOTAL

PARCEL NUMBERS:

APN 0490-223-32, 0490-101-55, 0490-101-56, 0490-111-14

CONDITIONAL USE PERMIT

APPLICANT DATA:
SIMON DAY
LOCKHART SOLAR PV, LLC
11455 EL CAMINO REAL, SUITE 160
SAN DIEGO, CA 92130
(415)404-0807
PHONE: (415)404-0807

PROPERTY OWNER:
ALL AMERICAN VENTURES c/o PEARL ELIAS
APN: 0490-223-32,0490-101-55,0490-101-56
PO BOX 340
MARION STATION, PA 19066
PHONE: (484)270-8051

PROPERTY OWNER:
HIGH DESERT LAND ACQUISITIONS, LLC c/o TIMOTHY GARCIA
APN: 0490-111-14
700 UNIVERSE BLVD
JUNO BEACH, FL 33408-2657
PHONE: (561)691-7256

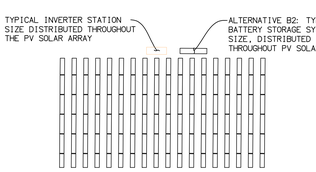
LEGEND

- FLOW ARROW
- PROPOSED PV SOLAR FIELDS
- PROPOSED REMOVAL AREA
- OVERHEAD POWER LINES
- STANDARD TRASH & RECYCLE DUMPSTERS 6'X 5'

* NO SIGNS PROPOSED
* NO PROTECTED PLANTS
* NO NEW DEDICATED ROADWAYS

NOTE:

THE FINAL LAYOUT OF PV ARRAYS ARE SUBJECT TO MODIFICATION PURSUANT TO FINAL DESIGN ENGINEERING. HOWEVER, ALL ROADWAYS WILL COMPLY WITH THE 20' FOR INTERIOR AND 26' FOR PERIMETER ROADWAY WIDTHS PER SB COUNTY FIRE AUTHORITY REQUIREMENTS. SHOULD THE LOCATION AND/OR REQUIRED ACCESS ROUTES CHANGE THEY SHALL BE FOUND IN SUBSTANTIAL CONFORMANCE PROVIDED THE ABOVE CRITERIA IS MET AND WITHIN THE EXISTING AREA OF DEVELOPMENT.



SOLAR PANEL ARRAY (SINGLE AXIS TRACKER)
PLAN VIEW

Michael Baker INTERNATIONAL
5 Hutton Centre Drive, Suite 500
Santa Ana CA 92707
Phone: (949) 472-3505
MBAKERINTL.COM

LOCKHART SOLAR PV
PLOT PLAN-
FORMERLY SEGS VIII & IX CSP POWER PLANTS

COUNTY OF SAN BERNARDINO

SHEET 1 OF 1
DATE: 8/01/2019

h:\PDATA\1696\38\CADD\LAND\DLV\SITEPLAN\LOCKHART SOLAR PROJECT PLOT PLAN.DWG TAYLOR.JORDAN 8/1/19 4:00 pm

SITE PHOTOS

Figure 3 View from Project Site toward the North

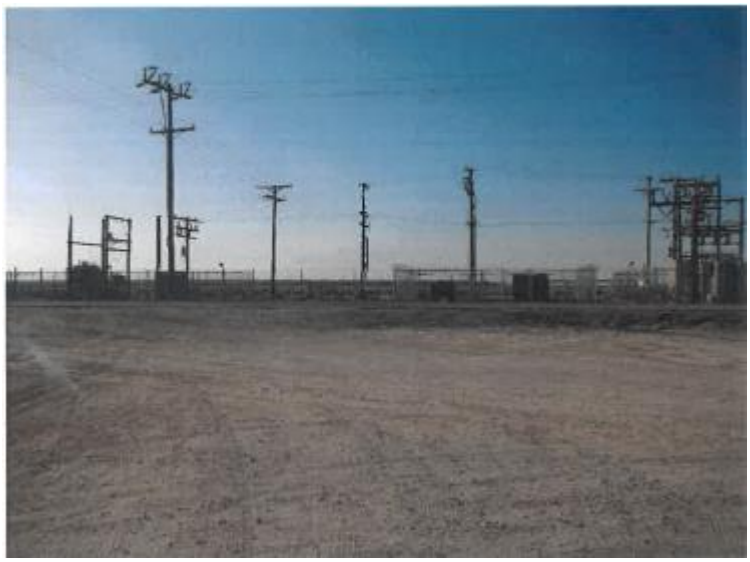


Figure 4 View from Project Site toward the South

Figure 5 View of Project Site toward the East

Figure 6 View of Project Site toward the West

PROJECT DESCRIPTION AND BACKGROUND:

The applicant is requesting approval of a Conditional Use Permit (CUP) involving the decommissioning and demolition of a previously permitted 160-megawatt (MW) SEGS VIII and IX concentrated solar thermal power facility on 1,073 acres and the redevelopment, at the same location, of a new photovoltaic (PV) solar facility including a 160 MW Battery Energy Storage System (BESS), and associated infrastructure necessary to generate up to a combined 160 megawatts (MW) AC of renewable electrical energy and/or energy storage capacity (Project). This is the same amount of electricity generated by the current facility being replaced.

Power generated by the proposed Project would be transferred to the Kramer Junction substation utilizing the existing 13.8-mile 220 kV gen-tie line. The new solar PV facilities would consist of solar arrays mounted on either fixed or single-axis tracking structures mounted to vertical posts. The solar facilities would operate year-round during the daylight hours.

Depending on the type of technology (modules) used, the panels would measure between four and seven feet in length, and the total height of the panel system measured from ground surface would be approximately seven to 12 feet. The length of each row of panels would be approximately 300 feet and would be oriented in the east-west direction in the case of a fixed-mount array being used, and oriented in the north-south direction in the case of single-axis trackers being used.

Access roads would be located throughout the Project area. Spacing between each solar panel row would be approximately eight to 22 feet. Single-axis tracking systems would employ a motor mechanism that would allow the arrays to track the path of the sun (from east to west) throughout the day. The motors would be installed after the horizontal cross-members are in place. In the morning, the panels would face the east. Throughout the day, the panels would slowly move to the upright position at noon and on to the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.

The County Planning Division sent out the Notice of Hearing on September 20, 2019, advertising the Planning Commission Hearing to be held on October 3, 2019.

PROJECT ANALYSIS:

Renewable Energy Regulation: Over the last decade or more, the state has mandated that public utilities acquire more renewable energy, including solar-generated electricity. The resulting influx of applications to the County for commercial solar energy generation projects, coupled with concerns about the adequacy of the County's land use regulation of such projects, prompted the Board of Supervisors (Board) to enact a temporary moratorium on June 12, 2013 (Item 12). On December 17, 2013 (Item No. 103), the Board adopted an ordinance amending Chapter 84.29, Renewable Energy Generation Facilities, of the Development Code and terminating the moratorium. These amendments established 31 specific findings that must be made for approval of a commercial solar energy generation project.

On August 8, 2017 (Item 51), the Board adopted the Renewable Energy and Conservation Element of the General Plan (RECE), defining County goals and policies related to renewable energy and energy conservation, including policies governing siting and development of renewable energy generation projects. As proposed by staff, RECE contained Policy 4.10, which prohibited utility-oriented renewable energy (RE) project (10 MW and greater) in areas zoned Rural Living (RL) or areas within defined community plans. The Board adoption of the RECE excluded Policy 4.10, but staff was directed to return the siting issue to the Planning Commission for further study.

The Planning Commission conducted a public hearing on May 24, 2018, recommending that the Board (1) amend the RECE by adopting Policy 4.10[1], (2) amend Policy 5.2 to add existing energy generation

[1] With the suggestion that the Board, under its purview, consider moderating the policy so as to avoid a blanket prohibition of utility-oriented renewable energy generation projects in Rural Living zoning districts.

sites to those identified as suitable for utility-oriented renewable energy generation projects, and (3) add Policy 5.9 (collaborating with utilities, the California Energy Commission, and the Bureau of Land Management to plan for renewable energy generation facilities to be located on public lands, apart from existing unincorporated communities). Thereafter, on February 28, 2019 (Item 1), the Board considered and adopted the Planning Commission recommendation.

With the adoption of Policy 4.10, a newly proposed utility-oriented RE project is prohibited in RL Land Use Districts. The Project site in this case is located within a RL Land Use District but remains consistent with the RECE because the Project is an upgrade to an existing commercial solar energy facility. The Project includes the decommissioning and demolition of the existing thermal power facility and the redevelopment of the proposed PV solar facility within the existing solar site and with no expansion of the existing footprint. The Project is consistent with RE Policy 5.2(x), adopted at the same time as Policy 4.10, which includes existing energy generation sites, like the Project site, as a suitable location for utility-oriented RE generation projects.

In order to ensure future consistency with the County's RECE goals and policies, a proposed zoning change from RL to Resource Conservation (RC) is being recommended with the land use changes in the upcoming Countywide Plan update. This action will be part of a larger effort aimed at existing RE project sites, which would allow existing solar facilities to remain in compliance with County Development Code Standards.

In order to approve a commercial solar facility, in addition to making the findings required under Section 85.06.040(a) of the County Development Code relative to a CUP, the Project must meet the Required Findings for Approval of a Commercial Solar Energy Facility Section 84.29.035. Considering the recently adopted RECE, and proposed revisions to the Countywide Plan update, the Planning Commission will be able to make these additional findings. Exhibit A "Findings" discusses in detail the Project's consistency with Development Code Section 84.29.065 pertaining to the development of commercial solar facilities.

Fencing: Existing security fencing and electronic gates will be used for the Project. Desert tortoise fencing is already in place and will continue to be maintained for the life of the Project (see **Figure 7** below).

Figure 7 Existing Tortoise Fencing

Interconnection to the Grid: The Project would also require telecommunication facilities to meet the communication requirements for interconnecting with the Kramer Junction Substation and to support remote Project operations monitoring. To provide for communication, a fiber-optic cable would be placed on the gen-tie line poles and a microwave system or an underground fiber optic cable installed within the existing transmission line roadway would be used to provide redundant communications required by Southern California Edison (SCE). The Project would use local exchange carrier services with Frontier, already in use, for telecommunication to support remote monitoring requirements.

The Project will also utilize a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system is critical to the California Independent System Operator (CAISO) and SCE utility interconnection, and for the proper operation and maintenance, which uses proprietary software; a fiber-optic transmission system; a telephone, radio, and/or microwave communication network; and other means of communication such as radio links and phase loop communication systems. The SCADA system functions as a remote start, stop, reset, and tag out for the facility, thus minimizing the manpower and site diagnostic information generated from the panels. The SCADA system would also control the substations, allowing for fully centralized Project operation to meet all CAISO and utility interconnection requirements.

Operations and Maintenance: Typical operations and maintenance activities that would occur on the Project site during operation include, but are not limited to, liaison and remote monitoring; administration and reporting; semi-annual and annual services; remote operations of inverters; site security and management; additional communication protocol; repair and maintenance of solar facilities, substations, electrical transmission lines, and other Project facilities; and periodic panel washing.

Solid and Non-Hazardous Waste: The Project would produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning modules, electrical materials, empty containers, and other miscellaneous solid waste, including the typical refuse generated by workers. Most of these materials would be collected and delivered back to the manufacturer or to recyclers. Non-recyclable waste would be placed in covered dumpsters and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

Hazardous Waste: Limited amounts of hazardous materials would be stored or used on the site during operations, including diesel fuel, gasoline and motor oil for vehicles, mineral oil to be sealed within the transformers, and lead-acid-based and/or lithium-ion batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during operation of the Project.

Parking: Chapter 83.11, section 83.11.040 table 83-15 requires eleven (11) spaces including one (1) ADA accessible space for a commercial building with the Project's proposed square footage. A total of fifty-seven (57) parking spaces are proposed including three (3) ADA van accessible space.

Setbacks: Setback requirements as described in Chapter 82.05, section 82.05.060 table 82-13B for the RL Land Use District Desert Region are as follows: Front (25'), Side-Street Side (25'), Side-Interior (20'), Rear (20'). The proposed Project meets all required setbacks for the proposed land use and the existing zoning.

Hours of Operation: The facility is intended to operate year round and would generate electricity during the daylight hours. The facility would be designed to produce up to a combined 160MW of solar power and/or energy storage capacity at the point of interconnection to the transmission grid.

Water Service: Existing water wells will be utilized for non-potable water, while potable water will be delivered via contract with Sparkletts or a similar provider.

Sewer System: An existing Onsite Water Treatment System (OWTS) will continue to be utilized.

ENVIRONMENTAL REVIEW:

Planning Staff has determined that the Project proposal is exempt from the California Environmental Quality Act (CEQA) as a Class 2 Categorical Exemption under Section 15302(c) of the CEQA Guidelines related to replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The new structures will be located on the same site and within the same footprint and will have the same solar utility purpose and capacity as the structures being replaced. In addition, the proposed facility reduces water usage and visual impacts through reduced panel heights, and reduces GHG emissions by shutting down the existing gas fired heaters.

In compliance with CEQA, the proposed Project is exempt pursuant to CEQA Guideline Section 15302(c); "Replacement or Reconstruction" (c) *replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.* Therefore, the filing of a Notice of Exemption is recommended. The exemption adopted for this Project reflects the County's independent judgment in making this determination.

RECOMENDATION: That the Planning Commission:

1. **ADOPT** the Notice of Exemption;
2. **ADOPT** the Findings as contained in the staff report;
3. **APPROVE** the Conditional Use Permit involving the decommissioning of the previously permitted 160-megawatt (MW) SEGS VIII and IX concentrated solar thermal power projects and the redevelopment, at the same location, of a new photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined 160 megawatts (MW) AC of renewable electrical energy and/or energy storage capacity subject to the Conditions of Approval; and
4. **DIRECT** staff to file the Notice of Exemption

ATTACHMENTS:

EXHIBIT A: Findings
EXHIBIT B: Conditions of Approval
EXHIBIT C: Site Plan
EXHIBIT D: Letter of Intent

EXHIBIT A

Findings

FINDINGS: CONDITIONAL USE PERMIT

A Conditional Use Permit (CUP) involving the decommissioning of a previously permitted 160-megawatt (MW) SEGS VIII and IX concentrated solar thermal power facility and the redevelopment, at the same location, of a new photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined 160 megawatts (MW) AC of renewable electrical energy and/or energy storage capacity on 1,073 acres in the Rural Living (RL) land use district: Hinkley (Project).

The following are the required findings, per the San Bernardino County Development Code (Development Code) Section 85.06.040, and supporting facts for the Project:

1. **The site for the proposed use is adequate in terms of shape and size to accommodate the proposed use and all landscaping, loading areas, open spaces, parking areas, setbacks, walls and fences, yards, and other required features pertaining to the application.**
   The proposed Project would include the development of solar facilities and associated infrastructure with the capacity to generate up to 160 MW of renewable electric energy and/or energy storage capacity utilizing the same footprint as the existing thermal solar facility to be decommissioned. Power generated by the proposed Project would be transferred to the Kramer Junction substation utilizing the existing 13.8-mile 220 KV gen-tie line. The solar facilities would use PV technology and consist of solar arrays mounted on either fixed or tracking structures mounted to vertical posts. The solar facilities would operate year-round and would generate electricity during the daylight hours. All setbacks meet the requirements of the Development Code for the proposed land use and the existing zoning. Existing security fencing and electronic gate will be used for the Project. Desert tortoise fencing is already in place and will continue to be maintained for the life of the project. Chapter 83.11, section 83.11.040 table 83-15 requires eleven (11) spaces including one (1) ADA accessible space for a commercial building with this proposed square footage. A total of fifty-seven (57) parking spaces are proposed, including three (3) ADA van accessible space, for the Project.

2. **The site for the proposed use has adequate legal and physical access which means that the site design incorporates appropriate street and highway characteristics to serve the proposed use.**
   The Project site is 1,073 acres including three (3) parcels located at 43880 Harper Lake Road in an unincorporated area of San Bernardino County in the community of Hinkley. The site for the proposed use has adequate access. Access roads would be located throughout the Project area. Spacing between each solar panel row would be approximately eight to 22 feet. Single-axis tracking systems would employ a motor mechanism that would allow the arrays to track the path of the sun (from east to west) throughout the day.

3. **The proposed use will not have a substantial adverse effect on abutting properties or the allowed use of the abutting properties, which means that the use will not generate excessive noise, traffic, vibration, lighting, glare, or other disturbance.**
   The Project is conditioned to comply with the Development Code with respect to noise, vibration, lighting and glare. The Project will comply with Chapter 83.01 General Performance Standards for glare and lighting, noise, vibration, and other disturbances pursuant to the Development Code. The Project is also a replacement or reconstruction of an existing utility system and/or facility involving negligible or no expansion of capacity. The new structures associated with the Project will be located on the same site and within the same footprint and will have the same solar utility purpose and capacity as the structures being replaced. The proposed facility reduces water usage and visual impacts through reduced panel heights, and reduces GHG emissions by shutting down the existing gas fired heaters.

4. The proposed use and manner of development are consistent with the goals, maps, policies, and standards of the County General Plan, Renewable Energy and Conservation Element (RECE) and any applicable Community or Specific Plan.

The proposed Project, together with the provisions for its design and improvement, is consistent with the County General Plan and RECE. The Project specifically implements the following goals, policies and objectives from the RECE adopted August 8, 2017 (amended February 2019):

Goal LU 1: The County will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

***Consistency*:** The Project site is in the same location as the thermal solar facility on SEGS VIII and IX to be decommissioned and will utilize existing infrastructure to the greatest extent possible. The facility is adjacent (north) to 1,750 acre Mojave Solar site. The Project is sufficiently separated from existing communities and rural residential areas such that adverse effects are avoided. The Project is not located within a quarter of a mile of any residential developments or single residences. The project design includes setbacks from roads as well as fencing to shield the facility from public view. Decommissioning of the site will occur in compliance with Development Code Section 84.29.060, which requires removal of site facilities when operations cease. The requirement for a removal surety bond will be included in the Conditions of Approval to be adopted for the project.

Goal CO 8: The County will minimize energy consumption and promote safe energy extraction, uses and systems to benefit local regional and global environmental goals.

***Consistency*:** The Project is located on the site of an existing energy generation site. The Project will include a new photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined 160 megawatts (MW) AC of renewable electrical energy and/or energy storage capacity on 1,073 acres. The use of clean air technologies on the Project site will ensure good air quality for the County residents, businesses, and visitors by way of safe energy extraction, uses and systems.

RE Goal 5: Renewable energy facilities will be located in areas that meet County standards, local values, community needs and environmental and cultural resource protection priorities.

***Consistency*:** The Project is located on the site of an existing energy generation site. The proposal is to convert from Thermal Solar generation to Photovoltaic (PV) Solar within the same footprint of the existing energy generation site in the unincorporated community of Hinkley. Considering features of the site design and the proximity to other solar generation facilities, the Project is appropriately sited and compatible with County standards, local values, community needs and environmental and cultural resource protection priorities.

RE Objective 5.2: Utility-oriented Renewable Energy (RE) facilities will be subject to site selection criteria consistent with County priorities expressed in the RECE.

***Consistency*:** The Project is located on the site of an existing energy generation site.

RE Policy 5.2(x): Utility-oriented RE generation projects on private land in the unincorporated County will be limited to the site-type below, in addition to meeting criteria established in the RECE and Development Code: … (x). Existing energy generation sites.

Consistency: The Project is located on the site of an existing energy generation site. The proposal is to convert from Thermal Solar generation to PV Solar within the same footprint of the existing energy generation site in the unincorporated community of Hinkley. Considering features of the site design, the RECE, the Development Code, and the proximity to other solar generation facilities, the Project is appropriately sited and compatible with the surrounding area.

5. There is supporting infrastructure, existing or available, consistent with the intensity of the development, to accommodate the proposed project without significantly lowering service levels.

During construction, the primary community infrastructure utilized by the Project will be the road system. Existing roadways that serve the Project site include Harper Lake Road, and Hoffman Road. A Construction Management Plan is required prior to any grading activities which will ensure that all public roadways utilized during construction will be maintained. Sewer service will utilize the existing approved septic system.

6. The lawful conditions stated in the approval are deemed reasonable and necessary to protect the overall public health, safety and general welfare.

The Project conditions of approval include measures that require the developer to comply with the performance measures outlined in the Development Code. The Project has been evaluated by County departments and as part of the environmental review process to respond to specific development needs and reduce potential environmental impacts.

7. The design of the site has considered the potential for the use of solar energy systems and passive or natural heating and cooling opportunities.

The sole purpose of the proposed Project is to decommission an existing thermal solar facility, and construct and operate a photovoltaic solar generating facility that will contribute significant quantities of renewable energy for use by the larger public.

FINDINGS: CALIFORNIA ENVIRONMENTAL QUALITY ACT

Planning Staff determined that the Project proposal is exempt from the California Environmental Quality Act (CEQA) as a Class 2 Categorical Exemption under CEQA Guidelines Section 15302(c): Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The new structures will be located on the same site and within the same footprint and will have the same solar utility purpose and capacity as the structures being replaced. In addition, the proposed facility reduces water usage and visual impacts through reduced panel heights, and reduces GHG emissions by shutting down the existing gas fired heaters.

Therefore, the filing of a Notice of Exemption is recommended. The exemption adopted for this Project reflects the County's independent judgment in making this determination.

FINDINGS: COMMERCIAL SOLAR FACILITY

The following are the required findings, per the San Bernardino County Development Code (Development Code) Section 84.29.035, and supporting facts for approval of the Project as a Commercial Solar Facility. In making this findings, the review authority has considered (1) the characteristics of the Project's commercial solar energy facility development site and its physical and environmental setting, as well as the physical layout and design of the Project in relation to nearby communities, neighborhoods, and rural residential uses; and (2) the location of other commercial solar energy generation facilities that have been constructed, approved, or applied for in the vicinity, whether within a city or unincorporated territory, or on State of Federal land. The findings of fact for Development Code Section 84.29.035, subdivision (c), are as follows:

Finding (c)(1): The proposed commercial solar energy facility is either (A) sufficiently separated from existing communities and existing/developing rural residential areas so as to avoid adverse effects, or (B) of a sufficiently small size, provided with adequate setbacks, designed to be lower profile than otherwise permitted, and sufficiently screened from public view so as to not adversely affect the desirability and future development of communities, neighborhoods, and rural residential use.

> ***Consistency.*** *The Project site is in the same location as the thermal solar facility on SEGS VIII and IX to be decommissioned and will utilize existing infrastructure to the greatest extent possible. The facility is adjacent (north) to 1,750 acre Mojave Solar site. The Project is sufficiently separated from existing communities and rural residential areas such that adverse effects are avoided. The Project design includes setbacks from roads as well as fencing to shield the facility from public view.*

Finding (c)(2): Proposed fencing, walls, landscaping, and other perimeter features of the proposed commercial solar energy generation facility will minimize the visual impact of the Project so as to blend with and be subordinate to the environment and character of the area where the facility is to be located.

> ***Consistency.*** *Existing security fencing and electronic gate will be used for the Project. Desert tortoise fencing is already in place and will continue to be maintained for the life of the Project. Permanent motion sensitive directional security lights will be installed to provide illumination around the substation areas and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. There will be less visual impacts with lower profile PV panels (current solar mirror troughs are at least 20 feet tall and new PV will be about 12 feet in height), there will be no power block and no cooling tower plume.*

Finding (c)(3): The siting and design of the proposed commercial solar energy generation facility will be either: (A) unobtrusive and not detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways or (B) located in such proximity to already disturbed lands, such as electrical substations, surface mining operations, landfills, wastewater treatment facilities, etc., that it will not further detract from the natural features, open space and visual qualities of the area as viewed from communities, rural residential uses, and major roadways and highways.

> ***Consistency.*** *The site is located on a previous solar development, with existing electric transmission lines and transportation uses. The Project is adjacent to an existing solar site, with additional solar facilities within the general area. The facility will be compatible with the overall character of the area.*

Finding (c)(4): The siting and design of project site access and maintenance roads have been incorporated in the visual analysis for the project and shall minimize visibility from public view points while providing needed access to the development site.

Consistency. *A minimum 26-foot-wide perimeter access route would be constructed along the Project site's fence line. All interior access routes would be a minimum of 20 feet in width. There will be no additional visual impact to the surrounding area due to the Project being developed on an existing solar site.*

Finding (c)(5): The proposed commercial solar energy generation facility will not adversely affect the feasibility of financing infrastructure development in areas planned for infrastructure development or will be located within an area not planned for future infrastructure development (e.g., areas outside of water agency jurisdiction).

Consistency. *No element of the proposed project is expected to impact the feasibility of financing infrastructure development for the local area. The site will continue to be served by onsite wells for non-potable water and delivered water for drinking. No additional infrastructure for sewer is proposed.*

Finding (c)(6): The proposed commercial solar energy generation facility will not adversely affect to a significant degree the availability of groundwater supplies for existing communities and existing and developing rural residential areas.

Consistency. *The Project will be using water from existing on-site wells. The Project's demand for water is not expected to exceed the water allotted to the landowners who are part of the project. There would be less water usage and wastewater generated with the shut-down of steam turbine generators and would not adversely affect availability of groundwater supplies to a significant degree.*

Finding (c)(7): The proposed commercial energy generation facility will minimize site grading, excavating, and filling activities by being located on land where the existing grade does not exceed an average of five (5) percent across the developed portion of the project site, and by utilizing construction methods that minimize ground disturbance.

Consistency. *Minimal site grading is proposed for the majority of the site with finished topographical grades being similar to existing conditions, and less than five percent on average.*

Finding (c)(8): The proposed commercial solar energy generation facility will be located in proximity to existing electrical infrastructure, such as transmission lines, utility corridors, and roads, so that: (A) minimal ground disturbance and above ground infrastructure will be required to connect to the existing transmission grid, considering the location of the project site and the location and capacity of the transmission grid, (B) new electrical generation tie lines will be co-located on existing power poles whenever possible, and (C) existing rights-of-way and designated utility corridors will be utilized to the extent practicable.

Consistency. *The Project is designed to include use of existing transmission and access infrastructure in the area developed for the existing solar site, including transmission lines, utility corridors and roads. The Project will connect and deliver its output to the existing Kramer Junction Substation.*

Finding (c)(9): The proposed commercial solar energy generation facility will be sited so as to avoid or minimize impacts to the habitat of special status species, including threatened, endangered, or rare species, Critical Habitat Areas as designated by the U.S. Fish and Wildlife Service, important habitat/wildlife linkages or areas of connectivity designated by County, state or federal agencies, and areas of Habitat Conservation Plans or Natural Community Conservation Plans that discourage or preclude development.

Consistency. *The Project site has been mostly disturbed by previous industrial or agricultural activities. A general biological survey was conducted to document all biological resources identified within the survey area and included a floral/fauna inventory, vegetation/land use mapping, and habitat suitability assessments to determine the*

potential for special-status plant and wildlife species and vegetation communities to occur within the survey area. No special-status plant or wildlife species or vegetation communities were observed within or surrounding the survey area. In addition, based on 9-quadrangle database record searches it was determined that ten special-status plant species and sixteen special-status wildlife species known to occur within the vicinity of the survey area are either not expected or have a low potential to occur within the survey area. Due to the highly disturbed areas of bare ground, open water and developed areas (i.e. solar fields and associated infrastructure, evaporation ponds and open areas) bird nesting opportunities and wildlife movements are limited and restricted. No U.S. Fish and Wildlife Service designated critical habitat has been mapped within the survey area.

Finding (c)(10): Adequate provision has been made to maintain and promote native vegetation and avoid the proliferation of invasive weeds during and following construction.

Consistency. *The Project includes measures to minimize the growth of invasive weeds during and following construction.*

Finding (c)(11): The proposed commercial solar energy generation facility will be located so as to avoid or mitigate impacts to significant cultural and historic resources, as well as sacred landscapes.

Consistency. *As a previously developed utility scale solar site the Project falls under CEQA exemption 15302 (c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. Any cultural resources discovered during decommissioning and construction activities are addressed in the final conditions of approval for the Project which includes cultural, historic, and Native American sacred discoveries.*

Finding (c)(12): The proposed commercial solar energy generation facility will be designed in a manner that does not impede flood flows, avoids substantial modification of natural water courses, and will not result in erosion or substantially affect area water quality.

Consistency. *The Project is designed to maintain the natural drainage pattern. None of the on-site facilities, including fences and panel posts, should prevent stormwater flow. Grading and Erosion control plans shall be submitted for review and approval obtained, prior to construction.*

Finding (c)(13): The proposed commercial solar energy generation facility will not be located within a floodway designated by the Federal Emergency Management Agency (FEMA), has been evaluated for flood hazard impacts pursuant to Chapter 82.14 of the Development Code, and will not result in increased flood hazards to upstream or downstream properties.

Consistency. *The Project is located within Flood Zone D according to FEMA Panel Number 06071C3250H dated 8/28/2008. Flood Hazards are undetermined in this area but possible. The requirements may change based on the recommendations of a drainage study accepted by the Land Development Division and the most current Flood Map prior to issuance of a grading permit.*

Finding (c)(14): All on-site solar panels, switches, inverters, transformers, and substations shall be located at least one foot above the base flood elevation as shown on the Flood Insurance Rate Maps.

Consistency. *Based on the National Flood Hazard Map, the entire Project site is within Zone D, which indicates flooding hazards for the site have not been determined. Mitigation measures that will be implemented by the Developer will minimize impacts.*

Finding (c)(15): For development sites proposed on or adjacent to undeveloped alluvial fans, the commercial solar energy generation facility has been designed to avoid potential

channel migration zones as demonstrated by a geomorphic assessment of the risk of existing channels migrating into the proposed development footprint, resulting in erosion impacts.

> ***Consistency.*** *The Project site is located approximately 0.5 miles west of Harper Dry Lake and sited to avoid potential channel migration zones and associated erosion impacts.*

Finding (c)(16): For proposed facilities located on prime agricultural soils or land designated by the California Farmland Mapping and Monitoring Program as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, where use of the land for agricultural purposes is feasible, the proposed commercial solar energy generation facility will not substantially affect the agricultural viability of surrounding lands.

> ***Consistency.*** *The proposed Project will be located on an existing solar site using the same footprint. There will be no expansion of the existing footprint. The existing developed site does not contain agricultural land and would not have an adverse effect on the agricultural viability of surrounding lands.*

Finding (c)(17): If the proposed site is subject to a Williamson Act contract, the proposed commercial solar energy generation facility is consistent with the principals of compatibility set forth in California Government Code Section 51238.1.

> ***Consistency.*** *The Project site is not subject to Williamson Act contracts.*

Finding (c)(18): The proposed commercial solar energy generation facility will not preclude access to significant mineral resources.

> ***Consistency.*** *The Project site is not located in an area of known, significant mineral resources. Additionally, solar energy generation is considered an interim land use (with a limited-term contract with a utility) and is expected to be removed after its contractual lifetime.*

Finding (c)(19): The proposed commercial solar energy generation facility will avoid modification of scenic natural formations.

> ***Consistency.*** *The Project would avoid any further modification of scenic natural formations, as no designated scenic natural formations as identified by the County are located at the Project site.*

Finding (c)(20): The proposed commercial solar energy generation facility will be designed, constructed, and operated so as to minimize dust generation, including provision of sufficient watering of excavated or graded soil during construction to prevent excessive dust. Watering will occur at a minimum of three (3) times daily on disturbed soil areas with active operations, unless dust is otherwise controlled by rainfall or use of a dust palliative, or other approved dust control measure.

> ***Consistency.*** *The Project will apply dust control measures in compliance with permit conditions and Mojave Desert Air Quality Management District (MDAQMD) guidance. A Dust Control Plan is required to establish the specific measures to be implemented to control dust.*

Finding (c)(21): All clearing, grading, earth moving, and excavation activities will cease during period of winds greater than 20 miles per hour (averaged over one hour), or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property, and in conformance with Air Quality Management District (AQMD) regulations.

> ***Consistency.*** *The Project will apply dust control measures in compliance with permit conditions and MDAQMD regulations.*

Finding (c)(22): For sites where the boundary of a new commercial solar energy generation facility will be located within one-quarter mile of a primary residential structure, an adequate wind barrier will be provided to reduce potentially blowing dust in the direction of the residence during construction and ongoing operation of the commercial solar energy generation facility.

Consistency. *The Project is not located within a quarter of a mile of any residential developments or single residences.*

Finding (c)(23): Any unpaved roads and access ways will be treated and maintained with a dust palliative or graveled or treated by another approved dust control method to prevent excessive dust, and paving requirements will be applied pursuant to Chapter 83.09 of the Development Code.

Consistency. *The applicant will prepare a Dust Control Plan for review and approval by the County and Mojave Desert Air Quality Management District. Included in the plan will be treatments and measures designed to the specific conditions of the project site so as to provide effective dust control.*

Finding (c)(24): On-site vehicle speed will be limited to 15 miles per hour.

Consistency. *The applicant will post and enforce speed limit of 15 miles per hour for on-site vehicles.*

Finding (c)(25): For proposed commercial solar energy generation facilities within two (2) miles of the Joshua Tree National Park boundaries, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature along the main access roads to the park (Park Boulevard and Utah Trail), nor will it substantially impair views from hiking/nature trails, campgrounds, and backcountry camping areas within the National Park.

Consistency. *The Project site is not located within two miles of Joshua Tree National Park. Joshua Tree National Park is located approximately 90 miles to the southeast.*

Finding (c)(26): For proposed facilities within two (2) miles of the Mojave National Preserve boundaries, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature of, nor substantially impair views from, hiking and backcountry camping areas within the National Preserve.

Consistency. *The Project site is not located within two miles of the Mojave National Preserve. The Mojave National Preserve is located approximately 70 miles to the east.*

Finding (c)(27): For proposed facilities within two (2) miles of Death Valley National Park boundaries, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature of, nor substantially impair views from, hiking and backcountry camping areas within the National Park.

Consistent. *The Project site is not located within two miles of Death Valley National Park. Death Valley National Park is located approximately 50 miles to the north.*

Finding (c)(28): For proposed facilities within two (2) miles of the boundaries of a County, state or federal agency designated wilderness area, the location, design, and operation of the proposed commercial solar energy facility will not be a predominant visual feature of, nor substantially impair views from, the designated wilderness area.

Consistency. *The Project is not located within 2 miles of County, state or federal agency designated wilderness area.*

Finding (c)(29): For proposed facilities within two (2) miles of the boundaries of any active military base, the location, design, and operation of the proposed commercial solar energy facility will not substantially impair the mission of the facility.

Consistency. *The nearest active military base is the Marine Corps Logistic Base in Barstow, located approximately 25 miles to the southeast. Construction and/or operation of the Project would not preclude military operations from occurring within the Project area.*

Finding (c)(30): When located within a city's sphere of influence, in addition to other County requirements, the proposed commercial solar energy facility will also be consistent with relevant city zoning requirements that would be applied to similar facilities within the city.

Consistency. *The Project site is not located within the Sphere of Influence of a city. The City of Barstow is located approximately 20 miles southeast of the Project site.*

Finding (c)(31): On terms and in an amount acceptable to the Director, adequate surety is provided for reclamation of commercial solar energy generation facility sites should energy production cease for a continuous period of 180 days and/or if the site is abandoned.

Consistency. *Decommissioning of the site will occur in compliance with Development Code Section 84.29.060, which requires removal of site facilities when operations cease. The requirement for a removal surety bond will be included in the Conditions of Approval to be adopted for the project.*

EXHIBIT B

Conditions of Approval

CONDITIONS OF APPROVAL

Lockhart Solar PV, LLC
Conditional Use Permit

GENERAL REQUIREMENTS

Ongoing and Operational Conditions

LAND USE SERVICES DEPARTMENT– Planning Division (909) 387-8311

1. Project Approval Description. A Conditional Use Permit to decommission an existing 160 megawatt (MW) concentrated solar thermal facility and redevelop the site with a new 160 MW photovoltaic (PV) solar facility, with a 160 MW PV/Battery Energy Storage System (BESS), including associated infrastructure with no future expansion of capacity. Located at 43880 Harper Lake Road, in the Community of Hinkley; (APNs: 0490-101-55, 0490-101-56, 0490-111-14, and 0490-223-32), Project No. P201900125.

   This Project is approved to be constructed and operated in compliance with the San Bernardino County Code (SBCC) and the Service Commercial (CS) land use designation, the California Building Codes (CBC), the California Fire Code (CFC), the Conditions of Approval, contained herein, and the approved site plan dated September 19, 2019.

2. Project Location. The Project site is a total of approximately 1,073-acres located at 43880 Harper Lake Road in an unincorporated area of San Bernardino County in the community of Hinkley.

3. Revisions. Any proposed change to the approved use/activity on the site or any increase in the developed area of the site or any expansion or modification to the approved facilities, including changes to the height, location, bulk or size of structure or equipment shall require an additional land use review and application subject to approval by the County. The developer shall prepare, submit with fees and obtain approval of the application prior to implementing any such revision or modification. (SBCC §86.06.070)

4. Indemnification. In compliance with SBCC §81.01.070, the developer shall agree, to defend, indemnify, and hold harmless the County or its "indemnitees" (herein collectively the County's elected officials, appointed officials (including Planning Commissioners), Zoning Administrator, agents, officers, employees, volunteers, advisory agencies or committees, appeal boards or legislative body) from any claim, action, or proceeding against the County or its indemnitees to attack, set aside, void, or annul an approval of the County by an indemnitee concerning a map or permit or any other action relating to or arising out of County approval, including the acts, errors or omissions of any person and for any costs or expenses incurred by the indemnitees on account of any claim, except where such indemnification is prohibited by law. In the alternative, the developer may agree to relinquish such approval.

   Any condition of approval imposed in compliance with the County Development Code or County General Plan shall include a requirement that the County acts reasonably to promptly notify the developer of any claim, action, or proceeding and that the County cooperates fully in the defense. The developer shall reimburse the County and its indemnitees for all expenses resulting from such actions, including any court costs and attorney fees, which the County or its indemnitees may be required by a court to pay as a result of such action.

   The County may, at its sole discretion, participate at its own expense in the defense of any such action, but such participation shall not relieve the developer of their obligations under this condition to reimburse the County or its indemnitees for all such expenses.

   This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The developer's indemnification obligation applies to the indemnitees' "passive" negligence but does not apply to the indemnitees' "sole" or "active" negligence or "willful misconduct" within the meaning of Civil Code Section 2782.

5. Expiration. This project permit approval shall expire and become void if it is not "exercised" within three (3) years of the effective date of this approval, unless an extension of time is approved. The permit is deemed "exercised" when either:

a. The permittee has commenced actual construction or alteration under a validly issued building permit, or

b. The permittee has substantially commenced the approved land use or activity on the project site, for those portions of the project not requiring a building permit. (SBCC §86.06.060)

c. Occupancy of approved land use occupancy of completed structures and operation of the approved and exercised land use remains valid continuously for the life of the project and the approval runs with the land, unless one of the following occurs:
   - Construction permits for all or part of the project are not issued or the construction permits expire before the structure is completed and the final inspection is approved.
   - The land use is determined by the County to be abandoned or non-conforming.
   - The land use is determined by the County to be not operating in compliance with these conditions of approval, the County Code, or other applicable laws, ordinances or regulations. In these cases, the land use may be subject to a revocation hearing and possible termination.

   PLEASE NOTE: This will be the ONLY notice given of this approval's expiration date. The developer is responsible to initiate any Extension of Time application.

6. Continuous Effect/Revocation. All of the conditions of this project approval are continuously in effect throughout the operative life of the project for all approved structures and approved land uses/activities. Failure of the property owner or developer to comply with any or all of the conditions at any time may result in a public hearing and possible revocation of the approved land use, provided adequate notice, time and opportunity is provided to the property owner, developer or other interested party to correct the non-complying situation.

7. Extension of Time. Extensions of time to the expiration date (listed above or as otherwise extended) may be granted in increments each not to exceed an additional three years beyond the current expiration date. An application to request consideration of an extension of time may be filed with the appropriate fees no less than thirty days before the expiration date. Extensions of time may be granted based on a review of the application, which includes a justification of the delay in construction and a plan of action for completion. The granting of such an extension request is a discretionary action that may be subject to additional or revised conditions of approval or site plan modifications. (SBCC §86.06.060)

8. Project Account. The Project account number is P201900125. This is an actual cost project with a deposit account to which hourly charges are assessed by various county agency staff (e.g. Land Use Services, Public Works, and County Counsel). Upon notice, the "developer" shall deposit additional funds to maintain or return the account to a positive balance. The "developer" is responsible for all expense charged to this account. Processing of the project shall cease, if it is determined that the account has a negative balance and that an additional deposit has not been made in a timely manner. A minimum balance of $1,000.00 must be in the project account at the time the Condition Compliance Review is initiated. Sufficient funds must remain in the account to cover the charges during each compliance review. All fees required for processing shall be paid in full prior to final inspection, occupancy and operation of the approved use.

9. Condition Compliance: In order to obtain construction permits for grading, building, final inspection and/or tenant occupancy for each approved building, the developer shall process a Condition Compliance Release Form (CCRF) for each respective building and/or phase of the development through the Planning Division in accordance with the directions stated in the Approval letter. The Planning Division shall release their holds on each phase of development by providing to County Building and Safety the following:

   - Grading Permits: a copy of the signed CCRF for grading/land disturbance and two "red" stamped and signed approved copies of the grading plans.
   - Building Permits: a copy of the signed CCRF for building permits and three "red" stamped and signed approved copies of the final approved site plan.
   - Final Occupancy: a copy of the signed CCRF for final inspection of each respective building or use of the land, after an on-site compliance inspection by the Planning Division.

10. Development Impact Fees. Additional fees may be required prior to issuance of development permits. Fees shall be paid as specified in adopted fee ordinances.

11. Additional Permits. The developer shall ascertain compliance with all laws, ordinances, regulations and any other requirements of Federal, State, County and Local agencies that may apply for the development and operation of the approved land use. These may include but not limited to:

    a. FEDERAL: N/A;
    b. STATE: Lahontan RWQCB, Mojave Desert AQMD
    c. COUNTY: Land Use Services – Building and Safety/Code Enforcement/Land Development, Fire/HazMat; Public Health – Environmental Health Services, Public Works –Traffic/ County Surveyor, and
    d. LOCAL: N/A

12. Continuous Maintenance. The Project property owner shall continually maintain the property so that it is visually attractive and not dangerous to the health, safety and general welfare of both on-site users (e.g. employees) and surrounding properties. The property owner shall ensure that all facets of the development are regularly inspected, maintained and that any defects are timely repaired. Among the elements to be maintained, include but are not limited to:

    a. Annual maintenance and repair: The developer shall conduct inspections for any structures, fencing/walls, driveways, and signs to assure proper structural, electrical, and mechanical safety.

    b. Graffiti and debris: The developer shall remove graffiti and debris immediately through weekly maintenance.

    c. Landscaping: The developer shall maintain landscaping in a continual healthy thriving manner at proper height for required screening. Drought-resistant, fire retardant vegetation shall be used where practicable. Where landscaped areas are irrigated it shall be done in a manner designed to conserve water, minimizing aerial spraying.

    d. Dust control: The developer shall maintain dust control measures on any undeveloped areas where landscaping has not been provided.

    e. Erosion control: The developer shall maintain erosion control measures to reduce water runoff, siltation, and promote slope stability.

    f. External Storage: The developer shall maintain external storage, loading, recycling and trash storage areas in a neat and orderly manner, and fully screened from public view. Outside storage shall not exceed the height of the screening walls.

    g. Metal Storage Containers: The developer shall NOT place metal storage containers in loading areas or other areas unless specifically approved by this or subsequent land use approvals.

    h. Screening: The developer shall maintain screening that is visually attractive. All trash areas, loading areas, mechanical equipment (including roof top) shall be screened from public view.

    i. Signage: The developer shall maintain all on-site signs, including posted area signs (e.g. “No Trespassing”) in a clean readable condition at all times. The developer shall remove all graffiti and repair vandalism on a regular basis. Signs on the site shall be of the size and general location as shown on the approved site plan or subsequently a County-approved sign plan.

    j. Lighting: The developer shall maintain any lighting so that they operate properly for safety purposes and do not project onto adjoining properties or roadways. Lighting shall adhere to applicable glare and night light rules.

    k. Parking and on-site circulation: The developer shall maintain all parking and on-site circulation requirements, including surfaces, all markings and traffic/directional signs in an un-faded condition as identified on the approved site plan. Any modification to parking and access layout requires the Planning Division review and approval. The markings and signs shall be clearly defined, un-faded and legible;

these include parking spaces, disabled space and access path of travel, directional designations and signs, stop signs, pedestrian crossing, speed humps and “No Parking”, “Carpool”, and “Fire Lane” designations.

l. Fire Lanes: The developer shall clearly define and maintain in good condition at all times all markings required by the Fire Department, including “No Parking" designations and “Fire Lane” designations.

13. Performance Standards. The approved land uses shall operate in compliance with the general performance standards listed in the County Development Code Chapter 83.01, regarding air quality, electrical disturbance, fire hazards (storage of flammable or other hazardous materials), heat, noise, vibration, and the disposal of liquid waste.

14. Lighting. Lighting shall comply with Table 83-7 “Shielding Requirements for Outdoor Lighting in the Mountain Region and Desert Region” of the County’s Development Code (i.e. “Dark Sky” requirements). All lighting shall be limited to that necessary for maintenance activities and security purposes. This is to allow minimum obstruction of night sky remote area views. No light shall project onto adjacent roadways in a manner that interferes with on-coming traffic. All signs proposed by this project shall only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign, by direct stationary neon lighting or in the case of an approved electronic message center sign, an alternating message no more than once every five seconds.

15. Clear Sight Triangle. Adequate visibility for vehicular and pedestrian traffic shall be provided at clear sight triangles at all 90 degree angle intersections of public rights-of-way and private driveways. All signs, structures and landscaping located within any clear sight triangle shall comply with the height and location requirements specified by County Development Code (SBCC§ 83.02.030) or as otherwise required by County Traffic.

16. Cultural Resources. During grading or excavation operations, should any potential paleontological or archaeological artifacts be unearthed or otherwise discovered, the San Bernardino County Museum shall be notified and the uncovered items shall be preserved and curated, as required. For information, contact the County Museum, Community and Cultural Section, telephone (909) 798-8570.

17. Underground Utilities. No new above-ground power or communication lines shall be extended to the site. All required utilities shall be placed underground in a manner that complies with the California Public Utilities Commission General Order 128, and avoids disturbing any existing/natural vegetation or the site appearance.

18. Construction Hours. Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday in accordance with the County of San Bernardino Development Code standards. No construction activities are permitted outside of these hours or on Sundays and Federal holidays.

19. Construction Noise. The following measures shall be adhered to during the construction phase of the project:

    a. All construction equipment shall be muffled in accordance with manufacturer’s specifications.

    b. All construction staging shall be performed as far as possible from occupied dwellings. The location of staging areas shall be subject to review and approval by the County prior to the issuance of grading and/or building permits.

    c. All stationary construction equipment shall be placed in a manner so that emitted noise is directed away from sensitive receptors (e.g. residences and schools) nearest the project site.

20. GHG – Operational Standards. The developer shall implement the following as greenhouse gas (GHG) mitigation during the operation of the approved project:

    a. Waste Stream Reduction. The “developer” shall provide to all tenants and project employees County-approved informational materials about methods and need to reduce the solid waste stream and listing available recycling services.

    b. Vehicle Trip Reduction. The “developer” shall provide to all tenants and project employees County-approved informational materials about the need to reduce vehicle trips and the program elements this

project is implementing. Such elements may include: participation in established ride-sharing programs, creating a new ride-share employee vanpool, designating preferred parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles with benches in waiting areas, and/or providing a web site or message board for coordinating rides.

c. Provide Educational Materials. The developer shall provide to all tenants and staff education materials and other publicity about reducing waste and available recycling services. The education and publicity materials/program shall be submitted to County Planning for review and approval.

d. Landscape Equipment. The developer shall require in the landscape maintenance contract and/or in onsite procedures that a minimum of 20% of the landscape maintenance equipment shall be electric-powered.

LAND USE SERVICES DEPARTMENT– Code Enforcement Division (909) 387-8311

21. Enforcement. If any County enforcement activities are required to enforce compliance with the conditions of approval, the property owner and "developer" shall be charged for such enforcement activities in accordance with the County Code Schedule of Fees. Failure to comply with these conditions of approval or the approved site plan design required for this project approval shall be enforceable against the property owner and "developer" (by both criminal and civil procedures) as provided by the San Bernardino County Code, Title 8 – Development Code; Division 6 – Administration, Chapter 86.09 – Enforcement.

22. Weed Abatement. The applicant shall comply with San Bernardino County weed abatement regulations and periodically clear the site of all non-complying vegetation. This includes removal of all Russian thistle (tumbleweeds).

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

23. Tributary Drainage. Adequate provisions should be made to intercept and conduct the tributary off site - on site drainage flows around and through the site in a manner, which will not adversely affect adjacent or downstream properties at the time the site is developed.

24. Natural Drainage. The natural drainage courses traversing the site shall not be occupied or obstructed.

25. Additional Drainage Requirements. In addition to drainage requirements stated herein, other "on-site" and/or "off-site" improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to this office.

26. Erosion Control Installation. Erosion control devices must be installed and maintained at all perimeter openings and slopes throughout the construction of the project. No sediment is to leave the job site.

PUBLIC HEALTH - Environmental Health Services (800) 442-2283

27. Refuse Storage/Removal. All refuse generated at the premises shall at all times be stored in approved containers and shall be placed in a manner so that environmental public health nuisances are minimized. All refuse not containing garbage shall be removed from the premises at least **1** time per week, or as often as necessary to minimize public health nuisances. Refuse containing garbage shall be removed from the premises at least **2** times per week, or as often if necessary to minimize public health nuisances, by a permitted hauler to an approved solid waste facility in conformance with San Bernardino County Code Chapter 8, Section 33.0830 et. seq. For information, please call DEHS/LEA at: (800) 442-2283.

28. Septic System Maintenance. The septic system shall be properly maintained, not create a public nuisance, and be serviced by a DEHS permitted sewage pumper.

29. Noise. Noise level(s) shall be maintained at or below County Standards, Development Code §83.01.080

COUNTY FIRE DEPARTMENT–Community Safety Division (909)386-8465

30. Constriction Permits. Construction permits, including Fire Condition Letters, shall automatically expire and become invalid unless the work authorized by such permit is commenced within 180 days after its issuance,

or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Suspension or abandonment shall mean that no inspection by the Department has occurred with 180 days of any previous inspection. After a construction permit or Fire Condition Letter, becomes invalid and before such previously approved work recommences, a new permit shall be first obtained and the fee to recommence work shall be one-half the fee for the new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. A request to extend the Fire Condition Letter or Permit may be made in writing PRIOR TO the expiration date justifying the reason that the Fire Condition Letter should be extended.

31. Jurisdiction. The above referenced project is under the jurisdiction of the San Bernardino County Fire Department herein ("Fire Department"). Prior to any construction occurring on any parcel, the developer shall contact the Fire Department for verification of current fire protection requirements. All new construction shall comply with the current Uniform Fire Code requirements and all applicable statutes, codes, ordinances and standards of the Fire Department.

32. Additional Requirements. In addition to the Fire requirements stated herein, other onsite and offsite improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to this office. [F01AJ]

DEPARTMENT OF PUBLIC WORKS – Solid Waste Management – (909) 386-8701

33. Recycling Storage Capacity. The developer shall provide adequate space and storage bins for both refuse and recycling materials. This requirement is to assist the County in compliance with the recycling requirements of Assembly Bill (AB) 2176.

34. Franchise Hauler Service Area. This project falls within a County Franchise Area. If subscribing for the collection and removal of construction and demolition waste from the project site, all developers, contractors, and subcontractors shall be required to receive services through the grantee holding a franchise agreement in the corresponding County Franchise Area (Burrtec).

35. Mandatory Commercial Recycling. Beginning July 1, 2012 all businesses defined to include a commercial or public entity that generates 4 or more cubic yards of commercial waste a week or is a multi-family residential dwelling of 5 units or more to arrange for recycling services. The County is required to monitor commercial recycling and will require businesses to provide recycling information. This requirement is to assist the County in compliance with AB 341.

36. Mandatory Commercial Organics Recycling. As of January 2017, the State of California through AB 1826 (Enacted October 2014), requires businesses that generate four (4) cubic yards of organics per week to recycle. A business generating organic waste shall arrange for the recycling services in a manner that is consistent with state and local laws and requirements, including a local ordinance or local jurisdiction's franchise agreement, applicable to the collection, handling, or recycling of solid and organic waste or arrange for separate organic waste collection and recycling services, until the local ordinance or local jurisdiction's franchise agreement includes organic waste recycling services. A business that is a property owner may require a lessee or tenant of that property to source separate their organic waste to aid in compliance. **Additionally, all businesses that contract for gardening or landscaping services must stipulate that the contractor recycle the resulting gardening or landscaping waste.** Residential multifamily dwellings of five (5) or more units are required to recycle organics though not required to arrange for recycling services specifically for food waste. Applicant will be required to report to the County on efforts to recycle organics materials once operational.

37. Demolition Debris – San Bernardino County owned and operated sanitary landfills and transfer stations are not permitted to accept asbestos contaminated wastes, therefore any debris generated by the demolition of structures are subject to asbestos clearance prior to disposal at any San Bernardino County disposal sites. Applicants are required to have a Certified Asbestos Consultant perform testing of all materials to be disposed. Upon receipt of the Consultant's report, indicating that the debris is not contaminated, Solid Waste

Management Operations Section will provide applicant with disposal authorization. For more information on Certified Asbestos Consultants please visit http://www.dir.ca.gov/databases/doshacru/acruList.asp, or for information on County requirements please contact Solid Waste Operations at 909-386-8701 or solid.wastemail@dpw.sbcounty.gov.

PRIOR TO ISSUANCE OF GRADING PERMITS OR LAND DISTURBING ACTIVITIES

The Following Shall Be Completed

LAND USE SERVICES DEPARTMENT– Planning Division (909) 387-8311

38. GHG – Construction Standards. The developer shall submit for review and obtain approval from County Planning of a signed letter agreeing to include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance. The developer/construction contractors shall do the following:

    a. Implement the approved Coating Restriction Plans.

    b. Select construction equipment based on low GHG emissions factors and high-energy efficiency. All diesel/gasoline-powered construction equipment shall be replaced, where possible, with equivalent electric or CNG equipment.

    c. Grading contractor shall provide and implement the following when possible:

        1. Training operators to use equipment more efficiently.

        2. Identifying the proper size of equipment for a task can also provide fuel savings and associated reductions in GHG emissions.

        3. Replacing older, less efficient equipment with newer models.

        4. Use GPS for grading to maximize efficiency.

    d. Grading plans shall include the following statements:

        - "All construction equipment engines shall be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration."

        - "All construction equipment (including electric generators) shall be shut off by work crews when not in use and shall not idle for more than 5 minutes."

    e. Schedule construction traffic ingress/egress to not interfere with peak-hour traffic and to minimize traffic obstructions. Queuing of trucks on and off site shall be firmly discouraged and not scheduled. A flag person shall be retained to maintain efficient traffic flow and safety adjacent to existing roadways.

    f. Recycle and reuse construction and demolition waste (e.g. soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.

    g. The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew and educate all construction workers about the required waste reduction and the availability of recycling services.

39. Air Quality. Although the Project does not exceed Mojave Air Quality Management District thresholds, the Project proponent is required to comply with all applicable rules and regulations as the Mojave Air Basin is in non-attainment status for ozone and suspended particulates [PM_{10} and $PM_{2.5}$ (State)]. To limit dust production, the Project proponent must comply with Rules 402 nuisance and 403 fugitive dust, which require the implementation of Best Available Control Measures for each fugitive dust source. This would include, but not be limited to, the following Best Available Control Measures. Compliance with Rules 402 and 403 are mandatory requirements and thus not considered mitigation measures:

a. The Project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.

1. The Project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading. Portions of the site that are actively being graded shall be watered to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday.

2. The Project proponent shall ensure that all disturbed areas are treated to prevent erosion.

3. The Project proponent shall ensure that all grading activities are suspended when winds exceed 25 miles per hour.

b. Exhaust emissions from vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces, will increase NO_X and PM_{10} levels in the area. Although the Project will not exceed Mojave Air Quality Management District thresholds during operations, the Project proponent will be required to implement the following requirements:

1. All equipment used for grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.

2. The operator shall maintain and effectively utilize and schedule on-site equipment and on-site and off-site haul trucks in order to minimize exhaust emissions from truck idling.

40. Diesel Regulations. The operator shall comply with all existing and future California Air Resources Board and Mojave Air Quality Management District regulations related to diesel-fueled trucks, which among others may include: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment. Mojave Air Quality Management District rules for diesel emissions from equipment and trucks are embedded in the compliance for all diesel fueled engines, trucks, and equipment with the statewide California Air Resources Board Diesel Reduction Plan. These measures will be implemented by the California Air Resources Board in phases with new rules imposed on existing and new diesel-fueled engines.

LAND USE SERVICES DEPARTMENT – Building and Safety Division (909) 387-8311

41. Retaining Wall Plans: Submit plans and obtain separate building permits for any required walls or retaining walls Erosion & Sediment Control Plan. An erosion and sediment control plan and permit shall be submitted to and approved by the Building Official prior to any land disturbance.

42. Geotechnical (Soil) Report: When earthwork quantities exceed 5,000 cubic yards, a geotechnical (soil) report shall be submitted to the Building and Safety Division for review and approval prior to issuance of grading permits.

43. Geology Report: If cut slopes steeper than 2:1 (horizontal to vertical) or grading involving 5,000 cubic yards or more are proposed a geology report shall be submitted to the Building and Safety Division for review and approval by the County Geologist.

44. Demolition Permit: Obtain a demolition permit for any building/s or structures to be demolished. Underground structures must be broken in, back-filled and inspected before covering.

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

45. Drainage Improvements. A Registered Civil Engineer (RCE) shall investigate and design adequate drainage improvements to intercept and conduct the off-site and on-site drainage flows around and through the site in a safety manner, which will not adversely affect adjacent or downstream properties.

46. FEMA Flood Zone. The project is located within Flood Zone D according to FEMA Panel Number 06071C3250H dated 8/28/2008. Flood Hazards are undetermined in this area but possible. The requirements may change based on the recommendations of a drainage study accepted by the Land Development Division and the most current Flood Map prior to issuance of grading permit.

47. Topo Map. A topographic map shall be provided to facilitate the design and review of necessary drainage facilities.

48. Grading Plans. Grading and Erosion control plans shall be submitted for review and approval obtained, prior to construction. All Drainage and WQMP improvements shall be shown on the Grading plans according to the approved Drainage study and WQMP reports. Fees for grading plans will be collected upon submittal to the Land Development Division and are determined based on the amounts of cubic yards of cut and fill. Fee amounts are subject to change in accordance with the latest approved fee schedule.

49. NPDES Permit. An NPDES permit - Notice of Intent (NOI) - is required on all grading of one (1) acre or more prior to issuance of a grading/construction permit. Contact your Regional Water Quality Control Board for specifics. www.swrcb.ca.gov

50. Regional Board Permit. Construction projects involving one or more acres must be accompanied by Regional Board permit WDID #. Construction activity includes clearing, grading, or excavation that results in the disturbance of at least one (1) acre of land total.

51. On-site Flows. On-site flows need to be directed to the nearest County road or drainage facilities unless a drainage acceptance letter is secured from the adjacent property owners and provided to Land Development.

PUBLIC HEALTH - Environmental Health Services (800) 442-2283

52. The project area has a high probability of containing vectors. DEHS Vector Control Section will determine the need for vector survey and any required control programs. A vector clearance letter shall be submitted to DEHS/Land Use. For information, contact Vector Control at (800) 442-2283.

DEPARTMENT OF PUBLIC WORKS – Surveyor – (909) 387-8149

53. Survey Monumentation. If any activity on this project will disturb **any** land survey monumentation, including but not limited to vertical control points (benchmarks), said monumentation shall be located and referenced by or under the direction of a licensed land surveyor or registered civil engineer authorized to practice land surveying **prior** to commencement of any activity with the potential to disturb said monumentation, and a corner record or record of survey of the references shall be filed with the County Survey or Section 8771(b) Business and Professions Code.

54. Record of Survey. Pursuant to Sections 8762 (b) and/or 8773 of the Business and Professions Code, a Record of Survey or Corner Record shall be filed under any of the following circumstances:

    a. Monuments set to mark property lines or corners.

    b. Performance of a field survey to establish property boundary lines, writing legal descriptions, or for boundary establishment/mapping of the subject parcel.

    c. Any other applicable circumstances pursuant to the Business and Professions Code that would necessitate filing of a record of survey.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465

55. Water System. Prior to any land disturbance, the water systems shall be designed to meet the required fire flow for this development and shall be approved by the Fire Department. The required fire flow shall be determined by using Appendix IIIA of the Uniform Fire Code. [FOS]

DEPARTMENT OF PUBLIC WORKS –Traffic Division – (909) 387-8186

56. Construction Management Plan. The applicant's engineer shall provide a construction management plan to the Department of Public Works, Transportation Operations Division to determine if a maintenance agreement (during construction) with the County will be required. The construction management plan shall show the number of trucks, type of trucks (size), the total number of Equivalent Single Axle Loads (ESALs), and the truck routes to the site for construction. If it is determined that a maintenance agreement is required, the developer shall enter into a maintenance agreement with the County Department of Public Works to

insure all County maintained roads utilized by the construction traffic shall remain in acceptable condition during construction. Prior to issuance of grading permits, the developer/contractor shall contact the Transportation Operations Division at (909) 387-7995 in order to process the maintenance agreement with the County. Please allow a minimum of 12 weeks for the processing of an agreement and obtain approval from the Board of Supervisors. For additional information regarding the maintenance agreement, please contact the Transportation Operations Division at (909) 387-7995. For additional information about the construction management plan, please contact the Department of Public Works - Traffic Division at (909) 387-8186.

PRIOR TO ISSUANCE OF BUILDING PERMITS

The Following Shall Be Completed:

LAND USE SERVICES DEPARTMENT – Planning (909) 387-8311

57. Architecture. Architectural elevations are considered conceptual. Final details with colors and material samples shall be submitted to the Planning Division for approval prior to building plan check submittal.

58. Lighting Plans. The developer shall submit for review and approval to County Planning a photometric study demonstrating that the project light does not spill onto the adjacent properties, or public streets. Lighting fixtures shall be oriented and focused to the onsite location intended for illumination (e.g. walkways). Lighting shall be shielded away from adjacent sensitive uses, including the adjacent residential development, to minimize light spillover. The glare from any luminous source, including on-site lighting, shall not exceed 0.5 foot-candle at the property line. This shall be done to the satisfaction of County Planning, in coordination with County Building and Safety.

59. GHG – Design Standards. The developer shall submit for review and obtain approval from County Planning evidence that the following measures have been incorporated into the design of the project. These are intended to reduce potential project greenhouse gas (GHGs) emissions. Proper installation of the approved design features and equipment shall be confirmed by County Building and Safety prior to final inspection of each structure.

    a. Meet Title 24 Energy Efficiency requirements. The Developer shall document that the design of the proposed structures meets the current Title 24 energy-efficiency requirements. County Planning shall coordinate this review with the County Building and Safety. Any combination of the following design features may be used to fulfill this requirement, provided that the total increase in efficiency meets or exceeds the cumulative goal (100%+ of Title 24) for the entire project (Title 24, Part 6 of the California Code of Regulations; Energy Efficiency Standards for Residential and Non Residential Buildings, as amended:

        - Incorporate dual paned or other energy efficient windows,
        - Incorporate energy efficient space heating and cooling equipment,
        - Incorporate energy efficient light fixtures, photocells, and motion detectors,
        - Incorporate energy efficient appliances,
        - Incorporate energy efficient domestic hot water systems,
        - Incorporate solar panels into the electrical system,
        - Incorporate cool roofs/light colored roofing,
        - Incorporate other measures that will increase energy efficiency.
        - Increase insulation to reduce heat transfer and thermal bridging.
        - Limit air leakage throughout the structure and within the heating and cooling distribution system to minimize energy consumption.

    b. Plumbing. All plumbing shall incorporate the following:

- All showerheads, lavatory faucets, and sink faucets shall comply with the California Energy Conservation flow rate standards.
- Low flush toilets shall be installed where applicable as specified in California State Health and Safety Code Section 17921.3.
- All hot water piping and storage tanks shall be insulated. Energy efficient boilers shall be used.

c. Lighting. Lighting design for building interiors shall support the use of:
- Compact fluorescent light bulbs or equivalently efficient lighting.
- Natural day lighting through site orientation and the use of reflected light.
- Skylight/roof window systems.
- Light colored building materials and finishes shall be used to reflect natural and artificial light with greater efficiency and less glare.
- A multi-zone programmable dimming system shall be used to control lighting to maximize the energy efficiency of lighting requirements at various times of the day.
- Provide a minimum of 2.5 percent of the project's electricity needs by on-site solar panels.

d. Building Design. Building design and construction shall incorporate the following elements:
- Orient building locations to best utilize natural cooling/heating with respect to the sun and prevailing winds/natural convection to take advantage of shade, day lighting and natural cooling opportunities.
- Utilize natural, low maintenance building materials that do not require finishes and regular maintenance.
- Roofing materials shall have a solar reflectance index of 78 or greater.
- All supply duct work shall be sealed and leak-tested. Oval or round ducts shall be used for at least 75 percent of the supply duct work, excluding risers.
- Energy Star or equivalent appliances shall be installed.
- A building automation system including outdoor temperature/humidity sensors will control public area heating, vent, and air conditioning units

e. Landscaping. The developer shall submit for review and obtain approval from County Planning of landscape and irrigation plans that are designed to include drought tolerant and smog tolerant trees, shrubs, and groundcover to ensure the long-term viability and to conserve water and energy. The landscape plans shall include shade trees around main buildings, particularly along southern and western elevations, where practical.

f. Irrigation. The developer shall submit irrigation plans that are designed, so that all common area irrigation areas shall be capable of being operated by a computerized irrigation system, which includes either an on-site weather station, ET gauge or ET-based controller capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. These features will assist in conserving water, eliminating the potential of slope failure due to mainline breaks and eliminating over-watering and flooding due to pipe and/or head breaks.

g. Recycling. Exterior storage areas for recyclables and green waste shall be provided. Where recycling pickup is available, adequate recycling containers shall be located in public areas. Construction and operation waste shall be collected for reuse and recycling.

h. Transportation Demand Management (TDM) Program. The project shall include adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. Preferred carpool/vanpool spaces shall be provided and, if available, mass transit facilities shall be provided (e.g. bus stop bench/shelter). The developer shall demonstrate that the TDM program has been instituted for

the project or that the buildings will join an existing program located within a quarter mile radius from the project site that provides a cumulative 20% reduction in unmitigated employee commute trips. The TDM Program shall publish ride-sharing information for ride-sharing vehicles and provide a website or message board for coordinating rides. The Program shall ensure that appropriate bus route information is placed in each building.

60. Signs. All proposed on-site signs shall be shown on a separate plan, including location, scaled and dimensioned elevations of all signs with lettering type, size, and copy. Scaled and dimensioned elevations of buildings that propose signage shall also be shown. The applicant shall submit sign plans to County Planning for all existing and proposed signs on this site. The applicant shall submit for approval any additions or modifications to the previously approved signs. All signs shall comply with SBCC Chapter 83.13, Sign Regulations, SBCC §83.07.040, Glare and Outdoor Lighting Mountain and Desert Regions, and SBCC Chapter 82.19, Open Space Overlay as it relates to Scenic Highways (§82.19.040), in addition to the following minimum standards:

    a. All signs shall be lit only by steady, stationary shielded light; exposed neon is acceptable.
    b. All sign lighting shall not exceed 0.5 foot-candle.
    c. No sign or stationary light source shall interfere with a driver's or pedestrian's view of public right-of-way or in any other manner impair public safety.
    d. Monument signs shall not exceed four feet above ground elevation and shall be limited to one sign per street frontage.

61. Special Use Permit. The developer shall submit for review and gain approval for a Special Use Permit (SUP) from County Code Enforcement. Thereafter, the SUP shall be renewed annually subject to annual inspections. The annual SUP inspections shall review & confirm continuing compliance with the listed conditions of approval, including all mitigation measures. This comprehensive compliance review shall include evaluation of the maintenance of all storage areas, landscaping, screening and buffering. Failure to comply shall cause enforcement actions against the developer. Such actions may cause a hearing or an action that could result in revocation of this approval and imposition of additional sanctions and/or penalties in accordance with established land use enforcement procedures. Any additional inspections that are deemed necessary by the Code Enforcement Supervisor shall constitute a special inspection and shall be charged at a rate in accordance with the County Fee Schedule, including travel time, not to exceed three (3) hours per inspection. As part of this, the developer shall pay an annual public safety services impact fee in accordance with Code §84.29.040(d).

62. Decommissioning Requirements. In accordance with SBCC 84.29.070, Decommissioning Requirements, the Developer shall submit a Closure Plan to the Planning Division for review and approval. The Decommissioning Plan shall satisfy the following requirements:

    a. Closure Plan. Following the operational life of the project, the project owner shall perform site closure activities to meet federal, state, and local requirements for the rehabilitation and re-vegetation of the project Site after decommissioning. The applicant shall prepare a Closure, Re-vegetation, and Rehabilitation Plan and submit to the Planning Division for review and approval prior to building permit issuance. Under this plan, all aboveground structures and facilities shall be removed to a depth of three feet below grade, and removed off-site for recycling or disposal. Concrete, piping, and other materials existing below three feet in depth may be left in place. Areas that had been graded shall be restored to original contours unless it can be shown that there is a community benefit for the grading to remain as altered. Succulent plant species native to the area shall be salvaged prior to construction, transplanted into windrows, and maintained for later transplanting following decommissioning. Shrubs and other plant species shall be re-vegetated by the collection of seeds and re-seeding following decommissioning.

    b. Closure Compliance**.** Following the operational life of the project, the developer shall perform site closure activities in accordance with the approved closure plan to meet federal, state, and local requirements for the rehabilitation and re-vegetation of the project site after decommissioning. Project decommissioning shall be performed in accordance with all other plans, permits, and mitigation measures that would

assure the project conforms to applicable requirements and would avoid significant adverse impacts. These plans shall include the following as applicable:

- Water Quality Management Plan
- Erosion and Sediment Control Plan
- Drainage Report
- Notice of Intent and Stormwater Pollution Prevention Plan
- Air Quality Permits
- Biological Resources Report
- Incidental Take Permit, Section 2081 of the Fish and Game Code
- Cultural Records Report
- The County may require a Phase 1 Environmental Site Assessment be performed at the end of decommissioning to verify site conditions.

LAND USE SERVICES DEPARTMENT – Building and Safety (909) 387-8311

63. Construction Plans. Any building, sign, or structure to be added to, altered (including change of occupancy/use), constructed, or located on site, will require professionally prepared plans based on the most current adopted County and California Building Codes, submitted for review and approval by the Building and Safety Division.

64. Temporary Use Permit: A Temporary Use Permit (T.U.P.) for an office trailer (if necessary) will be required or it must be placed on a permanent foundation per State H.C.D. guidelines. A T.U.P. is only valid for a maximum of five (5) years.

65. Permits: Obtain permits for all structures located on site and all work done without a permit.

LAND USE SERVICES DEPARTMENT – Land Development Division – Road Section (909) 387-8311

66. Transitional Improvements. Right-of-way and improvements (including off-site) to transition traffic and drainage flows from proposed to existing, shall be required as necessary.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465

67. Access. The development shall have a minimum one (1) point of vehicular access. These are for fire/emergency equipment access and for evacuation routes. Standard 902.2.1

    Single Story Road Access Width:

    All buildings shall have access provided by approved roads, alleys and private drives with a minimum twenty six (26) foot unobstructed width and vertically to fourteen (14) feet six (6) inches in height. Other recognized standards may be more restrictive by requiring wider access provisions.

    Multi-Story Road Access Width:

    Buildings three (3) stories in height or more shall have a minimum access of thirty (30) feet unobstructed width and vertically to fourteen (14) feet six (6) inches in height. (F41]

68. Interior perimeter roads shall be 26 foot wide

69. Interior roads between arrays shall be 20 feet wide and located no further than 600 feet apart. Dead end roads shall not exceed 150 feet without an approved fire department turn around.

70. All road ways leading to structures shall be paved or an all-weather surface approved by the fire department.

71. Roadways between arrays and perimeter road around rays are permitted to be compacted native material.

72. Primary Access Paved. Prior to building permits being issued to any new structure, the primary access road shall be paved or an all-weather surface shall be installed as specified in the General Requirements conditions (Fire #F-9), including width, vertical clearance and turnouts, if required. [F89]

73. Turnaround. An approved turnaround shall be provided at the end of each roadway one hundred and fifty (150) feet or more in length. Cul-de-sac length shall not exceed six hundred (600) feet; all roadways shall

not exceed a 12 % grade and have a minimum of forty five (45) foot radius for all turns. In the FS1, FS2 or FS-3 Fire Safety Overlay District areas, there are additional requirements. Standard 902.2.1 [F43]

74. Solar I Photovoltaic System Plans. No less than three (3) complete sets of Solar/ Photovoltaic Plans shall be submitted to the Fire Department for review and approval. Plans must be submitted and approved prior to Conditional Compliance Release of Building. [F39]

75. Building Plans. No less than three (3) complete sets of Building Plans shall be submitted to the Fire Department for review and approval. [F42]

76. Haz-Mat Approval. The applicant shall contact the San Bernardino County Fire Department/Hazardous Materials Division (909) 386-8400 for review and approval of building plans, where the planned use of such buildings will or may use hazardous materials or generate hazardous waste materials. [F94]

77. Combustible Protection. Prior to combustibles, being placed on the project site an approved paved road with curb and gutter and fire hydrants with an acceptable fire flow shall be installed. The topcoat of asphalt does not have to be installed until final inspection and occupancy. [F44]

78. Access - 150+ feet. Roadways exceeding one hundred fifty (150) feet in length shall be approved by the Fire Department. These shall be extended to within one hundred fifty (150) feet of and shall give reasonable access to all portions of the exterior walls of the first story of any building. Standard 902.2.1 [F45]

79. Access - 30% slope. Where the natural grade between the access road and building is in excess of thirty percent (30%}, an access road shall be provided within one hundred and fifty (150) feet of all buildings. Where such access cannot be provided, a fire protection system shall be installed. Plans shall be submitted to and approved by the Fire Department. Standard 902.2.1 [F46]

80. Combustible Vegetation. Combustible vegetation shall be removed as follows:

    - Where the average slope of the site is less than 15% - Combustible vegetation shall be removed a minimum distance of thirty (30) feet from all structures or to the property line, whichever is less.
    - Where the average slope of the site is 15% or greater - Combustible vegetation shall be removed a minimum one hundred (100) feet from all structures or to the property line, whichever is less. County Ordinance# 3586 [F52]

81. Fire Fee. The required fire fees shall be paid to the San Bernardino County Fire Departrnent/Community Safety Division (909) 386-8400.

PUBLIC HEALTH – Environmental Health Services (800) 442-2283

82. Water Purveyor. Water purveyor shall be EHS approved.

83. A water system permit may/shall be required and concurrently approved by the State Water Resources Control Board – Division of Drinking Water. Applicant shall submit preliminary technical report to EHS and the State Water Resources Control Board. Application must be approved prior to initiating construction of any water-related development. Source of water shall meet water quality and quantity standards. Test results, which show source meets water quality and quantity standards shall be submitted to the Division of Environmental Health Services (EHS). For information, contact the Water Section at 1-800-442-2283 and SWRCB-DDW at 916-449-5577.

    Technical report should include the following:

    a) The name of each public water system for which any service area boundary is within three miles, as measured through existing public rights-of-way, of any boundary of the applicant's proposed public water system's service area.

    b) A discussion of the feasibility of each of the adjacent public water systems identified pursuant to paragraph (1) annexing, connecting, or otherwise supplying domestic water to the applicant's proposed new public water system's service area. The applicant shall consult with each adjacent public water system in preparing the report and shall include in the report any information provided by each adjacent

public water system regarding the feasibility of annexing, connecting, or otherwise supplying domestic water to that service area.

c) A discussion of all actions taken by the applicant to secure a supply of domestic water from an existing public water system for the proposed new public water system's service area.

d) All sources of domestic water supply for the proposed new public water system.

e) The estimated cost to construct, operate, and maintain the proposed new public water system, including long-term operation and maintenance costs and a potential rate structure.

f) A comparison of the costs associated with the construction, operation and maintenance, and long-term sustainability of the proposed new public water system to the costs associated with providing water to the proposed new public water system's service area through annexation by, consolidation with, or connection to an existing public water system.

g) A discussion of all actions taken by the applicant to pursue a contract for managerial or operational oversight from an existing public water system.

h) An analysis of whether a proposed new public water system's total projected water supplies available during normal, single dry, or multiple dry water years during a 20-year projection will meet the projected water demand for the service area.

i) Any information provided by the local agency formation commission (LAFCO). The applicant shall consult with the LAFCO if any adjacent public water system identified pursuant to paragraph (1) is a local agency as defined by Section 56054 of the Government Code.

84. If wells are found on-site, evidence shall be provided that all wells are: (1) properly destroyed, by an approved C57 contractor and under permit from the County OR (2) constructed to EHS standards, properly sealed and certified as inactive OR (3) constructed to EHS standards and meet the quality standards for the proposed use of the water (industrial and/or domestic).Evidence shall be submitted to EHS for approval.

85. Method of sewage disposal shall be EHS approved onsite wastewater treatment system (OWTS).

86. If sewer connection and/or service are unavailable, onsite wastewater treatment system(s) may then be allowed under the following conditions: A soil percolation report per June 2017 standards shall be submitted to EHS for review and approval. If the percolation report cannot be approved, the project may require an alternative OWTS. For information, please contact the Wastewater Section at 1-800-442-2283.

87. Existing onsite wastewater treatment system can be used if applicant provides certification from a qualified professional (i.e., Professional Engineer (P.E.), Registered Environmental Health Specialist (REHS), C42 contractor, Certified Engineering Geologist (C.E.G.), etc.) that the system functions properly, meets code, and has the capacity required for the proposed project. Applicant shall provide documentation outlining methods used in determining function.

88. Written clearance shall be obtained from the designated California Regional Water Quality Control Board (listed below) and a copy forwarded to the Division of Environmental Health Services for projects with design flows greater than 10,000 gallons per day.

    - Lahontan Region, 15095 Amargosa Road Bldg 2 Suite 210 Victorville, CA 92392.

89. Submit preliminary acoustical information demonstrating that the proposed project maintains noise levels at or below San Bernardino County Noise Standard(s), San Bernardino Development Code Section 83.01.080. The purpose is to evaluate potential future on-site and/or adjacent off-site noise sources. If the preliminary information cannot demonstrate compliance to noise standards, a project specific acoustical analysis shall be required. Submit information/analysis to the DEHS for review and approval. For information and acoustical checklist, contact DEHS at 1-800-442-2283.

90. All demolition of structures shall have a vector inspection prior to the issuance of any permits pertaining to demolition or destruction of any such premises. For information, contact DEHS Vector Section at 1-800-442-2283.

PRIOR TO FINAL INSPECTION OR OCCUPANCY

The Following Shall Be Completed

LAND USE SERVICES DEPARTMENT – Planning Division (909) 387-8311

91. Fees Paid. Prior to final inspection by Building and Safety Division and/or issuance of a Certificate of Conditional Use by the Planning Division, the applicant shall pay in full all fees required under actual cost job number P201900125.
92. Shield Lights. Any lights used to illuminate the site shall include appropriate fixture lamp types as listed in SBCC Table 83-7 and be hooded and designed so as to reflect away from adjoining properties and public thoroughfares and in compliance with SBCC Chapter 83.07, "Glare and Outdoor Lighting" (i.e. "Dark Sky Ordinance).
93. CCRF/Occupancy. Prior to occupancy/use, all Condition Compliance Release Forms (CCRF) shall be completed to the satisfaction of County Planning with appropriate authorizing signatures from each reviewing agency.
94. Screen Rooftop. All roof top mechanical equipment is to be screened from ground vistas.
95. Installation of Improvements. All required on-site improvements shall be installed per approved plans.
96. GHG – Installation/Implementation Standards. The developer shall submit for review and obtain approval from County Planning of evidence that all applicable GHG performance standards have been installed, implemented properly and that specified performance objectives are being met.
97. Removal Surety. Surety in a form and manner determined acceptable to County Counsel and the Land Use Services Director shall be required for the closure costs and complete removal of the solar energy generating facility and other elements of the facility. The developer shall either:
    - Post a performance or other equivalent surety bond issued by an admitted surety insurer to guarantee the closure costs and complete removal of the solar panels and other elements of the facility in a form or manner determined acceptable to County Counsel and the Land Use Services Director in an amount equal to 120 percent of the cost estimate generated by a licensed civil engineer and approved by the Land Use Services Director; OR
    - Cause the issuance of a certificate of deposit or an irrevocable letter of credit payable to the County of San Bernardino issued by a bank or savings association authorized to do business in this state and insured by the Federal Deposit Insurance Corporation for the purpose of guaranteeing the closure costs and complete removal of the solar panels and other elements of the facility in a form or manner determined acceptable to County Counsel and the Land Use Services Director in an amount equal to 120 percent of the cost estimate generated by a licensed civil engineer and approved by the Land Use Services Director.

LAND USE SERVICES DEPARTMENT – Land Development Division – Drainage Section (909) 387-8311

98. Drainage Improvements. All required drainage improvements if any shall be completed by the applicant. The private registered engineer shall inspect improvements outside the County right-of-way and certify that these improvements have been completed according to the approved plans. Certification letter shall be submitted to Land Development.

LAND USE SERVICES DEPARTMENT – Land Development Division – Road Section (909) 387-8311

99. LDD Requirements. All LDD requirements shall be completed by the applicant prior to occupancy.
100. Parkway Planting. Trees, irrigation systems, and landscaping required to be installed on public right-of-way shall be approved by County Public Works and Current Planning and shall be maintained by the adjacent property owner or other County-approved entity.

COUNTY FIRE DEPARTMENT – Community Safety Division (909) 386-8465

101. Street Sign. This project is required to have an approved street sign (temporary or permanent). The street sign shall be installed on the nearest street corner to the project. Installation of the temporary sign shall be prior to any combustible material being placed on the construction site. Prior to final inspection and occupancy of the first structure, the permanent street sign shall be installed. Standard 901.4.4 [F72]

102. Commercial Addressing. Commercial and industrial developments of 100,000 sq. ft. or less shall have the street address installed on the building with numbers that are a minimum six (6) inches in height and with a three quarter (3/4) inch stroke. The street address shall be visible from the street. During the hours of darkness, the numbers shall be electrically illuminated (internal or external). Where the building is two hundred (200) feet or more from the roadway, additional non-illuminated contrasting six (6) inch numbers shall be displayed at the property access entrances. Standard 901.4.4 [F82]

103. Key Box. An approved Fire Department key box is required. The key box shall be provided with a tamper switch and shall be monitored by a Fire Department approved central monitoring service. In commercial, industrial and multi-family complexes, all swing gates shall have an approved fire department Knox Lock. Standard 902.4 [F85]

104. Water System Commercial. A water system approved and inspected by the Fire Department is required. The system shall be operational, prior to any combustibles being stored onsite. All fire hydrants shall be spaced no more than 300 feet apart (as measured along vehicular travel ways) and no more than 300 feet from any portion of a structure. [F54]

105. Hydrant Marking. Blue reflective pavement markers indicating fire hydrant locations shall be installed as specified by the Fire Department. In areas where snow removal occurs or non-paved roads exist, the blue reflective hydrant marker shall be posted on an approved post along the side of the road, no more than three (3) feet from the hydrant and at least six (6) feet high above the adjacent road. Standard 901.4.3. [F80]

106. Material Identification Placards. The applicant shall install Fire Department approved material identification placards on the outside of all buildings and/or storage tanks that store or plan to store hazardous or flammable materials in all locations deemed appropriate by the Fire Department. Additional placards shall be required inside the buildings when chemicals are segregated into separate areas. Any business with an N.F.P.A. 704 rating of 2-3-3 or above shall be required to install an approved key box vault on the premises, which shall contain business access keys and a business plan. Standard 704. [F95]

107. Inspection by Fire Department. Permission to occupy or use the building {Certification of Occupancy or Shell Release) will not be granted until the Fire Department inspects, approves and signs off on the Building and Safety job card for "fire final". [F03]

COUNTY FIRE DEPARTMENT – Hazardous Materials Division (909) 386-8401

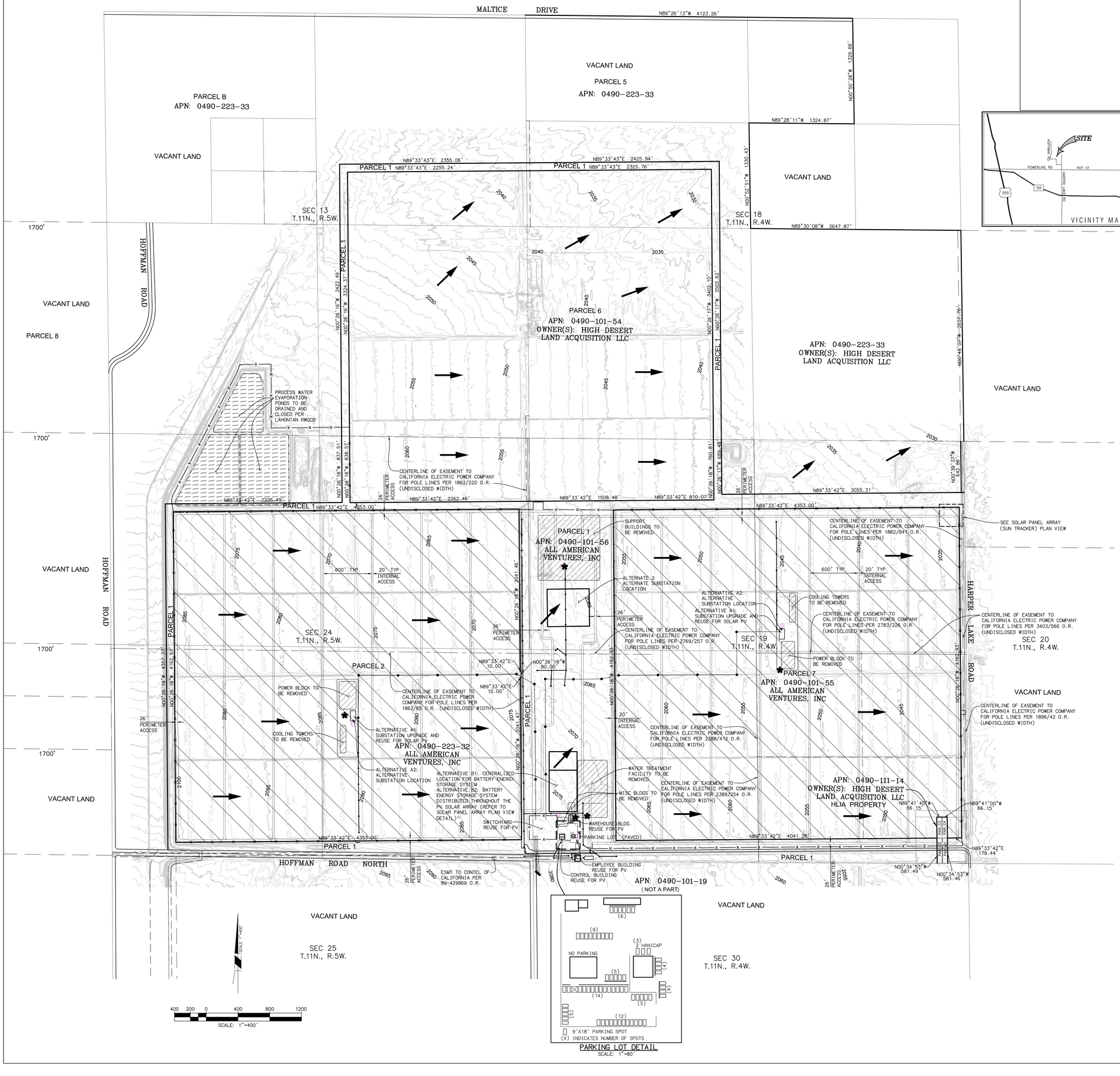
108. Prior to occupancy, the business operator shall be required to apply for one or more of the following permits, or apply for an exemption from hazardous material permitting requirements: Hazardous Material Permit, Hazardous Waste Permit, Aboveground Storage Tank Permit or an Underground Storage Tank Permit. Application for one or more of these permits shall occur by submitting a hazardous materials business plan using the California Environmental Reporting System (CERS) http://cers.calepa.ca.gov/.

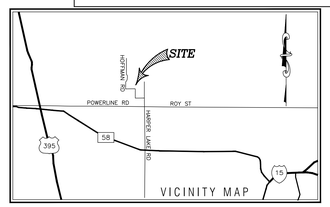
109. Facilities handling greater than 1320 gallons of petroleum products in aboveground storage tanks (shell capacity) shall prepare and implement a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR 1 112.3 and CHSC 25270.4.5(a). Additional information can be found at http://www.sbcfire.org/ofm/Hazmat/PoliciesProcedures.aspx or you may contact The Office of the Fire Marshal, Hazardous Materials Division at (909) 386-8401.

END OF CONDITIONS

EXHIBIT C

Site Plan





OFFICIAL USE ONLY

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO AND DESCRIBED AS FOLLOWS:

PARCEL A:
PARCEL NO. 1 OF PARCEL MAP NO. 12194, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
EXCEPTING ALL OIL AND GAS AND TO IT OR PERSONS AUTHORIZED BY IT THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME, UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT FROM THE UNITED STATES OF AMERICA TO JAY HUBERT MARSHALL, RECORDED MAY 11, 1927, IN BOOK 231, PAGE(S) 86 OF OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.
EXCEPT ONE-HALF IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950 IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-101-56

PARCEL B:
PARCEL NO. 2 OF PARCEL MAP NO. 12194, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
EXCEPT ONE-HALF INTEREST IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950, IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-223-32

PARCEL NO. 7 OF PARCEL MAP NO. 12194, AS PER MAP RECORDED IN BOOK 142, PAGE(S) 44 THROUGH 53, INCLUSIVE, OF PARCEL MAPS, RECORDS OF SAID COUNTY.
EXCEPTING AND RESERVING TO THE UNITED STATES OF AMERICA ALL OIL AND GAS IN THE SAID LANDS, AND TO IT OR PERSON AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS OF, AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED IN THE PATENT RECORDED JANUARY 20, 1925 IN BOOK O, PAGE(S) 122 OF PATENTS.
ALSO EXCEPT ONE-HALF IN ALL MINERAL RIGHTS, AS CONTAINED IN DEED FROM FRANK R. BECKER AND LAVONIA M. BECKER, HUSBAND AND WIFE, TO L.M. LOCKHART, RECORDED OCTOBER 20, 1950 IN BOOK 2658, PAGE(S) 525 OF OFFICIAL RECORDS.
APN: 0490-101-55

PARCEL C:
PARCEL C-1
THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF
SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
EXCEPTING THEREFROM THE EASTERLY 2 ACRES.
PARCEL C-2
THE EASTERLY ONE-FIFTH OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
PARCEL C-3
THE SOUTHERLY THREE-QUARTERS OF THE EASTERLY ONE-FIFTH OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT.
PARCEL C-4
THE SOUTHERLY THREE-QUARTERS OF THE WESTERLY ONE-FIFTH OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 11 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
APN: 0490-111-14

UTILITIES:

WATER:
POTABLE WATER TRUCKED IN BY SPARKLETTS,
NON-POTABLE WATER PROVIDED BY ON-SITE WELL

SEWAGE:
SEPTIC SEWER SYSTEM

GAS:
PACIFIC GAS & ELECTRIC
ADDRESS: PO BOX 997300, SACRAMENTO, CA 95899-7300
PHONE #: 1-800-743-5000

ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
ADDRESS: PO BOX 800, ROSEMEAD, CA 91770
PHONE #: 1-800-655-4555

PHONE:
FRONTIER COMMUNICATIONS
ADDRESS: 401 MERRIT 7, NORWALK, CT 06851
PHONE #: 1-877-730-7106

CABLE TV:
NO CABLE SERVICE REQUIRED

PARKING SUMMARY:

BUILDING: 10,320 SF
REQUIRED: 1 SPACE/ 1,000 SF = 11 SPACES
PROVIDED: 54 STANDARD SPACES
3 ADA SPACES
57 TOTAL

LEGEND

- FLOW ARROW
- PROPOSED PV SOLAR FIELDS
- PROPOSED REMOVAL AREA
- OVERHEAD POWER LINES
- STANDARD TRASH & RECYCLE DUMPSTERS 6'X 5'

* NO SIGNS PROPOSED
* NO PROTECTED PLANTS
* NO NEW DEDICATED ROADWAYS

PARCEL NUMBERS:

APN 0490-223-32, 0490-101-55, 0490-101-56, 0490-111-14

CONDITIONAL USE PERMIT

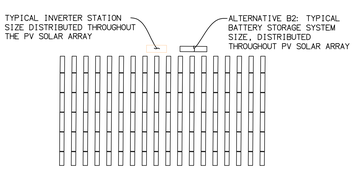
APPLICANT DATA:
SIMON DAY
LOCKHART SOLAR PV, LLC
11455 EL CAMINO REAL, SUITE 160
SAN DIEGO, CA 92130
(415)404-0807
PHONE: (415)404-0807

PROPERTY OWNER:
ALL AMERICAN VENTURES c/o PEARL ELIAS
APN: 0490-223-32,0490-101-55,0490-101-56
PO BOX 340
MARION STATION, PA 19066
PHONE: (484)270-8051

PROPERTY OWNER:
HIGH DESERT LAND ACQUISITIONS, LLC c/o TIMOTHY GARCIA
APN: 0490-111-14
700 UNIVERSE BLVD
JUNO BEACH, FL 33408-2657
PHONE: (561)691-7256

NOTE:

THE FINAL LAYOUT OF PV ARRAYS ARE SUBJECT TO MODIFICATION PURSUANT TO FINAL DESIGN ENGINEERING. HOWEVER, ALL ROADWAYS WILL COMPLY WITH THE 20' FOR INTERIOR AND 26' FOR PERIMETER ROADWAY WIDTHS PER SB COUNTY FIRE AUTHORITY REQUIREMENTS. SHOULD THE LOCATION AND/OR REQUIRED ACCESS ROUTES CHANGE THEY SHALL BE FOUND IN SUBSTANTIAL CONFORMANCE PROVIDED THE ABOVE CRITERIA IS MET AND WITHIN THE EXISTING AREA OF DEVELOPMENT.



SOLAR PANEL ARRAY (SINGLE AXIS TRACKER)
PLAN VIEW

Michael Baker INTERNATIONAL
5 Hutton Centre Drive, Suite 500
Santa Ana CA 92707
Phone: (949) 472-3505
MBAKERINTL.COM

LOCKHART SOLAR PV
PLOT PLAN-
FORMERLY SEGS VIII & IX CSP POWER PLANTS

COUNTY OF SAN BERNARDINO

SHEET 1 OF 1
DATE: 8/01/2019

h:\PDATA\196838\CADD\LAND\DLV\SITEPLAN\LOCKHART SOLAR PROJECT PLOT PLAN.DWG TAYLOR.JORDAN 8/1/19 4:00 pm

EXHIBIT D

Letter of Intent

LOCKHART SOLAR LETTER OF INTENT

This Project description is for the approximately 1,073-acre Lockhart Solar Photovoltaic Project (Project) proposed by the applicant, Lockhart Solar PV, LLC. The proposed Project will involve the decommissioning of the previously CEC permitted 160-megawatt (MW) SEGS VIII and IX concentrated solar thermal power projects and the redevelopment, at the same location, of a new photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to a combined 160 megawatts (MW) AC of renewable electrical energy and/or energy storage capacity.

The applicant for this CUP requests a CEQA Class 2 Categorical Exemption under Section 15302 for replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The new structures will be located on the same site and within the same footprint and will have the same solar utility purpose and capacity as the structures replaced. Additionally, operating conditions of the proposed project will have fewer environmental impacts (particularly regarding air emissions, aesthetics and hazardous materials) when compared to the existing conditions.

Project Objectives

The proposed Project would provide San Bernardino County and the State of California with a renewable energy source, that is on previously permitted and disturbed land that would assist the state in complying with the Renewables Portfolio Standard under Senate Bill 350, which requires that by December 31, 2030, 50% of all electricity sold in the state shall be generated from renewable energy sources. The following are the Project objectives:

- Develop a previously disturbed power-generating site that utilizes existing transmission infrastructure in order to minimize environmental impacts.
- Develop a solar PV facility that has the same or less environmental impacts than is currently in operation at the property.
    - Same development footprint
    - Fewer visual impacts with lower profile PV panels (current solar mirror troughs are at least 20 ft tall and new PV will be about 12 ft), no power block and no cooling tower plume
    - Fewer air quality impacts with shut down of gas-fired backup heaters, exhaust towers and cooling towers
    - Less water use and wastewater generated with shut down of steam turbine generator
    - Less hazardous waste generated with no heat transfer fluid needed for solar PV technology
    - Less potential of spills of hazardous materials due to the lack of heat transfer fluid

    - Less GHG generated with the shut down of the gas-fired heaters.
- Establish solar PV power-generating facilities of sufficient size and configuration to produce reliable electricity in an economically feasible and commercially financeable manner that can be marketed to different power utility companies.
- Use proven and established PV and energy storage technology that is efficient, requires low maintenance, and is recyclable.
- Assist California in meeting its greenhouse gas emissions reduction goals by 2030 as required by the California Global Warming Solutions Act (Assembly Bill 32), as amended by Senate Bill 32 in 2016.

Project Site

The Project site is in Lockhart, CA, approximately 7 miles north of the intersection of Harper Lake Road and Mojave-Barstow Highway 58. The Project site consists of four parcels, each of which may contain solar, energy storage facilities, or O&M facilities, which together would compose the Project site. Parcel A (APN 0490-223-32) is approximately 416 acres, Parcel B (APN 0490-101-55) is approximately 415 acres, Parcel C (APN 0490-101-56) is approximately 240.7 acres and Parcel D (APN 0490-111-14) is approximately 1.74 acres. The Project site is bordered by Hoffman Road to the south and Harper Lake Road to the East. Its westerly edge follows an unnamed dirt road and its northern edge follows an unnamed dirt road. The Project site is accessed via Harper Lake Road.

An existing 13.8 mile 220 kV generator tie-in line (gen-tie) line currently connects the site to the Kramer Junction substation, which is owned and operated by Southern California Edison (SCE). The solar PV Project would utilize this transmission line. Pending engineering review of remaining equipment life, the Project intends to use and/or upgrade the two existing on-site substations which currently connect to an on-site switchyard and finally to the gen-tie line.

Project Overview and Design

The proposed Project would include the development of solar facilities and associated infrastructure with the capacity to generate up to 160 MW of renewable electric energy and/or energy storage capacity – the same approximate amount of electricity generated with the current project with less environmental impact. Power generated by the proposed Project would be transferred to the Kramer Junction substation utilizing the existing 13.8 mile 220 kV gen-tie line. The solar facilities would use PV technology and consist of solar arrays mounted on either fixed or tracking structures mounted to vertical posts. The solar facilities would operate year-round and would generate electricity during the daylight hours.

The proposed Project consists of two development areas that compose the Project site and may be built in phases pending power purchase agreements. Combined, the solar facilities would generate a total of up to 160 MW of renewable electrical energy and/or energy storage capacity.

Each of the Project's facilities would include solar panels/modules, inverters, internal service roads, and telecommunication equipment, including underground and overhead electrical collection systems and fiber optics. Electrical collection systems would be installed in conjunction with panel arrays within the Project site, connecting each solar panel to a feeder circuit; each feeder circuit would in turn be connected to the collector substation. The solar panel circuits would gather into 13.8 kV or 34.5 kV circuits and step-up to 220 kV at the on-site substations. The power would then be delivered via 220 kV circuits to a grid interconnection point at the Kramer Junction Substation which is owned by Southern California Edison.

The Project would consist of the following components:

- **Solar PV Generating Facilities and Solar Modules**: Installation of solar facilities capable of up to a combined 160 MW of renewable electrical energy and/or energy storage via PV modules made of thin film or polycrystalline silicon material covered by glass, mounted on a galvanized metal fixed-tilt or single-axis racking system and connected to inverters, and/or a commercially viable energy storage facility
- **Collector Substation**: Collector substation(s) including circuit breakers, disconnect switches, metering and protection equipment, and main step-up transformer(s)
    - Alternative A1: This alternative would upgrade the two existing substations located within the central portions of each existing thermal solar array for reuse within the same footprint for the solar PV plant.
    - Alternative A2: This alternative would remove the two existing substations located within the central portions of the thermal solar array and consolidate all substation equipment into a central location between the two sections of the solar PV plant. The substation facility would be located to the north of the California Electric Power Company easement centerline. and would be approximately six acres in size.
- **Battery Energy Storage Station (BESS)**: Installation of an energy storage facility and appurtenances that would provide energy storage capacity for the electric grid.
    - Alternative B1: This alternative would construct a consolidated BESS north of the existing switchyard, warehouse building and parking lot. The BESS would be approximately six acres in size.
    - Alternative B2: This alternative would distribute the BESS throughout the solar array. Individual approximately 3MW battery storage facilities would be located adjacent and connected to individual inverter stations.
- **Operations and Maintenance (O&M) building, warehouse and employee building**: An existing O&M/Control building, a warehouse building, and an employee training building will continue to be used on site for operations and maintenance of the solar PV plant

- **Electrical Collector System and Inverters**: Overhead and underground collection systems throughout the solar facilities (the collection systems would be aggregated at multiple circuit breakers or medium-voltage switchgear positions within the Project facilities, leading to the collector substation)
- **Gen-Tie Power Line and Interconnection with the Statewide Grid**: An existing 13.8 mile gen-tie transmission line will be used for the Project
- **Telecommunication Facilities**: Telecommunication equipment, including underground and overhead fiber optics, microwave, and meteorological data collection systems or supervisory control and data acquisition (SCADA)
- **Site Access and Security**: On-site access roads and existing perimeter security fencing and nighttime directional lighting

The facilities are intended to operate year-round and would be designed to produce up to a combined 160 MW of solar power and/or energy storage capacity at the point of interconnection to the transmission grid.

Solar PV Generating Facilities and Solar Modules

Solar modules for the proposed Project would be provided on either a fixed-mount array system or a single-axis tracker system. Depending on the type of technology (modules) used, the panels would measure between 4 and 7 feet in length, and the total height of the panel system measured from ground surface would be approximately 7 to 12 feet. The length of each row of panels would be approximately 300 feet and would be oriented in the east–west direction in the case of a fixed-mount array being used, and oriented in the north–south direction in the case of single-axis trackers being used.

Access roads would be located throughout the Project area. Spacing between each solar panel row would be approximately 8 to 22 feet. Single-axis tracking systems would employ a motor mechanism that would allow the arrays to track the path of the sun (from east to west) throughout the day. The motors would be installed after the horizontal cross-members are in place. In the morning, the panels would face the east. Throughout the day, the panels would slowly move to the upright position at noon and on to the west at sundown. The panels would reset to the east in the evening or early morning to receive sunlight at sunrise.

Energy Storage Facility

Adjacent to the on-site switchyard and/or throughout the solar arrays, energy storage systems are proposed. The energy storage batteries would be housed within air-conditioned connex-type structures. The batteries are housed in open-air-style racking 10 to 12 feet high. The associated inverters, transformers, and switchgear would be located immediately adjacent to the structure on concrete pads or on pre-assembled skids mounted on pile foundations.

The energy storage structure(s) would also have a fire rating in conformance with County standards and specialized fire suppression systems installed for the battery rooms. The structure(s) would also have HVAC cooling to maintain energy efficiency. Power to the HVAC, lighting, etc. would be provided via a connection to the on-site substation service transformer with connection lines installed aboveground and/or belowground. The energy storage system would be unmanned, with remote operational control and periodic inspections and maintenance performed as necessary.

Telecommunication Facilities

The Project would also require telecommunication facilities to meet the communication requirements for interconnecting with the Kramer Junction Substation and to support remote Project operations monitoring. To provide for communication, a fiber-optic cable would be placed on the gen-tie line poles and a microwave system or an underground fiber optic cable installed within the existing transmission line roadway would be used to provide redundant communications required by SCE. The Project would use local exchange carrier services with Frontier, already in use, for telecommunication to support remote monitoring requirements.

The Supervisory Control and Data Acquisition (SCADA) system is critical to the California Independent System Operator (CAISO) and SCE utility interconnection, and for the proper operation and maintenance, which uses proprietary software; a fiber-optic transmission system; a telephone, radio, and/or microwave communication network; and other means of communication such as radio links and phase loop communication systems. The SCADA system functions as a remote start, stop, reset, and tag out for the facility, thus minimizing the manpower and site diagnostic information generated from the arrays. The SCADA system would also control the substations, allowing for fully centralized Project operation to meet all CAISO and utility interconnection requirements.

Existing security fencing and electronic gate will be used for the Project. Desert tortoise fencing is already in place and will continue to be maintained for the life of the Project.

Permanent motion-sensitive, directional security lights would be installed to provide adequate illumination around the substation areas and points of ingress/egress. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. All lighting would also conform to applicable San Bernardino County night-sky ordinance requirements. Lighting would be used from dusk to dawn once the facilities are operational. Motion-sensitive cameras would also be installed throughout each solar facility at the inverters for added security. The cameras would be mounted on poles of approximately 20 feet in height.

Operations and Maintenance Activities

Typical O&M activities that would occur on the Project site during operation include, but are not limited to, liaison and remote monitoring; administration and reporting; semi-annual and annual services; remote operations of inverters; site security and management; additional communication protocol; repair and maintenance of solar facilities, substations, electrical transmission lines, and other Project facilities; and periodic panel washing.

Solid and Nonhazardous Waste

The Project would produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning modules, electrical materials, empty containers, and other miscellaneous solid waste, including the typical refuse generated by workers. Most of these materials would be collected and delivered back to the manufacturer or to recyclers. Non- recyclable waste would be placed in covered dumpsters and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

Hazardous Materials

Limited amounts of hazardous materials would be stored or used on the site during operations, including diesel fuel, gasoline and motor oil for vehicles, mineral oil to be sealed within the transformers, and lead-acid-based and/or lithium-ion batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during operation of the Project.

State of California - Department of Fish and Wildlife

2020 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (REV. 12/01/19) Previously DFG 753.5a

Print | StartOver | Finalize&Email

RECEIPT NUMBER:
36 — 01082020 — 008

STATE CLEARINGHOUSE NUMBER *(If applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
County of San Bernardino Land Use Department		01082020

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
San Bernardino	

PROJECT TITLE

A conditional use permit involving the decommissioning of the previously permitted 160-megawatt (MW) SEGS VIII and IX

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL	PHONE NUMBER
County of San Bernardino Land Use Department		(909) 387-3067

PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE
385 North Arrowhead Avenue	San Bernardino	CA	92415-0187

PROJECT APPLICANT *(Check appropriate box)*

☑ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$3,343.25	$	0.00
☐ Mitigated/Negative Declaration (MND)(ND)	$2,406.75	$	0.00
☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW	$1,136.50	$	0.00

☑ Exempt from fee
- ☑ Notice of Exemption (attach)
- ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	0.00
☑ County documentary handling fee		$	50.00
☐ Other		$	

PAYMENT METHOD:

☐ Cash ☐ Credit ☐ Check ☑ Other SAP **TOTAL RECEIVED** $ 50.00

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	Lisa Arredondo, Deputy Clerk

ORIGINAL - PROJECT APPLICANT | COPY - CDFW/ASB | COPY - LEAD AGENCY | COPY - COUNTY CLERK | DFW 753.5a (Rev. 12012019)

Notice of Exemption

To: ☒ Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

From: San Bernardino County
Land Use Services Department
Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187

☒ Clerk of the Board of Supervisors
County of San Bernardino
385 North Arrowhead Avenue, Second Floor
San Bernardino, CA 92415-0130

DATE FILED & POSTED
Posted On: 01/08/2020
Removed On: 02/20/2020
Receipt No: E-010820200-008

Project Description

APN: 0490-101-55 (Multiple Parcel Associations)
APPLICANT: Simon Day/Lockhart Solar PV, LLC
PROPOSAL: A CONDITIONAL USE PERMIT INVOLVING THE DECOMMISSIONING OF THE PREVIOUSLY PERMITTED 160-MEGAWATT (MW) SEGS VIII AND IX CONCENTRATED SOLAR THERMAL POWER PROJECTS AND THE REDEVELOPMENT, AT THE SAME LOCATION, OF A NEW PHOTOVOLTAIC (PV) SOLAR FACILITY AND ASSOCIATED INFRASTRUCTURE NECESSARY TO GENERATE UP TO A COMBINED 160 MEGAWATTS (MW) AC OF RENEWABLE ELECTRICAL ENERGY AND ENERGY STORAGE CAPACITY ON 1,073 ACRES
PROJECT#: P201900125
COMMUNITY: HINKLEY
LOCATION: 43880 Harper Lake Road Hinkley, CA 92347

Applicant

Simon Day/
Lockhart Solar PV, LLC
Name

11455 El Camino Real #160
Address

San Diego, CA 92130

(415) 404-0807
Phone

Representative

Noelle Steele/Michael Baker Int.
Name

5 Hutton Center Drive #500
Address

Santa Ana, CA 92707

(949) 855-3683
Phone

Anthony DeLuca, Senior Planner
Lead Agency Contact Person

(909) 387-3067
Area Code/Telephone Number

Exempt Status: *(check one)*

☐ Ministerial [Sec. 21080(b)(1); 15268];

☐ Declared Emergency [Sec. 21080(b)(3); 15269(a)];

☐ Emergency Project [Sec. 21080(b)(4); 15269(b)(c)];

☒ Categorical Exemption. State type and section number: 15302(c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

☐ Statutory Exemptions. State code number: _____

☐ Other Exemption: _____

Reasons why project is exempt: The proposed project meets the Categorical Exemptions guidelines and has been determined to be exempt from the provisions of the California Environmental Quality Act (CEQA). The project has been found categorically exempt per **Section 15302 (c): "Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity."**

Signature Heidi Duron — Planning Director *Title* — January 7, 2020 *Date*

☒ Signed by Lead Agency ☐ Signed by Applicant

Date received for filing at OPR: _____

APPENDIX C

AIR QUALITY ANALYSIS

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CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: April 21, 2020

TO: Amanda Johnson, Project Manager

FROM: Michael Slavick, Senior Air Quality Specialist

SUBJECT: Solar Energy Generating System VIII Decommissioning Plan - Air Quality Technical Analysis

INTRODUCTION

Luz Solar Partners, Ltd., VIII (Project Owner), an indirect wholly owned subsidiary of Terra-Gen, LLC, submitted the Facility Decommissioning Plan for the Solar Energy Generating System (SEGS) VIII (88-AFC-01C) to the California Energy Commission (CEC). The Decommissioning Plan fulfills the compliance requirement of Condition of Certification (COC) DECOMMISSIONING-1, as found in the Commission Final Decision for the SEGS VIII.

The Project Owner proposes to replace the existing solar thermal facilities with cleaner, zero emissions operating photovoltaic (PV) solar facilities. The proposed PV solar facilities would not require gas-fired heaters, an exhaust tower, or cooling tower operation. With the cessation of the current operations, there would be a reduction in emissions, which would be temporarily replaced with short-term emissions related to decommissioning and demolition. Decommissioning activities would result in short-term, minor, and localized air quality impacts from fugitive dust, tailpipe emissions from construction equipment used, waste/recycling truck trips, and construction worker commutes. This technical memorandum identifies the emissions associated with the anticipated construction-related activities that would occur during decommissioning and demolition to ensure that activities conform to the applicable federal, State, and local air quality laws, ordinances, regulations, and standards (LORS).

Project Location

The Solar Energy Generating System (SEGS) VIII facility (project) is located on approximately 400 acres near Harper Lake in San Bernardino County, California (see Figure 1, Project Location). While SEGS VIII shares a project footprint and numerous project facilities with SEGS IX, this plan is for the decommissioning of SEGS VIII only. The proposed PV project would reuse the existing project transmission equipment and some of the existing structures at the shared project sites.

Project Description

SEGS VIII generates a peak of 80 megawatts of solar thermal electricity for the Southern California Edison transmission grid using fields of parabolic solar collector mirrors. Heat from the mirrors is

concentrated on tubes of heat transfer fluid, which is circulated to steam boilers to produce electricity. The solar thermal facility also operates the natural gas fired heaters equipment to supplement energy from the sun during periods of low solar radiation. Although the facility can continue to operate as a concentrated thermal solar plant, the proposed project would decommission the existing SEGS VIII concentrated solar thermal facility and replace it with a new PV solar facility.

Facilities to be Removed

The following lists the facilities that would be removed from the SEGS VIII project area. Figure 2, Plot Plan, shows the location of the existing facilities.

- Substation (would be removed if upgrade of existing substation for future use is not viable).
- On-site electrical transmission lines and towers (if they cannot be reused for future solar PV project).
- Cooling towers: This includes an evaporative cooling tower system.
- Power block: This includes storage tanks, a steam turbine generator, transformers, heat exchangers, a power block, pumps, natural gas-fired heaters and other ancillary equipment.
- Parabolic mirrors, aboveground supports, aboveground Heat Transfer Fluid (HTF) piping, and related equipment.

Schedule

Decommissioning is scheduled to begin as early as October 2020, pending the approval of this Decommissioning Plan and market-driven business decisions. Decommissioning would be competed using traditional heavy construction equipment including but not limited to front-end loaders, wheel loaders, mobile shears, track mounted and rubber tired excavators, skid steers, bull dozers, concrete crushers, water trucks, dump trucks and heavy haul trucks. Although various types of decommissioning and demolition equipment would be utilized to dismantle each type of structure or equipment, dismantling will proceed according to the following general 6-month construction staging process.

The first stage would consist of the mobilization of construction equipment on-site, which would take approximately one week. The second stage would consist of the safe layup of project facilities including removal of HTF, which would take approximately one week. The third stage consists of dismantling and demolition of above-ground structures to be removed. This is anticipated to take approximately 3 months. The third stage would also consists of concrete removal and crushing as needed to ensure that no concrete structure remains within 3 feet of final grade (i.e., floor slabs, below-ground walls, and footings) in areas that need to be cleared for future solar PV project facilities. The Project Owner intends to limit concrete and foundation removal to the extent practical. This stage would take approximately 60 days. Where practical, concrete may be crushed to 2-inch minus size and backfilled into open pits and/or be used as road base for the new PV plant as may be permitted by regulatory entities. The fourth stage would consist of removal/dismantling of underground co-generation utilities within 3 feet of final grade if the underground utility conflicts with placement of PV equipment. The Project Owner intends to limit the need for underground

utility removal to the maximum extent practical. This stage would take approximately 96 days. The four stage decommissioning and demolition process will take a total of approximately 6 months.

Sensitive Land Uses in the Project Vicinity

The project site is bounded by dry Harper Lake to the east, Hoffman Road to the south, open space to the north and west, and a few abandoned structures are located to the south. The nearest single-family home is located approximately 8,500 feet (1.6 miles) to the southeast to the southeast.

REGULATORY BACKGROUND

State and Local Agency Review Requirements

The CEC will review the project-related emissions to determine whether demolition associated with the proposed project will comply with all applicable LORS. The County of San Bernardino (County) may take over jurisdiction of the decommissioning and demolition of the existing SEGS VIII and IX solar thermal facilities upon agreement with the CEC, for which the County would oversee the necessary condition of certification and/or conditions of approval to ensure that decommissioning and demolition activities will not result in a significant impact to the environment or public health and safety. The Mojave Desert Air Quality Management District (MDAQMD) may also review the project-related emissions to determine whether construction of the proposed project will comply with all applicable MDAQMD rules and regulations.

The MDAQMD is a commenting agency on air quality and related matters within its jurisdiction or affecting its jurisdiction. The MDAQMD reviews projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *CEQA and Federal Conformity Guidelines* (2016) and associated updates, were followed in the assessment of air quality impacts for the proposed project.

Air Pollution Constituents and Attainment Status

Both the State of California (State) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

The Mojave Desert Air Basin (MDAB) is a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The poor air quality in the basin is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emissions sources. Projects that emit these pollutants or their precursors (i.e., volatile organic compounds

[VOCs] and oxides of nitrogen [NO_X] for ozone) potentially contribute to poor air quality. The MDAQMD significance thresholds take into account the cumulative impact of a project that adds emissions to the entire air basin, in this case a basin already in nonattainment for O_3, PM_{10}, and $PM_{2.5}$.

For most construction projects, motor vehicles and equipment make up the bulk of greenhouse gas (GHG) emissions produced on an operational basis. The primary GHGs emitted by motor vehicles include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons. In August 2011, the MDAQMD revised its California Environmental Quality Act (CEQA) and federal conformity guidelines, which provide background information and guidance on its preferred analysis approach for GHG emissions. The revisions established significant emissions thresholds for GHGs of 100,000 tons per year or 548,000 pounds per day.

In September 2011, San Bernardino County adopted a Greenhouse Gas Reduction Plan (County 2011b) and amended its General Plan (County 2011a) to include a policy addressing the County's intention to reduce GHG emissions that are reasonably attributable to (1) the County's internal activities, services, and facilities; and (2) private industry and development that is located within the area subject to the County's land use and building permit authority.

Mojave Desert Air Quality Management District Thresholds

The MDAQMD has established daily emissions thresholds for construction and operation for the evaluation of the proposed project in the MDAB. It should be noted that the emissions thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (USEPA 2016), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

The County utilizes the MDAQMD *CEQA and Federal Conformity Guidelines* (2016) to identify potentially significant impacts on air quality. For the purposes of this analysis, an impact is considered significant if a project:

- Generates total emissions (direct and indirect) in excess of the thresholds given in Table A;
- Generates a violation of any ambient air quality standard when added to the local background;
- Does not conform with the applicable attainment or maintenance plan(s);[1] or
- Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to ten in a million, and/or a health index (non-cancerous) greater than or equal to one.

[1] A project is deemed to not exceed this threshold, and hence not be significant if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments, and similar land use plan changes, which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

Table A presents the MDAQMD's regional air quality significance thresholds.

Table A: MDAQMD Thresholds of Significance

Pollutant	Annual Threshold (tons per year)	Daily Threshold (pounds per day)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NOx)	25	137
Volatile organic compounds (VOCs)	25	137
Oxides of sulfur (SO_X)	25	137
Particulate matter (PM_{10})	15	82
Particulate matter ($PM_{2.5}$)	15	82
Carbon Dioxide Equivalent (CO_2e)	100,000	548,000

Source: Mojave Desert Air Quality Management District. *California Environmental Quality Act and Federal Conformity Guidelines* (2016).

The MDAQMD significance thresholds are based on either daily or total annual air pollutant emissions (i.e., the amount of air pollutants generated from construction of the proposed project during a 6-month period). For multi-phased projects, such as projects with separate construction phases, phases shorter than one year can be compared to the daily value. MDAQMD thresholds are the same for construction and operation. If emissions exceed the thresholds, then a project is considered to have a significant impact on air quality and must incorporate all feasible mitigation measures.

EMISSION CALCULATION ASSUMPTIONS

Air pollutant emissions associated with the project would occur over the short term from decommissioning related construction activities, such as fugitive dust from demolition activities and emissions from equipment exhaust. Decommissioning activities would produce combustion emissions from various sources from equipment engines and motor vehicles transporting the construction crew and materials. Exhaust emissions from decommissioning activities would vary daily as demolition activity levels change. Emissions quantification related to these decommissioning activities is necessary for comparison to the MDAQMD significance thresholds. In addition, the environmental documentation must include support for the quantification methodology used, including emission factors, emission factors sources, assumptions, and sample calculations where necessary. Because emission calculation tools such as OFFROAD and EMFAC emission factor data were used, the emissions calculation assumption section presets the general assumptions for the specific inputs and settings used for the air quality analysis.

General Assumptions

1. The Project Owner's equipment schedule, based on construction contractor bid information, was used to determine emissions from off-road equipment.

2. The Project Owner's trip assumptions, based on construction contractor bid information, were used to determine emissions from on-road equipment.

On-Road Equipment Assumptions

1. Trip lengths were adjusted to reflect that trips would be between the SEGS VIII facility and Barstow, landfill facility, recycling facility, and hazardous waste facility locations.
2. Exhaust emissions for on-road equipment were calculated using the EMFAC2017 emission factors for scenario year 2020.
3. All on-road construction equipment emissions were determined using on-road emission factors; none were estimated using off-road emission factors.
4. Fugitive dust emissions were estimated for both paved roads and unpaved roads, where applicable.

Off-Road Equipment Assumptions

1. Exhaust emissions were calculated using the OFFROAD2017 emission factors for scenario year 2020.
2. Specific activity fugitive dust emissions were calculated based on the information from the USEPA document, *AP-42 Compilation of the Air Pollutant Emission Factors.* All reference emission calculations are provided in the footnotes of the spreadsheet provided in Attachment C of this analysis. The specific construction equipment list was obtained from the Project Owner.

Construction Information

Construction-related emissions are based on the following:

1. The site total acreage inside the proposed fence-line is approximately 400 acres. The maximum acreage to be disturbed in any single day or month is approximately 50 acres.
2. Mobilization of the construction equipment may occur in the open spaces of the shared facilities area. Equipment and vehicle travels may also occur within the 400-acre project site and the shared facilities area during the demolition period.
3. Construction activity is expected to last for a total of 6 months.

The construction will occur in the following four main phases/stages:

- Mobilization;
- Heat Transfer Fluid (HTF) Removal and De-Energize Verification;
- Mirror Farm Demolition; and
- Co-Generation Facility Demolition.

Fugitive dust emissions from the demolition activities will result from:

- Dust entrained during mobilization and demolition at the construction site;
- Dust entrained during off-site travel on paved and unpaved surfaces; and

- Dust entrained during recycled concrete loading, crushing, and unloading operations.

Combustion emissions during construction will result from:

- Exhaust from the diesel construction equipment used for mobilization and demolition of on-site structures;
- Exhaust from water trucks used to control construction dust emissions;
- Exhaust from pickup trucks and diesel trucks used to transport workers and materials around the project site;
- Exhaust from diesel trucks used to deliver metals, glass, concrete, and HTF supplies to the construction recycling, and landfill sites; and
- Exhaust from automobiles used by workers to commute to the project site.

To determine the potential worst-case daily construction impacts, exhaust and dust emission rates have been evaluated for each source of emissions. Worst-case daily dust emissions are expected to occur during the Mirror Farm Demolition. The worst-case daily exhaust emissions are expected to occur during the middle of the construction schedule during the truck hauling of materials to recycling centers and landfill sites. Daily emissions are based on the maximum equipment mix and use rates during the peak construction day. Annual emissions are derived from the daily values using the estimated construction time frame.

Construction-related issues and emissions at the project site are consistent with issues and emissions encountered at any construction site. Compliance with the provisions of the following permits (as incorporated in the CEC Conditions of Certification) will generally result in minimal site emissions: (1) grading permit, (2) Stormwater Pollution Prevention Plan (SWPPP) requirements (construction site provisions), (3) use permit, (4) building permits, and (5) the MDAQMD rules compliance, which will require compliance with the provisions of all applicable fugitive dust rules that pertain to the site construction phase. An analysis of construction emissions is presented in Attachment C. This analysis incorporates the following mitigation measures or control strategies as required by the MDAQMD's *Dust Control Plan Guidance Document* (MDAQMD 2017):

- The Project Owner will have an on-site construction mitigation manager who will be responsible for the implementation and compliance of the construction mitigation program. The documentation of the ongoing implementation and compliance with the proposed construction mitigations will be provided on a periodic basis.
- All unpaved roads and disturbed areas in the project and laydown construction sites will be watered as frequently as necessary to control fugitive dust. The frequency of watering will be on a minimum schedule of every two hours during the daily construction activity period. Watering may be reduced or eliminated during periods of precipitation.
- On-site vehicle speeds will be limited to 5 mph on unpaved areas within the project site.
- The project site entrance(s) will be posted with visible speed limit signs.

- All construction equipment vehicle tires will be inspected and cleaned as necessary to be free of dirt prior to leaving the construction site via paved roadways.
- Gravel ramps will be provided at the tire cleaning area.
- All unpaved exits from the construction site will be graveled or treated to reduce track-out to public roadways.
- All construction vehicles will enter the project site through the treated entrance roadways, unless an alternative route has been provided.
- The first 500 feet of any public roadway exiting the construction site will be cleaned on a periodic basis (or less during periods of precipitation), using wet sweepers or air-filtered dry vacuum sweepers, when construction activity occurs or on any day when dirt or runoff from the construction site is visible on the public roadways.
- Any soil storage piles and/or disturbed areas that remain inactive for longer than 10 days will be covered, or shall be treated with appropriate dust suppressant compounds.
- All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions will be covered, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to minimize fugitive dust emissions. A minimum freeboard height of two feet will be required on all bulk materials transport.
- Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) will be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition will remain in place until the soil is stabilized or permanently covered with vegetation.

To reduce exhaust emissions from construction equipment, the Project Owner is proposing the following:

- The Project Owner will work with the construction contractor to utilize to the extent feasible, USEPA/California Air Resources Board (ARB) Tier II/Tier III engine compliant equipment for equipment over 100 hp.
- Ensure periodic maintenance and inspections per the manufacturers' specifications.
- Reduce idling time through equipment and construction scheduling.
- Use California low sulfur diesel fuels (<=15 ppmw S).

Based on the temporary nature and the time frame for decommissioning, these measures will reduce construction emissions and impacts to levels that are in compliance with the MDAQMD air quality regulations. Use of these emission control strategies will ensure that the site does not cause any violations of existing air quality standards as a result of construction-related activities. Attachment C presents the evaluation of construction-related emissions.

CONSTRUCTION EMISSION ANALYSIS

The proposed project is expected to be demolished in four phases or stages. The construction emissions of each stage were calculated using the equipment list and construction schedule contained in Attachment C. Because the same equipment and staging would be used for the proposed project, the peak emissions listed in Table B, Construction Emissions by Stage (Pounds per Day), are applicable to each stage. The peak day emissions shown in Table B are calculated using the assumption that Stages 1, 2, 3, and 4 would occur separately. Although the analysis assumes that demolition of the four stages would occur separately, demolition equipment in any of the stages may occur simultaneously. Table C presents the annual construction emissions.

Table B: Daily Construction Emissions by Stage (Pounds per Day)

Construction Stage	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Stage 1 - Mobilization	0.58	2.54	7.38	0.02	40.42	4.40	2,229
Stage 2 - HTF Removal	3.09	9.84	42.41	0.11	42.93	5.21	11,671
Stage 3 - Mirror Farm Demo	5.77	16.42	80.72	0.20	43.47	6.09	21,717
Stage 4 - Co-Gen Demo	1.93	6.97	25.75	0.07	41.27	4.88	7,303
Peak Day	**5.77**	**16.42**	**80.72**	**0.20**	**43.47**	**6.09**	**21,717**
MDAQMD Threshold	**548**	**137**	**137**	**137**	**82**	**65**	**548,000**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (2020).
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
HTF = Heat Transfer Fluid
MDAQMD = Mojave Desert Air Quality Management District
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_X = sulfur oxides
VOC = volatile organic compounds

The emissions from the decommissioning project would not exceed the significance threshold for all criteria pollutants and GHG emissions.

Table C: Annual Construction Emissions by Stage (Ton per Year)

Construction Stage	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Stage 1 - Mobilization	0.00	0.01	0.02	0.00	2.23	0.28	6
Stage 2 - HTF Removal	0.01	0.03	0.13	0.00	2.03	0.29	35
Stage 3 - Mirror Farm Demo	0.17	0.49	2.43	0.01	2.31	0.34	652
Stage 4 - Co-Gen Demo	0.09	0.33	1.24	0.00	2.28	0.31	351
Total Annual Emissions	**0.27**	**0.85**	**3.81**	**0.01**	**8.86**	**1.22**	**1,043**
MDAQMD Threshold	**100**	**25**	**25**	**25**	**15**	**12**	**100,000**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (2020).
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
HTF = Heat Transfer Fluid
MDAQMD = Mojave Desert Air Quality Management District
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_X = sulfur oxides
VOC = volatile organic compounds

As shown in Table C, all criteria pollutants and GHG emissions would be below the annual threshold. The annual thresholds for all criteria pollutants would be less than significant.

The project is not expected to generate any odors which would cause a public nuisance or impact a substantial population at any off-site location.

AIR QUALITY EMMISSION CONTROL MEASURES

Implementation of the following emission control measures would mitigate the criteria pollutants to below the MDAQMD significance threshold.

Measure AIR-1 Prior to the issuance of decommissioning permits or approvals, the Project Owner shall develop a Dust Control Plan (DCP) per the requirements of Mojave Desert Air Quality Management District (MDAQMD) Rule 403.2. The DCP shall comply with MDAQMD Rules 403 and 403.2 to control fugitive dust, including particulate matter less than 10 microns in size (PM_{10}), by addressing objectives, key contacts, roles and responsibilities, dust sources, and control measures.

The DCP shall address the following sources of dust:

- Demolition-created dust sources
- Equipment and haul trucks travel over disturbed surfaces
- Equipment travel over unstable surfaces
- Equipment and haul trucks travel over unpaved roads
- Haul trucks travel over paved roads
- Unspecified fugitive dust emission sources

To minimize each of the emission sources identified above during decommissioning of the Solar Energy Generating System (SEGS) VIII facility, there are multiple control measures available that can feasibly reduce impacts to less than significant levels.

Measure AIR-2 On-road trucks shall comply with United States Environmental Protection Agency (USEPA) 2010 on-road emission standards or better, unless the contractor can reasonably demonstrate that such equipment is unavailable to the satisfaction of the MDAQMD.

Attachments: A: References
B: Figures: Figure 1: Project Location
Figure 2: Plot Plan
C: Estimated Emission Calculations

ATTACHMENT A

REFERENCES

California Air Resources Board. 2017a. EMFAC2017 (version 1.0.2) Motor Vehicle Emission Inventory Model. Website: https://arb.ca.gov/emfac/emissions-inventory.

_____. 2017b. OFFROAD2017 ORION (version 1.0.1) Emissions Model.

County of San Bernardino (County). 2011a. General Plan Amendment. December. Website: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/GPATextNotice12062011GHG.pdf.

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Mojave Desert Air Quality Management District (MDAQMD). 2016. *California Environmental Quality Act and Federal Conformity Guidelines.* August 2016.

_____. 2017. Dust Control Plan Guidance Document. September.

United States Environmental Protection Agency (USEPA). 2009. AP-42, Fifth Edition Compilation of Air Pollutant Emission Factors Volume 1: Stationary Point and Area Sources. Website: https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors#5thed.

_____. 2016. National Ambient Air Quality Standards (NAAQS) Table. Website: https://www.epa.gov/criteria-air-pollutants/naaqs-table.

ATTACHMENT B

FIGURES

LSA

LEGEND

SEGS Project Footprint

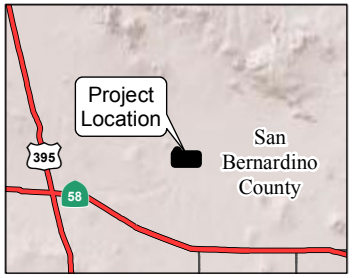


FIGURE 1

SEGS VIII and IX

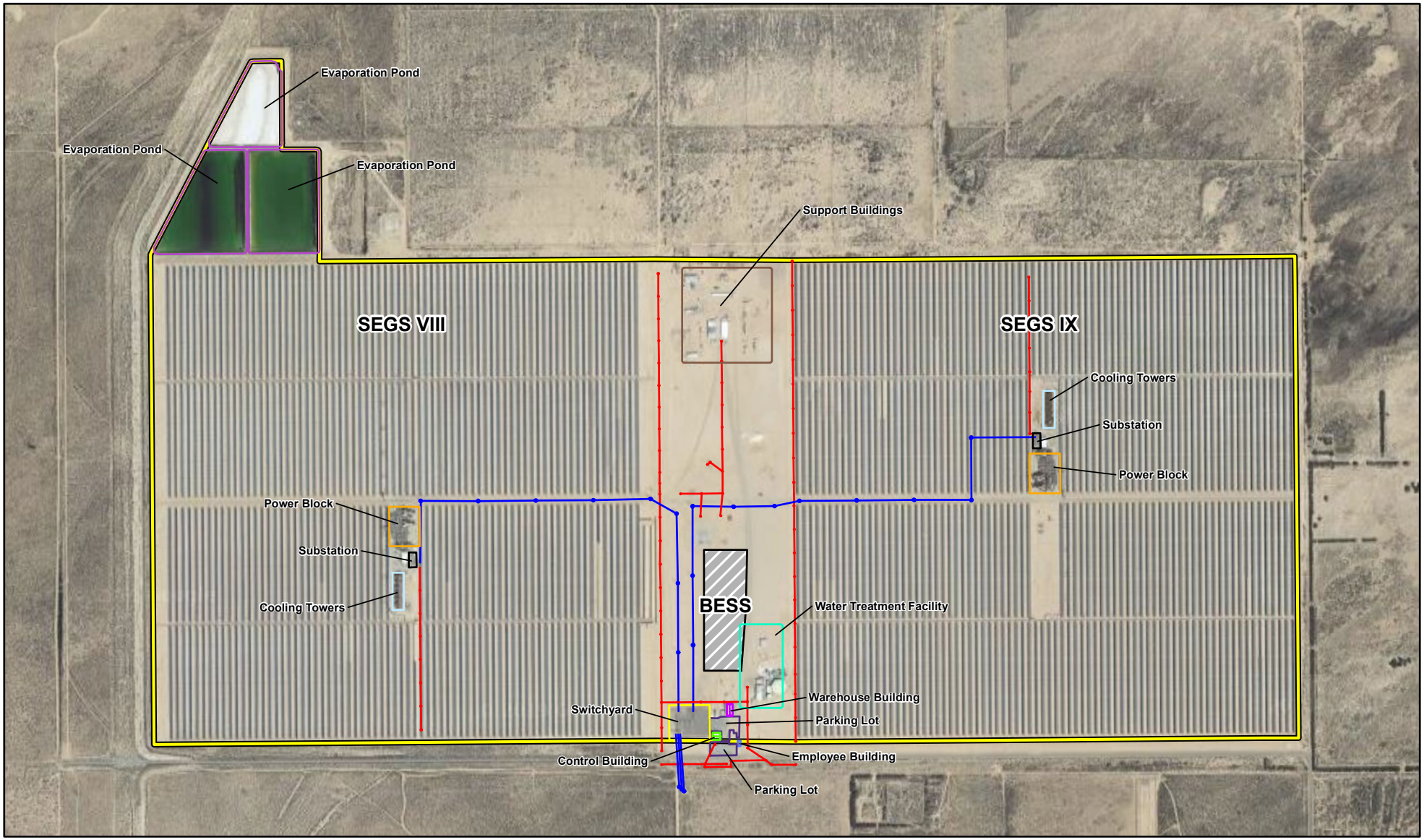
Project Location

0 600 1200

FEET

SOURCE: Luz Solar Partners VIII and IX, LLC (6/2019), Google (9/2015)

I:\TGL1902\GIS\MXD\ProjectLocationMap.mxd (10/2/2019)



LSA

LEGEND

SEGS Project Footprint	Evaporation Ponds	Substation
Existing Plot Plan	Gen-Tie	Support Buildings
Control Building	Parking Lot	Switchyard
Cooling Towers	Power	Warehouse Building
Employee Building	Power Block	Water Treatment Facility

0 600 1200
FEET

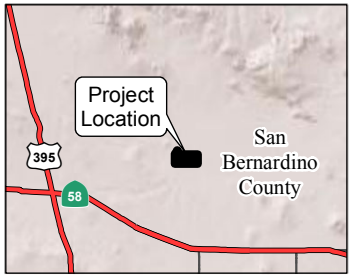


FIGURE 2

SEGS VIII and IX

Existing Plot Plan

SOURCE: Luz Solar Partners VIII and IX, LLC (10/2019), Google (9/2015)

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ATTACHMENT C

ESTIMATED EMISSION CALCULATIONS

Data provided by Facility

Schedule Breakdown by Phase	Duration		Days	
Mobilization	1	week	5	
HTF Removal and De-Energize Verification	1	week	6	
Mirror Farm Demolition	2.5	months	60	
Co-Generation Demolition	4.5	months	96	starting after HTF Removal
Total Demolition Duration	6	months	156	

Equipment to be Used	Qty
Mobile Shears Backhoe	3
Exacavators	4
Wheel Loaders	2
Skid Steer Loaders	3
Buldozers	2
Water Trucks	3
Small misc equipment (electric)	0
Semi-Trucks	5-15
Pick-Up/Crew Trk	5-15

Amount of Materials to be demolished	Qty	Units	Conversion	Unit	Truck Capacity	Units	Number of Truck Hauls	Hauls per day
Cubic Yard of Concrete to be crushed	300,000	tons	250,000	cy	n/a		n/a	n/a
Recycled Concrete for road base	250,000	tons			n/a		n/a	n/a
Recycled Concrete for backfill	50,000	tons			n/a		n/a	n/a
Contaminated Concrete	32	tons			16	tons	2	2
Glass	6250	tons			20	tons	313	5
Other non-recycleable waste	4,000	tons			14	tons	286	5
Metal	7,500	tons			22	tons	341	4
HTF Material	320,000	gallons			11,600	gallons	28	5

Travel Distance	Distance	
Distance to Recycling Location	150	miles
Distance to Landfill Location	25	miles
Distance to Hazardous Waste Location	250	miles

Note:

All Facility Data was obtained from the Project Description and Construction Information For the SEGS VIII Decommissioning Project, Prepared by Zach Sawicki - Terra-Gen, April 2020.

Solar Energy Generating System (SEGS) VIII - Estimated Daily Construction Equipment and Vehicle Exhaust Emissions (worst-case day emissions in lbs/day)

14-Apr-20

									Emission Factors[2] (g/hp-hr or g/mi)									Maximum Emission Rates (lbs/day)						Maximum Emission Rates (lbs/day)			
Equipment Type	Quantity	Hours per Day	Days per Week	Weeks	Hp	Load Factors	Miles RT[1]	Trip/day	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	CO2e
Mobilization																											
Mobile Shears Backhoe	3	1	5	1	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.00	0.01	0.01	0.00	0.00	0.00	1.83	0.00	0.00	1.85
Exacavators	4	1	5	1	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.00	0.01	0.01	0.00	0.00	0.00	1.58	0.00	0.00	1.60
Wheel Loaders	2	1	5	1	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.00	0.00	0.01	0.00	0.00	0.00	0.75	0.00	0.00	0.75
Skid Steer Loaders	3	1	5	1	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.00	0.01	0.01	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Buldozers	2	1	5	1	247	0.4	n/a	n/a	0.6195	2.3710	6.5033	0.0049	0.3185	0.293000	474.792800	0.153600	0.004274	0.00	0.01	0.01	0.00	0.00	0.00	0.84	0.00	0.00	0.00
Water Trucks	3	1	5	1	n/a	n/a	54	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.19	0.46	2.73	0.01	0.09	0.06	675.73	0.01	0.11	707.60
Semi-Trucks	5	1	5	1	n/a	n/a	54	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	0.31	0.77	4.51	0.01	0.14	0.10	1,126.22	0.01	0.18	1,179.34
Pick-Up/Crew Trk	8	1	5	1	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.08	1.27	0.11	0.00	0.04	0.02	334.19	0.01	0.01	336.83
HTF Removal and De-Energize Verification																											
Mobile Shears Backhoe	3	10	6	1	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.01	0.05	0.08	0.00	0.00	0.00	18.27	0.01	0.00	18.47
Exacavators	4	10	6	1	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.01	0.10	0.08	0.00	0.00	0.00	15.83	0.01	0.00	16.00
Wheel Loaders	2	10	6	1	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.00	0.02	0.05	0.00	0.00	0.00	7.45	0.00	0.00	7.53
Skid Steer Loaders	3	10	6	1	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.00	0.08	0.06	0.00	0.00	0.00	11.55	0.00	0.00	11.67
Water Trucks	3	10	6	1	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.02	0.04	0.28	0.00	0.01	0.01	62.57	0.00	0.01	65.52
Semi-Trucks	5	10	6	1	n/a	n/a	500	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	2.90	7.15	41.65	0.10	1.32	0.94	10,427.94	0.13	1.64	10,919.77
Pick-Up/Crew Trk	15	10	6	1	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.15	2.38	0.20	0.01	0.08	0.03	626.61	0.01	0.02	631.55
Mirror Farm Demolition																											
Mobile Shears Backhoe	3	10	6	10	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.01	0.05	0.08	0.00	0.00	0.00	18.27	0.01	0.00	18.47
Exacavators	4	10	6	10	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.01	0.10	0.08	0.00	0.00	0.00	15.83	0.01	0.00	16.00
Wheel Loaders	2	10	6	10	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.00	0.02	0.05	0.00	0.00	0.00	7.45	0.00	0.00	7.53
Skid Steer Loaders	3	10	6	10	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.00	0.08	0.06	0.00	0.00	0.00	11.55	0.00	0.00	11.67
Buldozers	2	10	6	10	247	0.4	n/a	n/a	0.6195	2.3710	6.5033	0.0049	0.3185	0.293000	474.792800	0.153600	0.004274	0.00	0.01	0.01	0.00	0.00	0.00	8.37	0.00	0.00	0.00
Water Trucks	3	10	6	10	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.02	0.04	0.28	0.00	0.01	0.01	62.57	0.00	0.01	65.52
Semi-Trucks	16	10	6	10	n/a	n/a	300	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	5.58	13.73	79.96	0.19	2.54	1.81	20,021.65	0.26	3.15	20,965.97
Pick-Up/Crew Trk	15	2	6	10	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.15	2.38	0.20	0.01	0.08	0.03	626.61	0.01	0.02	631.55
Co-Generation Facility Demolition																											
Mobile Shears Backhoe	3	10	6	17	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.01	0.05	0.08	0.00	0.00	0.00	18.27	0.01	0.00	18.47
Exacavators	4	10	6	17	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.01	0.10	0.08	0.00	0.00	0.00	15.83	0.01	0.00	16.00
Wheel Loaders	2	10	6	17	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.00	0.02	0.05	0.00	0.00	0.00	7.45	0.00	0.00	7.53
Skid Steer Loaders	3	10	6	17	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.00	0.08	0.06	0.00	0.00	0.00	11.55	0.00	0.00	11.67
Water Trucks	3	10	6	17	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.02	0.04	0.28	0.00	0.01	0.01	62.57	0.00	0.01	65.52
Semi-Trucks	5	10	6	17	n/a	n/a	300	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	1.74	4.29	25.00	0.06	0.79	0.57	6,256.77	0.08	0.98	6,551.86
Pick-Up/Crew Trk	15	2	6	17	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.15	2.38	0.20	0.01	0.08	0.03	626.61	0.01	0.02	631.55

	Tire Wear (g/mi)		Brake Wear (g/mi)		Start Emission Rate (g/trip)									Hot Soak (g/trip)	Evaporative Loss (g/trip)
	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	ROG	ROG
Water Trucks	0.036	0.009	0.06174	0.02646	-	-	3.313673264	-	-	-	-	-	-	-	-
Semi-Trucks	0.036	0.009	0.06174	0.02646	-	-	3.313673264	-	-	-	-	-	-	-	-
Pick-Up/Crew Trk	0.008	0.002	0.03675	0.01575	0.44349	3.0526442	0.374326355	0.000743	0.0022447	0.002064	75.0804	0.088928	0.037038	0.187635	0.619873

Mobilization	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(lbs/day) CO_2e
Total Emissions for Mobilization (lbs/day)	0.58	2.54	7.38	0.02	0.27	0.18	2,229.13
Threshold Limits (lbs/day)	548	137	137	137	82	65	548,000
Exceedance?	No	No	No	No	No	No	No

HTF Removal and De-Energize Verification	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(lbs/day) CO_2e
Total Emissions for HTF Removal (lbs/day)	3.09	9.84	42.41	0.11	1.42	0.99	11,670.52
Threshold Limits (lbs/day)	548	137	137	137	82	65	548,000
Exceedance?	No	No	No	No	No	No	No

Mirror Farm Demolition	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(lbs/day) CO_2e
Total Emissions forMirror Farm Demolition (lbs/day)	5.77	16.42	80.72	0.20	2.64	1.86	21,716.71
Threshold Limits (lbs/day)	548	137	137	137	82	65	548,000
Exceedance?	No	No	No	No	No	No	No

Co-Generation Facility Demolition	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(lbs/day) CO_2e
Total Emissions for Co-Generation Facility Demolition (lbs/day)	1.93	6.97	25.75	0.07	0.89	0.62	7,302.61
Threshold Limits (lbs/day)	548	137	137	137	82	65	548,000
Exceedance?	No	No	No	No	No	No	No

Notes:

[1]Contractor truck trips conservative assumption of simultaneous 54 mile roundtrips (SEGS VIII Facility - Barstow).

[2]Emissions factors for off-road equipment and on-road trucks are conservatively assumed to be the 2020 scenario year presented in OFFROAD and EMFAC2017 spreadsheets.
On-road Construction Vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from haul trucks and material delivery trucks

Solar Energy Generating System (SEGS) VIII - Estimated Annual Construction Equipment and Vehicle Exhaust Emissions (annual emissions in tons/year)

14-Apr-20

									Emission Factors[2] (g/hp-hr or g/mi)									Maximum Emission Rates (tons/year)						Maximum Emission Rates (tons/year)			
Equipment Type	Quantity	Hours per Day	Days per Duration	Weeks	Hp	Load Factors	Miles RT[1]	Trip/day	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	CO2e
Mobilization																											
Mobile Shears Backhoe	3	1	5	1	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0046	0.0000	0.0000	0.0046
Exacavators	4	1	5	1	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0040	0.0000	0.0000	0.0040
Wheel Loaders	2	1	5	1	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0019	0.0000	0.0000	0.0019
Skid Steer Loaders	3	1	5	1	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0029	0.0000	0.0000	0.0029
Buldozers	2	1	5	1	247	0.4	n/a	n/a	0.6195	2.3710	6.5033	0.0049	0.3185	0.293000	474.792800	0.153600	0.004274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0021	0.0000	0.0000	0.0006
Water Trucks	3	1	5	1	n/a	n/a	54	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.0005	0.0012	0.0068	0.0000	0.0002	0.0002	1.6894	0.0000	0.0003	1.7690
Semi-Trucks	5	1	5	1	n/a	n/a	54	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	0.0008	0.0019	0.0113	0.0000	0.0004	0.0003	2.8156	0.0000	0.0004	2.9484
Pick-Up/Crew Trk	8	1	5	1	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.0001	0.0029	0.0003	0.0000	0.0002	0.0001	0.8355	0.0000	0.0000	0.8421
																						0.00					
HTF Removal and De-Energize Verification																											
Mobile Shears Backhoe	3	10	6	1	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.0000	0.0002	0.0002	0.0000	0.0000	0.0000	0.0548	0.0000	0.0000	0.0554
Exacavators	4	10	6	1	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.0000	0.0003	0.0002	0.0000	0.0000	0.0000	0.0475	0.0000	0.0000	0.0480
Wheel Loaders	2	10	6	1	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.0000	0.0001	0.0002	0.0000	0.0000	0.0000	0.0224	0.0000	0.0000	0.0226
Skid Steer Loaders	3	10	6	1	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.0000	0.0002	0.0002	0.0000	0.0000	0.0000	0.0346	0.0000	0.0000	0.0350
Water Trucks	3	10	6	1	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.0001	0.0001	0.0008	0.0000	0.0000	0.0000	0.1877	0.0000	0.0000	0.1966
Semi-Trucks	5	10	6	1	n/a	n/a	500	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	0.0087	0.0215	0.1250	0.0003	0.0040	0.0028	31.2844	0.0004	0.0049	32.7599
Pick-Up/Crew Trk	15	10	6	1	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.0001	0.0065	0.0006	0.0000	0.0005	0.0002	1.8799	0.0000	0.0000	1.8947
																						0.00					
Mirror Farm Demolition																											
Mobile Shears Backhoe	3	10	60	10	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.0002	0.0016	0.0024	0.0000	0.0001	0.0001	0.5482	0.0002	0.0000	0.5541
Exacavators	4	10	60	10	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.0002	0.0031	0.0023	0.0000	0.0001	0.0001	0.4748	0.0002	0.0000	0.4799
Wheel Loaders	2	10	60	10	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.0001	0.0006	0.0016	0.0000	0.0001	0.0000	0.2236	0.0001	0.0000	0.2260
Skid Steer Loaders	3	10	60	10	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.0001	0.0024	0.0018	0.0000	0.0001	0.0001	0.3464	0.0001	0.0000	0.3502
Buldozers	2	10	60	10	247	0.4	n/a	n/a	0.6195	2.3710	6.5033	0.0049	0.3185	0.293000	474.792800	0.153600	0.004274	0.0003	0.0013	0.0034	0.0000	0.0002	0.0002	0.2512	0.0001	0.0000	0.0006
Water Trucks	3	10	60	10	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.0005	0.0013	0.0084	0.0000	0.0002	0.0002	1.8771	0.0000	0.0003	1.9656
Semi-Trucks	16	10	60	10	n/a	n/a	300	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	0.1673	0.4119	2.3988	0.0057	0.0761	0.0544	600.6596	0.0078	0.0944	628.9896
Pick-Up/Crew Trk	15	2	60	10	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.0013	0.0655	0.0065	0.0002	0.0053	0.0020	18.7986	0.0003	0.0005	18.9470
																						0.08					
Co-Generation Facility Demolition																											
Mobile Shears Backhoe	3	10	96	17	358	0.59	n/a	n/a	0.1937	1.3582	2.0798	0.0048	0.0730	0.067200	468.244700	0.151400	0.004274	0.0004	0.0025	0.0039	0.0000	0.0001	0.0001	0.8770	0.0003	0.0000	0.8865
Exacavators	4	10	96	17	158	0.38	n/a	n/a	0.2314	3.0860	2.2784	0.0049	0.1104	0.101500	472.289100	0.152700	0.004274	0.0004	0.0050	0.0037	0.0000	0.0002	0.0002	0.7597	0.0002	0.0000	0.7679
Wheel Loaders	2	10	96	17	203	0.36	n/a	n/a	0.2902	1.2689	3.4212	0.0048	0.1136	0.104500	469.512700	0.151800	0.004274	0.0002	0.0010	0.0026	0.0000	0.0001	0.0001	0.3577	0.0001	0.0000	0.3616
Skid Steer Loaders	3	10	96	17	65	0.37	n/a	n/a	0.1884	3.2771	2.5046	0.0049	0.1084	0.099700	471.907500	0.152600	0.004274	0.0002	0.0038	0.0029	0.0000	0.0001	0.0001	0.5543	0.0002	0.0000	0.5603
Water Trucks	3	10	96	17	n/a	n/a	5	4	0.5270	1.2976	7.5546	0.0179	0.1419	0.135753	1892.045773	0.024480	0.297403	0.0008	0.0021	0.0134	0.0000	0.0004	0.0003	3.0033	0.0000	0.0005	3.1449
Semi-Trucks	5	10	96	17	n/a	n/a	300	2	0.52705	1.2976	7.55461	0.01788	0.14189	0.135753	1892.045773	0.02448	0.297403	0.0837	0.2060	1.1999	0.0028	0.0380	0.0272	300.3298	0.0039	0.0472	314.4948
Pick-Up/Crew Trk	15	2	96	17	n/a	n/a	54	2	0.02357	1.22202	0.11225	0.00347	0.00179	0.001647	350.9016758	0.005505	0.00883	0.0020	0.1047	0.0103	0.0003	0.0085	0.0032	30.0778	0.0005	0.0008	30.3151
																						0.05					

	Tire Wear (g/mi)		Brake Wear (g/mi)		Start Emission Rate (g/trip)									Hot Soak (g/	Evaporative Loss (g/trip)
	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO2	CH4	N2O	ROG	ROG
Water Trucks	0.036	0.009	0.06174	0.02646	-	-	3.313673264	-	-	-	-	-	-	-	-
Semi-Trucks	0.036	0.009	0.06174	0.02646	-	-	3.313673264	-	-	-	-	-	-	-	-
Pick-Up/Crew Trk	0.008	0.002	0.03675	0.01575	0.44349	3.0526442	0.374326355	0.000743	0.0022447	0.002064	75.0804	0.088928	0.037038	0.187635	0.619873

Mobilization	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(tons/year) CO_2e
Total Emissions for Mobilization (tons/year)	0.0013	0.0061	0.0185	0.0001	0.0008	0.0005	5.57
Threshold Limits (tons/year)	100	25	25	25	15	12	100,000
Exceedance?	No	No	No	No	No	No	No

HTF Removal and De-Energize Verification	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(tons/year) CO_2e
Total Emissions for HTF Removal (tons/year)	0.0090	0.0289	0.1273	0.0003	0.0046	0.0031	35.01
Threshold Limits (tons/year)	100	25	25	25	15	12	100,000
Exceedance?	No	No	No	No	No	No	No

Mirror Farm Demolition	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(tons/year) CO_2e
Total Emissions forMirror Farm Demolition (tons/year)	0.1702	0.4877	2.4252	0.0059	0.0821	0.0570	651.51
Threshold Limits (tons/year)	100	25	25	25	15	12	100,000
Exceedance?	No	No	No	No	No	No	No

Co-Generation Facility Demolition	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$	(tons/year) CO_2e
Total Emissions for Co-Generation Facility Demolition (tons/year)	0.0877	0.3251	1.2367	0.0032	0.0475	0.0311	350.53
Threshold Limits (tons/year)	100	25	25	25	15	12	100,000
Exceedance?	No	No	No	No	No	No	No

Notes:

[1]Contractor truck trips conservative assumption of simultaneous 54 mile roundtrips (SEGS VIII Facility - Barstow).

[2]Emissions factors for off-road equipment and on-road trucks are conservatively assumed to be the 2020 scenario year presented in OFFROAD and EMFAC2017 spreadsheets.

On-road Construction Vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from haul trucks and material delivery trucks

Onsite Vehicle Fugitive PM Emissions - Unpaved Roads

Vehicle Activity

Group ID	Source	Miles per round trip	Load Weight (tons)	Material Transferred (Tons) Annual	Material Transferred (Tons) Daily	VMT Annual	VMT Daily
ST	Semi-Trucks[1]	0.5	37	17,800	972	240.54	13.14
L1	Mobile Shear Loader	0.32	45	13,750	156	98	1
L2	Excavator	0.32	45	13,750	156	98	1
L3	Wheel Loader	1.6	12.5	300,000	2,720	38,400	348
L4	Skid Steer Loader	0.06	12.5	13,750	156	66	1
L5	Bulldozer	4.8	40	300,000	2,720	36,000	326.40
WT1	Water Truck					3,050	34
T2	Construction/Misc Truck[2]					2,200	10

Notes:

(1) Includes off-road haul trucks only. Trucks hauling concrete travel on unpaved surface.

(2) Fifty-percent of time Construction/Misc trucks are on paved surfaces.

Emission Factors

ID	Source	k (PM10)	k (PM2.5)	s[1]	W[2]	% Control Efficiency[3]	Moisture[1]	PM10 EF lb/VMT	PM2.5 EF lb/VMT
ST	Semi-Trucks	1.5	0.15	7.4	32	98	5.7	0.056	0.006
L1	Mobile Shear Loader	1.5	0.15	7.4	55	98	5.7	0.072	0.007
L2	Excavator	1.5	0.15	7.4	55	98	5.7	0.072	0.007
L3	Wheel Loader	1.5	0.15	7.4	13	98	5.7	0.037	0.004
L4	Skid Steer Loader	1.5	0.15	7.4	9	98	5.7	0.032	0.003
L5	Bulldozer	1.5	0.15	7.4	43	98	5.7	0.064	0.006
WT1	Water Truck	1.5	0.15	7.4	19	98	5.7	0.044	0.004
T2	Construction/Misc Truck	1.5	0.15	7.4	1.5	98	5.7	0.014	0.001

Notes:

(1) Average silt content and moisture content for unpaved roads with routine watering.

(2) The vehicle weights are based on the average weight of unloaded and loaded weights for haul trucks and the water truck. The other vehicle weights are based on the estimated Gross Mean Vehicle Weight provided by manufacturers. The following table summarizes the weight basis:

ID	Vehicle Type	Advertised Empty GMVW (tons)	Load Weight (tons)	Ave Weight (tons)	Source
ST	Semi-Trucks	13	37	32	Caterpillar Advertised Weights and Capacities - http://www.cat.com/cda/layout?m=37840&x=7&location=drop
L1	Mobile Shear Loader	32.5	45	55	
L2	Excavator	32.5	45	55	
L3	Wheel Loader	6.5	12.5	13	
L4	Skid Steer Loader	3	12.5	9	
L5	Bulldozer	22.5	40	43	
WT1	Water Truck	8.5	20	19	
T2	Construction/Misc Truck	1.5	NA	1.5	Manufacturer Advertised Weight for vehicle class

(3) Control efficiency from Figure 13.2.2-2, AP-42 5th Ed., Section 13.2.2, Unpaved Roads, December 2003, revision. Uncontrolled moisture content was assumed to be 1.0% and control moisture 5.7% which gives an M of 5.7 (and control efficiency of 99.7%). To be conservative, used 98% control. The uncontrolled road moisture was based on Fugitive Particulate Matter Emissions Final Draft Report, U.S. Environmental Protection Agency, Research Triangle Park, NC, EPA Contract No. 68-D2-0159, Assignment 4-06, January 1997, which reported a uncontrolled moisture content of 0.52% on unpaved roads. A value of 1.0% was selected which results in a more conservative estimate of control efficiency.

Assume 98% control also applies to soil stabilization based on the frequency of water application.

Emission Factor Source: AP-42 5th Ed., Section 13.2.2, Unpaved Roads, Rev.: December, 2003.
E=k(s/12)^a(W/3)^b

E = emission factor in lb/VMT
k = particle size multiplier (1.5 for PM10, 0.15 for PM2.5)
s = silt content of road surface materials, %
W = mean vehicle weight, ton

a = 0.9 for PM10
b = 0.45 for PM10
a = 0.9 for PM2.5
b = 0.45 for PM2.5

PM10 Emissions - Unpaved Roads

		PM10 Emissions		PM2.5 Emissions		
Group ID	**Source**	**Daily lb/day**	**Annual TPY**	**Daily lb/day**	**Annual TPY**	**Source Type**
ST	Semi-Trucks	0.73	0.01	0.07	0.00	Area
L1	Mobile Shear Loader	0.08	0.00	0.01	0.00	Area
L2	Excavator	0.08	0.00	0.01	0.00	Area
L3	Wheel Loader	12.96	0.715	1.30	0.071	Area
L4	Skid Steer Loader	0.02	0.001	0.00	0.000	Area
L5	Bulldozer	20.89	1.152	2.09	0.115	Area
WT1	Water Truck	1.48	0.067	0.15	0.007	Area
	Sub-Total - Plant Area	**36.25**	**1.95**	**3.63**	**0.19**	
T2	Construction/Misc Truck	0.14	0.016	0.01	0.002	Area
	Grand Total	**36.40**	**1.96**	**3.64**	**0.20**	
	Threshold Limits	**82.00**	**15.00**	**65.00**	**12.00**	
	Exceedance?	**No**	**No**	**No**	**No**	

Example Calculation: Loader PM10 = (44 VMT/day) x (0.103 lb/VMT) = 4.53 lb/day
Loader PM10 = (11,250 VMT/day) x (0.103 lb/VMT) / (2000 lb/ton) = 0.58 TPY

Crusher Equipment Data:

340 TPH Recycled Concrete Material
2,720 TPD Recycled Concrete Material
300,000 TPY Recycled Concrete Material
8.0 hr/day (Recycled Material Production)
882 hr/yr (Recycled Material Production)

Recycled Material Crusher Process Emissions

ID No.	Equipment Category	Description	Feed Rate (TPH)	Emission Controls	PM_{10} EF (lb/ton)	$PM_{2.5}$ EF (lb/ton)	PM_{10} EF lb/hr	$PM_{2.5}$ EF lb/hr	PM_{10} EF lb/day	$PM_{2.5}$ EF lb/day	PM_{10} EF ton/yr	$PM_{2.5}$ EF ton/yr	Notes	Source Type
RF-1	Recycled Material Feeder Bin	Recycled Material Loaded to Feeder	340	Wet Suppression	1.60E-05	2.40E-06	5.44E-03	8.16E-04	4.35E-02	6.53E-03	2.40E-03	3.60E-04	1	Volume
RCR-1	Recycled Material Jaw Crusher	Recycled Material Crushing	340	Wet Suppression	5.40E-04	8.10E-05	1.84E-01	2.75E-02	1.47E+00	2.20E-01	8.10E-02	1.22E-02	2	Volume
RTC-1	Recycled Material Transfer Conveyor	Transfer Conveyor	170	Wet Suppression	4.60E-05	6.90E-06	7.82E-03	1.17E-03	6.26E-02	9.38E-03	3.45E-03	5.18E-04	2	Volume
RTC-2	Recycled Material Transfer Conveyor	Transfer Conveyor	170	Wet Suppression	4.60E-05	6.90E-06	7.82E-03	1.17E-03	6.26E-02	9.38E-03	3.45E-03	5.18E-04	2	Volume
RSC-1	Recycled Material Stacker Conveyor	Stacker Conveyor	170	Wet Suppression	4.60E-05	6.90E-06	7.82E-03	1.17E-03	6.26E-02	9.38E-03	3.45E-03	5.18E-04	2	Volume
RSC-2	Recycled Material Stacker Conveyor	Stacker Conveyor	170	Wet Suppression	4.60E-05	6.90E-06	7.82E-03	1.17E-03	6.26E-02	9.38E-03	3.45E-03	5.18E-04	2	Volume
RS-1	Recycled Material 3-Deck Screen	Recycled Material Screening	340	Wet Suppression	7.40E-04	1.11E-04	2.52E-01	3.77E-02	2.01E+00	3.02E-01	1.11E-01	1.67E-02	2	Volume
								Total	**3.78**	**0.57**	**0.21**	**0.03**		
									82	65	15	12	Threshold Limits	
Notes:									**No**	**No**	**No**	**No**	**Exceedance?**	

1. Based on emission factor for truck unloading of fragmented stone to the feeder provided in Table 11.19.2-2., AP-42 5th Ed. Final Section 11.19.2 updated August 2004.

2. Based on controlled emission factors (with wet suppression) for applicable activity provided in Table 11.19.2-2 (Crushed Stone Processing and Pulverized Mineral Processing), AP-42 5th Ed. Final Section 11.19.2 updated August 2004. Since there was no data for PM4, the controlled emission factor for PM10 was used and scaled to PM4 using the ratio 0.15, provided in AP-42, Section 13.2.4, dated November 2006. The PM2.5 emission factors were calculated as follows:

Crusher: 5.4E-04 lbs/ton x 0.15 = 8.1E-05 lbs/ton
Screens: 7.4E-04 lbs/ton x 0.15 = 1.11E-04 lbs/ton.
Conveyors: 4.6E-05 lbs/ton x 0.15 = 6.90E-06 lbs/ton.

Product Delivery Truck/ Employee Vehicle On-Site Emissions

Source Data

On-Road Product Delivery Truck Activity

Haul Truck Type	Truck Trips[1]	Truck Trips	Load Weight	Truck Weight (unloaded)	Truck Weight (loaded)	Average Truck Weight[2]	Delivery Days[3]	Truck Idling Time[4]	Travel Distance (one way)
	(trip /day)	(trip/constr duration)	(tons)	(tons)	(tons)	(tons)	days/yr	(min/truck)	(miles)
Metal Product Truck	4	341	25	12	37	24.5	60	11	150
Glass Product Truck	5	313	25	12	37	24.5	60	11	150
Trash/Debris Truck	5	286	20	12	32	22	5	11	25
HFT Fluids Delivery Truck	5	28	20	12	32	22	5	11	250
Water Truck[5]	6	66	16	3	19	11	156	11	25
Construction/Misc Truck[5]	5	780	0.5	2.5	3	2.75	156	11	25
Total HHDD Trucks	30	1,814							

1. The number of truck trips are based on the *Project Description For SEGS VIII Decommissioning Project*, Prepared by Zach Sawicki - Terra-Gen, April 2020.
2. The average truck weight is the average of the loaded and unloaded weights.
3. The number of delivery days per year was calculated from the total material divided by daily weight of material hauled as follows:
   7,500 tons of material processed per yr / (12 trucks per day x 22 tons of material hauled per truck) = 28 days/yr")
4. Truck Idling time based on loading material estimates. Title 13 CCR Section 1956.8 limits idling with parking brake engaged to 5 minutes. However, the rule does not apply to trucks more than 100 feet from residences and if the parking brake is not engaged, the rule limits idling to less than 15 minutes. Therefore, the actual idle time of 11 minutes will be used.
5. The water trucks and construction/miscellaneous trucks may travel on any of the roadways. However, worst case emissions are assumed if they travel on the plant ingress and egress access roads.

Vehicles (Employees)

Vehicle Trips[1]	Operating Days	Vehicle Weight[3]	Travel Distance (one way)
(trips/day)	(days/year)[2]	(tons)	(miles)
30	156	2.38	25

1. The number of vehicles trips are based *on the number of crew truck listed in the Project Description For SEGS VIII Decommissioning Project, Prepared by Zach Sawicki - Terra-Gen, April 2020*.
2. Based on the construction duration of 156 days per construction period: 6 days per week at 26 weeks per year.
3. Based on the mid point of the weight class for Light Duty Trucks (LDT2) as used in EMFAC 2017, where the weight class range is 3751 to 5750 pounds.

Emission Factors

Idling tailpipe[1]

Vehicle Type	PM10		PM2.5	
	(ton/10^6 vehicles-day)	(lbs/min-vehicle)	(ton/10^6 vehicles-day)	(lbs/min-vehicle)
Heavy Heavy Duty Diesel Trucks[2]	0.05	1.83E-05	0.05	1.83E-05

1. Idling emission factors estimated from the CA mobile emission model, EMFAC2017, run in Burden mode (since EMFAC mode does not provide values for Idling) for model year 2020. Idling emissions for Light Duty Trucks (considered employee vehicles) were not considered since the EMFAC model only assesses idling emissions for Heavy Duty Trucks or larger and because it is unlikely for employees to leave their vehicles idling on a frequent basis.

2. For Heavy Heavy Duty Diesel Trucks (HHDD), the EMFAC model was run using 53,978 HHDT vehicles (Emfac Default) idling at 101.2202 minutes each (min/vehicle-day) (Emfac Default). This value was then converted to lbs/min-truck. For example, the EMFAC idling emission value for 53,978 HHDT vehicles, idling 101.2202 minutes for ROG was 0.82 tons/day. So 0.82 tons/53,978 trucks/101.2202 min per truck x 2,000 lbs/ton =3.00E-04 lbs/min-truck. SOx idling emissions are negligible.

Driving tailpipe -Running Exhaust[1]

ID	Source	PM10	PM2.5
		(g/mile)	(g/mile)
Heavy Heavy Duty Diesel Trucks	Product Delivery Tru	0.318	0.292
Light Duty Trucks (All)	Light Duty Truck	0.094	0.087

1. Running emission factors based on CA mobile emission model, EMFAC2017, run in the EMFAC mode for model year 2020. For Heavy Heavy Duty Diesel Trucks, a speed of 10 miles per hour was used. For Light Duty Trucks (employee vehicles) a speed of 10 miles per hour was also used since the truck traffic would impede the light duty traffic.

Re-Entrained Dust

ID	k[1] (PM10)	k[1] (PM2.5)	sL[2]	W	C[3] (PM10)	C[3] (PM2.5)	Precipitation[4]	Control Efficiency[5]	PM10 EF[6]	PM2.5 EF[6]
	(lb/VMT)	(lb/VMT)	(g/m^2)	(tons)	(lb/VMT)	(lb/VMT)	(days)	(%)	(lb/VMT)	(lb/VMT)
Metal Product Truck	0.016	0.0024	0.022	24.5	0.00047	0.00036	35	80	0.003794984	0.000512736
Glass Product Truck	0.016	0.0024	0.022	24.5	0.00047	0.00036	35	80	0.003794984	0.000512736
Trash/Debris Product Truck	0.016	0.0024	0.022	22	0.00047	0.00036	35	80	0.003215521	0.000425816
HTF Delivery Truck	0.016	0.0024	0.022	22	0.00047	0.00036	35	80	0.003215521	0.000425816
Water Truck	0.016	0.0024	0.022	11.00	0.00047	0.00036	35	80	0.001077549	0.00010512
Construction/ Misc. Truck	0.016	0.0024	0.022	6.00	0.00047	0.00036	35	80	0.000379298	3.82749E-07

1. The particle size multiplier (k) is based on values for PM10 and PM2.5, shown in November 2006 AP-42 Section 13.2.1, Table 13.2-1.1.

2. The silt loading (sL) value is based on the SCAQMD CEQA handbook page A9-96, which gives a silt loading for a freeway of 0.00065 oz/yd2 (0.022 g/m2). This value was chosen since the area is granite rock, the roads are swept each shift, and vehicle traffic is frequent (38 trucks per day).

3. Based on the November, 2006 AP-42 Section 13.2.1.3 predictive emission factor equation, the vehicle fleet exhaust, brake and tire wear (C) are to be subtracted from the equation. The estimation of exhaust, tire and brake wear are separately accounted for based on Emfac, model year 2020. The C value for PM4 was determined using linear interpolation between PM2.5 and PM10.

4. Number of "wet" days with precipitation at least 0.254 mm (0.01 in), average of 35 days/yr in Barstow, CA, from Western Regional Climate Center https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0519

5. MDAQMD Rule 403 requires removing any soil track-out within one hour, and operating a PM10 street sweeper with 80% efficiency per SCAQMD Rule 1186, resulting in 80% control efficiency.

6. Particulate emission factors includes control efficiency for sweeping and excludes "wet" days.

7. The Fleet Average Vehicle Weight is based on the weighted mean.

Brake and Tire Wear[1]

Vehicle Type	PM10 (g/mile)		
	Brake Wear	Tire Wear	Total
Heavy Heavy Duty Diesel Trucks	0.0617	0.036	0.0977
Light Duty Trucks	0.0368	0.008	0.0448

1. Brake and Tire Wear emission factors based on CA mobile emissions model, EMFAC2017, run in the EMFAC mode for model year 2020. For Heavy Heavy Duty Diesel Trucks, a speed of 10 miles per hour was used. For Light Duty Trucks (employee vehicles) a speed of 10 miles per hour was also used since the truck traffic would impede the light duty traffic.

Daily Emissions

Vehicle Type	Emission Source	Source ID	Diesel PM10 (lb/day)	PM2.5 (lb/day)
Mobilization Trucks	Idling	HD-Idle	0.00	0.00
	Driving	HD-drive	0.09	0.08
	Brake & Tire Wear	HD-B&T	0.03	0.03
	Re-entrained Dust	VehRoad	0.00	0.00
		Subtotal	**0.12**	**0.11**
Metal Product Trucks	Idling	HD-Idle	0.00	0.00
	Driving	HD-drive	0.42	0.39
	Brake & Tire Wear	HD-B&T	0.13	0.13
	Re-entrained Dust	VehRoad	0.01	0.00
		Subtotal	**0.56**	**0.52**
Glass Product Trucks	Idling	HD-Idle	0.00	0.00
	Driving	HD-drive	0.53	0.48
	Brake & Tire Wear	HD-B&T	0.13	0.13
	Re-entrained Dust	VehRoad	0.01	0.00
		Subtotal	**0.66**	**0.61**
Trash/Debris Product Trucks	Idling	HD-Idle	0.00	0.00
	Driving	HD-drive	0.18	0.16
	Brake & Tire Wear	HD-B&T	0.03	0.03
	Re-entrained Dust	VehRoad	0.00	0.00
		Subtotal	**0.21**	**0.19**
HTF Material Delivery Trucks Water Trucks Construction and Misc Trucks	Idling	HD-Idle	0.00	0.00
	Driving	HD-drive	1.01	0.93
	Brake & Tire Wear	HD-B&T	0.31	0.31
	Re-entrained Dust	VehRoad	0.01	0.00
		Subtotal	**1.33**	**1.24**
		Peak Day	**1.33**	**1.24**
		Threshold Limits	82	65
		Exceedance?	**No**	**No**

Annual Emissions

Vehicle Type	Emission Source	Source ID	**Diesel PM10** (ton/yr)	**PM2.5** (ton/yr)
Mobilization Trucks	Idling	HD-Idle	0.000	0.000
	Driving	HD-drive	0.007	0.006
	Brake & Tire Wear	HD-B&T	0.002	0.002
	Re-entrained Dust	VehRoad	0.000	0.000
		Subtotal	**0.009**	**0.008**
Metal Product Trucks	Idling	HD-Idle	0.000	0.000
	Driving	HD-drive	0.018	0.016
	Brake & Tire Wear	HD-B&T	0.006	0.006
	Re-entrained Dust	Veh	0.000	0.000
		Subtotal	**0.024**	**0.022**
Glass Product Trucks	Idling	HD-Idle	0.000	0.000
	Driving	HD-drive	0.016	0.015
	Brake & Tire Wear	HD-B&T	0.005	0.005
	Re-entrained Dust	Veh	0.000	0.000
		Subtotal	**0.022**	**0.020**
Trash/Debris Product Trucks	Idling	HD-Idle	0.000	0.000
	Driving	HD-drive	0.000	0.000
	Brake & Tire Wear	HD-B&T	0.001	0.001
	Re-entrained Dust	Veh	0.000	0.000
		Subtotal	**0.001**	**0.001**
HTF Material Delivery Trucks Water Trucks Construction and Misc Trucks	Idling	HD-Idle	0.000	0.000
	Driving	HD-drive	0.010	0.009
	Brake & Tire Wear	HD-B&T	0.003	0.003
	Re-entrained Dust	Veh	0.000	0.000
		Subtotal	**0.013**	**0.012**
		Total	**0.059**	**0.055**
		Threshold Limits	15	12
		Exceedance?	**No**	**No**

1. HHDD annual emissions based on product delivery operations (delivery days/yr) for each haul truck type, shown in Source Data Table above.
2. LDT annual emissions based on 6 months of decommissioning operations.

Table Construction Emissions by Stage (Pounds per Day)

Construction Stage	CO	VOC	NOx	SOx	PM10	PM2.5	CO2e
Stage 1 - Mobilization	0.58	2.54	7.38	0.02	40.42	4.40	2,229
Stage 2 - HTF Removal	3.09	9.84	42.41	0.11	42.93	5.21	11,671
Stage 3 - Mirror Farm Demo	5.77	16.42	80.72	0.20	43.47	6.09	21,717
Stage 4 - Co-Gen Demo	1.93	6.97	25.75	0.07	41.27	4.88	7,303
Peak Day	5.77	16.42	80.72	0.20	43.47	6.09	21,717
MDAQMD Threshold	548	137	137	137	82	65	548,000
Exceedance?	No	No	No	No	No	No	No

Construction Emissions by Stage (Tons per Year)

Construction Stage	CO	VOC	NOx	SOx	PM10	PM2.5	CO2e
Stage 1 - Mobilization	0.00	0.01	0.02	0.00	2.23	0.28	6
Stage 2 - HTF Removal	0.01	0.03	0.13	0.00	2.03	0.29	35
Stage 3 - Mirror Farm Demo	0.17	0.49	2.43	0.01	2.31	0.34	652
Stage 4 - Co-Gen Demo	0.09	0.33	1.24	0.00	2.28	0.31	351
Total Annual Emissions	0.27	0.85	3.81	0.01	8.86	1.22	1,042.63
MDAQMD Threshold	100	25	25	25	15	12	100,000
Exceedance?	No	No	No	No	No	No	No

APPENDIX D

BIOLOGICAL RESOURCES REPORT

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LOCKHART SOLAR PROJECT

Hinkley Area,
San Bernardino County, California

BIOLOGICAL RESOURCES REPORT

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November 2018
JN 169638

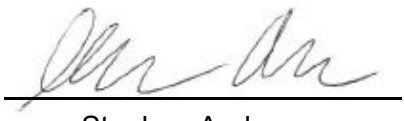
Michael Baker
INTERNATIONAL

LOCKHART SOLAR PROJECT

HINKLEY AREA,
SAN BERNARDINO COUNTY, CALIFORNIA

Biological Resources Report

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a biological resources assessment for the above-referenced project.



Stephen Anderson
Biologist
Natural Resources/Regulatory Permitting

Dan Rosie
Ecologist/Project Manager
Natural Resources/Regulatory Permitting

November 2018

Executive Summary

On behalf of Lockhart Solar PV, LLC, Michael Baker International (Michael Baker) has prepared this Biological Resources Report for the Lockhart Solar Project (Project), located in the Lockhart area northwest of the unincorporated community of Hinkley, San Bernardino County, California. The Lockhart Solar Project will result in the decommissioning and demolition of the previously permitted solar thermal power plants and the development of new solar PV facilities and associated infrastructure necessary to generate up to a combined 160 megawatts alternate current of renewable electrical energy and/or energy storage capacity.

This report was prepared to document all biological resources identified within the survey area during a general biological resources survey, which includes a floral and faunal inventory, vegetation/land use mapping, and habitat suitability assessments to determine the potential for special-status plant and wildlife species and vegetation communities to occur within the survey area.

The survey area, located in the Mojave Desert, consists of highly disturbed areas of bare ground, open water, and developed areas (i.e., solar fields and associated infrastructure, evaporation ponds, and open areas) almost entirely devoid of any plants or wildlife. No special-status plant or wildlife species or vegetation communities were observed within or surrounding the survey area during the survey. In addition, based on 9-quadrangle database record searches, Michael Baker determined that the ten (10) special-status plants species and sixteen (16) special-status wildlife species known to occur within the vicinity of the survey area are either not expected or have a low potential to occur within or surrounding the survey area.

Further, bird nesting opportunities and wildlife movement are limited and relatively restricted throughout most of the survey area, respectively, due to a lack of vegetative cover on-site, and development and infrastructure within and surrounding the survey area. In addition, no U.S. Fish and Wildlife Service-designated critical habitat has been mapped within the survey area.

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LIST OF ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
FEMA	Federal Emergency Management Agency
FT	Federally Threatened
kV	Kilovolt
MBTA	Migratory Bird Treaty Act
Michael Baker	Michael Baker International
MW	Megawatt
NRCS	Natural Resources Conservation Service
PV	photovoltaic
SEGS	Solar Electric Generating System
SSC	Species of Special Concern
ST	State Threatened
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	Watch List

Section 1 Introduction

On behalf of Lockhart Solar PV, LLC, Michael Baker International (Michael Baker) has prepared this Biological Resources Report for the proposed Lockhart Solar Project (Project). This report describes the biological resources record searches and literature review, survey methodologies, and results of the biological resources survey conducted within the survey area to determine the presence or potential occurrence of State-listed and/or Federally-listed rare, threatened, or endangered species, and other special-status plants, animals, and natural communities.

1.1 PROJECT LOCATION

The survey area is located in the southwestern portion of the Mojave Desert, approximately 7 miles north of Highway 58 and 11 miles east of U.S. Highway 395, northwest of the unincorporated community of Hinkley, San Bernardino County, California (Figure 1, *Regional Vicinity*). Specifically, the survey area is depicted within Sections 13, 19, and 24, Township 11 North, Range 4 and 5 West, of the U.S. Geological Survey *Lockhart, California* 7.5-minute topographic quadrangle map (Figure 2, *Site Vicinity*).

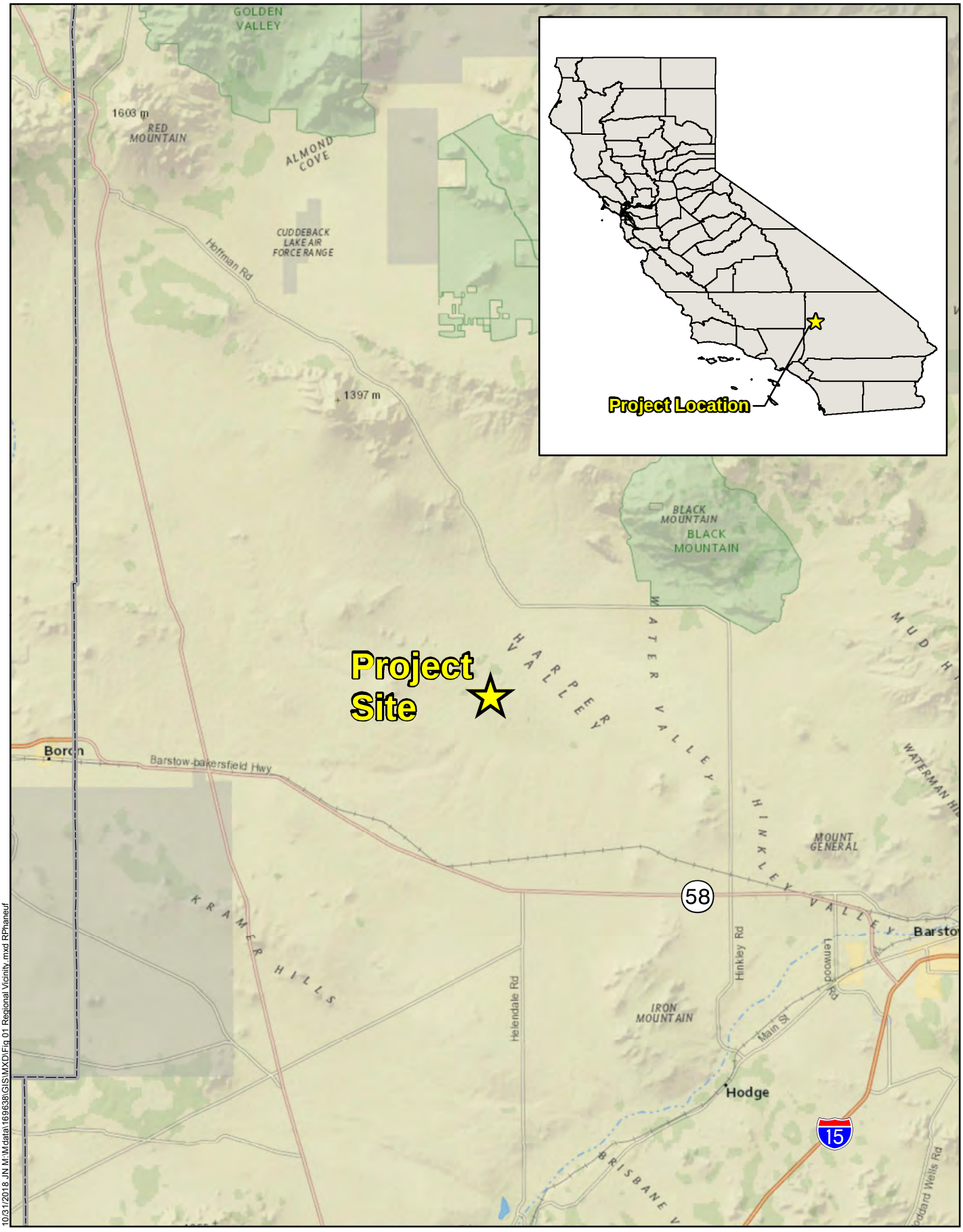
The site is located in the Lockhart area west of Harper Dry Lake approximately 11 miles east of Kramer Junction and 7 miles north of Mojave-Barstow Highway 58. The redevelopment site is bordered by Hoffman Road to the south and Harper Lake Road to the east (Figure 3, *Survey Area*). Its western and northern edges follow unnamed dirt roads. The project is accessed from Hoffman Road via Harper Lake Road.

1.2 PROJECT BACKGROUND AND DESCRIPTION

Lockhart Solar PV, LLC, is seeking land use approval from San Bernardino County on this approximately 1,007-acre redevelopment site. The proposed redevelopment project consists of the decommissioning and demolition of the previously permitted 160-megawatt (MW) solar thermal power plant and the development of a new solar photovoltaic (PV) facility and associated infrastructure necessary to generate up to a combined 160 MW alternate current of renewable electrical energy and/or energy storage capacity.

The proposed project consists of three highly disturbed development areas generally in the same location as the existing Solar Electric Generating System (SEGS) VIII and IX project parcels (also collectively known as Lockhart Solar). The solar facility would use PV technology and consist of solar arrays mounted on tracking structures mounted to vertical steel posts. The solar facility would be built in phases and would operate year-round generating electricity during the daylight hours.

Project components would include solar panels/modules, inverters, internal service roads, and



10/31/2018 JN M:\Mdata\169638\GIS\MXD\Fig 01 Regional Vicinity.mxd RPhaneuf

Michael Baker INTERNATIONAL

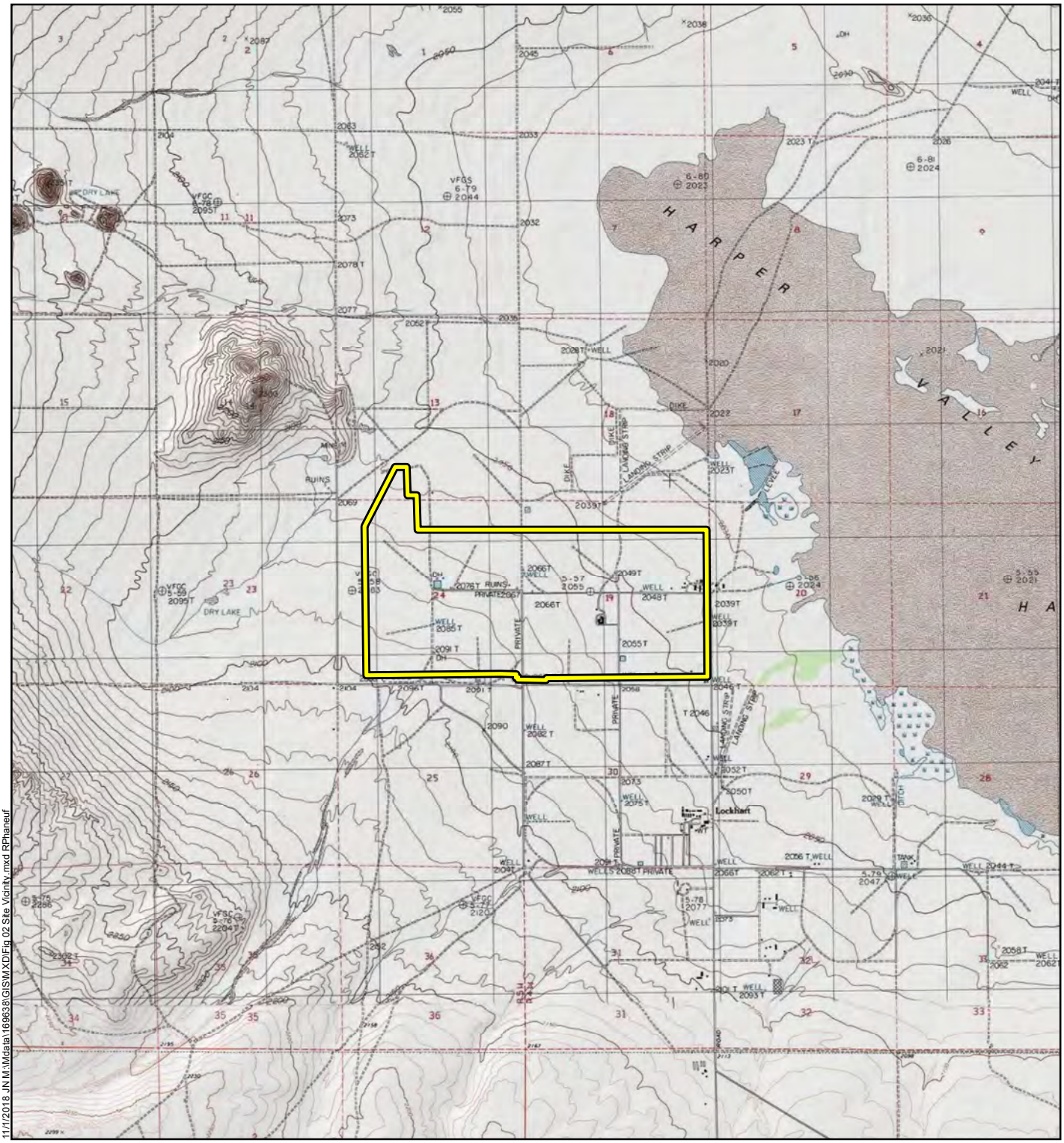
0 2.5 5 Miles

Source: ArcGIS Online

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

Regional Vicinity

Figure 1



11/1/2018 JN M:\Mdata\169638\GIS\MXD\Fig 02 Site Vicinity.mxd RPhaneuf

Legend

Survey Area

USGS 7.5-Minute topographic quadrangle maps: *Lockhart, California (1986)*

Michael Baker INTERNATIONAL

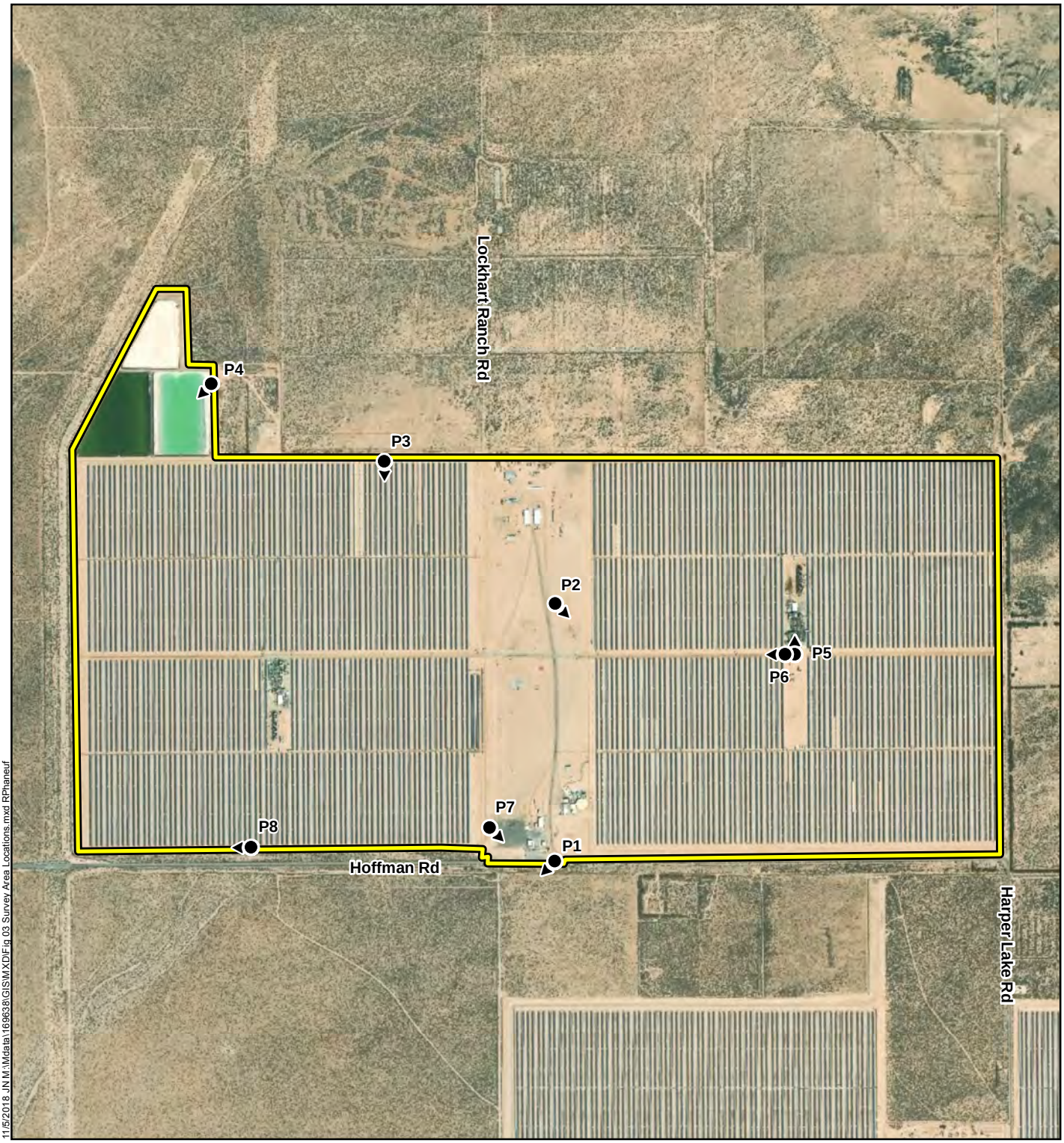
0 0.5 1 Miles

Source: ArcGIS Online, 2018

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

Site Vicinity

Figure 2



Legend

Survey Area

Photo Point and Direction

Michael Baker INTERNATIONAL

0 0.125 0.25 Miles

Source: ArcGIS Online, 2018

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

Survey Area

Figure 3

telecommunication equipment, including underground and overhead electrical collection systems and fiber optics. Underground electrical collection systems would be installed in conjunction with panel arrays within the project site, connecting each solar panel to a feeder circuit; each feeder circuit would in turn be connected to the collector substation. The solar panel circuits would gather into 13.8 kilovolts (kV) circuits or 34.5 kV and would step-up to 230 kV at either new electrical substations or using the existing reconditioned electrical substations located on site. The solar PV projects would utilize the existing gen-tie line to Kramer Junction. On-site operations and maintenance facilities will remain to service the new power plants.

An energy storage facility will be constructed on site consisting of battery banks and control systems assembled in temperature controlled 10-foot by 40-foot roll-off containers using about 2 acres of land. The energy storage system will be connected to the substation equipment to provide power as needed.

1.3 PURPOSE OF DOCUMENT

This report documents all biological resources identified within the survey area during a general biological resources survey. It includes an analysis of the potential for the various on-site biological resources to support special-status plant and wildlife species and special-status vegetation communities known to occur within the vicinity of the survey area that are subject to provisions of the Federal Endangered Species Act of 1973, Migratory Bird Treaty Act (MBTA), California Endangered Species Act, California Environmental Quality Act, California Fish and Game Code (CFGC), California Native Plant Protection Act, Bald and Golden Eagle Protection Act, and other local policies and ordinances protecting biological resources.

Section 2 Methodology

2.1 LITERATURE REVIEW AND DATABASE SEARCHES

Prior to conducting the field surveys, Michael Baker conducted a 9-quadrangle (Fremont Peak, Bird Spring, Opal Mountain, The Buttes, Lockhart, Water Valley, Kramer Hills, Twelve Gauge Lake, and Hinkley) search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) RareFind 5 (CDFW, Biogeographic Data Branch 2018) and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2018), and generated a Species and Resources List queried from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system (USFWS 2018a). This helped to identify special-status plant and wildlife species, vegetation communities, and other biological resources that have been previously documented within, near, and/or have the potential to occur within the survey area. The *Special Animals List* (CDFW 2018a), *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2018b), and CNPS California Rare Plant Ranking System (CRPR) were reviewed for the current status of rare and endangered plant and wildlife species. Other resources reviewed include the USFWS Critical Habitat for Threatened & Endangered Species mapper (USFWS [ArcGIS Online] 2018); recent and historical aerial photography (Google Earth Pro 2018); the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA, NRCS 2018); USFWS National Wetland Inventory (USFWS 2018b), and Federal Emergency Management Agency (FEMA) – 100 Year Flood Zones (FEMA [ArcGIS Online] 2018).

2.2 GENERAL BIOLOGICAL RESOURCES SURVEYS

Following the database searches, on October 30, 2018, Michael Baker biologists Stephen Anderson, Dan Rosie, and Tom Millington conducted a general biological resources assessment of the entire survey area between the hours of 0800 and 1200, with weather conditions consisting of temperatures ranging from approximately 60 to 95 degrees Fahrenheit (°F), winds approximately 1 to 5 miles per hour, and clear skies. The survey was conducted to document existing site conditions, including an inventory of plant and wildlife species and mapping of vegetation communities/land uses, to determine the potential for various special-status plant and wildlife resources known to occur within the vicinity of the survey area, and to identify jurisdictional aquatic features, if present. Representative photographs of the survey area are provided at the end of this report in Appendix A, *Site Photographs*. Refer to Figure 3 for the location and direction from which each photograph was taken.

2.2.1 Vegetation/Land Use Mapping and Plant Species Inventory

Classification of the on-site vegetation communities and other land uses is based on the descriptions of terrestrial vegetation classification systems described in *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Plant species nomenclature

and taxonomy follow *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin *et al.* 2012). All plant species encountered were noted and identified at minimum to the lowest possible taxonomic level necessary to determine rarity. Refer to Appendix B for a complete list of plant species observed on-site.

2.2.2 General Wildlife Observations

Wildlife identification and nomenclature followed standard reference texts, including The American Ornithologists' Union *Checklist of North and Middle American Birds* (The American Ornithologists' Union 2013); the *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, With Comments Regarding Confidence In Our Understanding* (Crother 2012); and *Mammals of North America, Second Edition* (Kays and Wilson 2009). All wildlife species observed and/or otherwise detected through sign (e.g., tracks, scat) were recorded. Other wildlife species may occupy the site but are not easily detectable during the day (i.e., nocturnal) and without extensive survey efforts during the appropriate season, in addition to several species being transient and potentially occupying the site other times of the year. However, due to the highly disturbed nature of the site and the lack of suitable habitat, nocturnal and transient species are not expected to occur on-site. Refer to Appendix B for a complete list of wildlife species observed or otherwise detected on-site.

2.3 SURVEY LIMITATIONS

This Biological Resources Report has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Biological surveys for the presence or absence of certain taxa have been conducted as part of this assessment but were not necessarily performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided.

The findings and opinions conveyed in this report are based on findings derived from site reconnaissance and a review of the CNDDB and CNPS Online Inventory, and other resources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Michael Baker believes the data sources

are reasonably reliable, Michael Baker cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

Section 3 Existing Conditions

The following is a summarization of the results of the database review and general biological resources survey performed by Michael Baker. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and wildlife species observed are presented below. Representative photographs of the survey area are provided in Appendix A, and a complete list of all the plant and wildlife species observed on-site during the field surveys is provided in Appendix B.

3.1 ENVIRONMENTAL SETTING

The survey area is located within the Mojave Desert Region of the Desert Province and is dominated by highly disturbed/developed land and bare ground. Specifically, the survey area consists entirely of previously graded, open areas devoid of vegetation, development with active infrastructure, and solar power facilities. The survey area consists entirely of developed land and bare ground with trace amounts of non-native grasses and forbs.

3.1.1 Climate

The survey area, located in the high desert - southwest portion of the Mojave Desert, has an arid climate characterized by cool winters and hot summers. With an average annual temperature typically of approximately 65 °F, highs in the summer average approximately 97 °F and lows in the winter averaging approximately 38 °F, and low humidity throughout the year. Average annual precipitation for the Barstow, California, area is approximately 5.27 inches (U.S. Climate Data 2018).

3.1.2 Hydrology

The survey area is located within the Mojave Hydrologic Unit (Hydrologic Unit Code 18090207) and Lockhart Hydrologic Area. Located in the west Mojave Desert, the Lockhart Hydrologic Area encompasses approximately 700 square miles. Within this watershed, the Lockhart site is tributary to Harper Lake, a terminal dry lake located directly east of the project site. Harper Valley is drained by numerous ephemeral streams towards Harper Lake. Floodwater from Grass Valley occasionally flows into Harper Valley via Black Canyon on the eastern side of the valley.

Harper Lake is an endorheic basin that once contained water and a natural marsh into the early 20th century but began to disappear once agricultural development began to deplete the groundwater that sustained its level. The lake eventually became dry in the late 1990s after the agricultural fields in the area were shut down and the lake was no longer fed by agricultural runoff. However, the SEGS power plant was required by the Bureau of Land Management (BLM) to deliver water to the lake as a mitigation agreement. Up to 75-acre feet of water per year is managed by the BLM and transferred to the lake.

Michael Baker searched the FEMA – 100 Year Flood Zones for flood data within the survey area (ArcGIS 2018). According to FEMA, the survey area is located within Zone D or areas with undetermined flood hazard.

3.2 TOPOGRAPHY AND SOILS

The survey area is situated in western region of the Mojave Desert. The region is known as the "High Desert" due to its approximate elevation of 2,800 feet above mean sea level (amsl). Much of the project area is relatively flat. Surface elevations within the survey area vary between approximately 2,105 feet amsl in the southwest corner to approximately 2,040 feet amsl in the northeast corner.

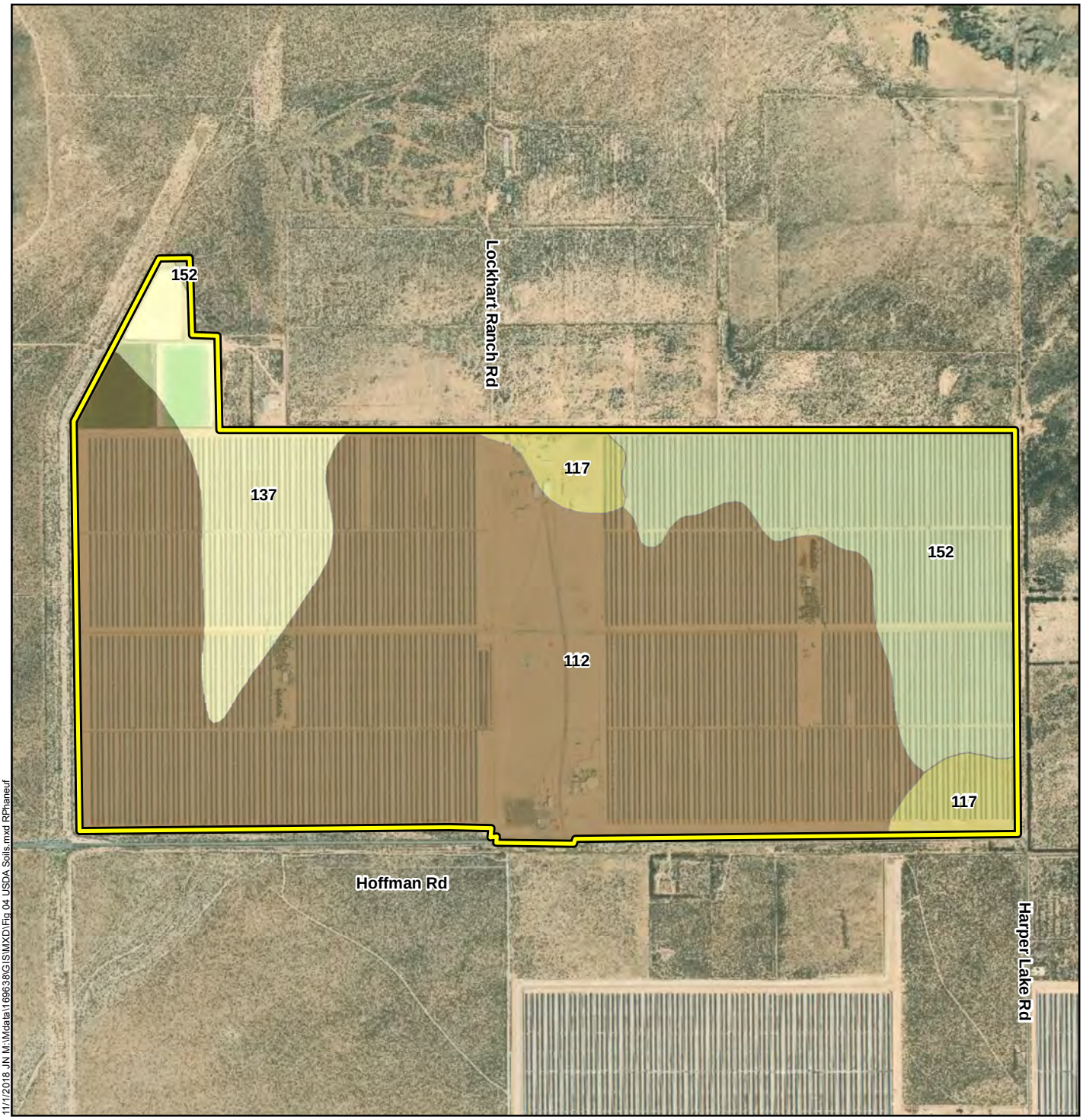
On-site and adjoining soils were reviewed prior to the field survey using the Web Soil Survey (USDA, NRCS 2018). Mapped soils within the survey area include the following (refer to Figure 4, *USDA Soils*):

- Cajon sand, 0 to 2 percent slopes (Map Unit Symbol: 112)
- Cajon loamy sand, loamy substratum, 0 to 2 percent slopes (117)
- Kimberlina loamy fine sand, cool, 0 to 2 percent slopes (137)
- Norob-Halloran complex, 0 to 5 percent slopes (152)

Michael Baker then reviewed the National Hydric Soils List (USDA, NRCS 2018) to identify soils mapped within the survey area that are considered to be hydric. According to the soils list, Cajon sand, 0 to 3 percent slopes (112); Cajon loamy sand, loamy substratum, 0 to 2 percent slopes (117); and Norob-Halloran complex, 0 to 5 percent slopes (152) are considered hydric. Soil textures identified on-site were generally consistent with those mapped by the Web Soil Survey, but which are substantially altered and compacted on-site. Due to the high level of disturbance and human activity within the survey area, most of the soils are highly compacted and devoid of any vegetation. Although hydric soils are present according to the USDA soils report, no hydric vegetation was present on-site.

3.3 VEGETATION COMMUNITIES AND OTHER LAND USES

No terrestrial vegetation communities were identified on-site during the field survey. Vegetation classification was based on Holland (1986). A complete list of plant species observed during the field surveys is provided in Appendix B. A map that illustrates the extent of the terrestrial vegetation communities and other land uses observed within the survey area is presented as Figure 5, *Vegetation Communities and Land Uses*. Table 1, below, provides the acreages of each vegetation community/land use on-site, followed by each discussed in detail.



11/1/2018 JN M:\Mdata\169638\GIS\MXD\Fig 04 USDA Soils.mxd RPhaneuf

Legend

Survey Area

Soil Type

117	Cajon Loamy Sand, loamy substratum, 0 to 2 percent slopes
112	Cajon Sand, 0 to 2 percent slopes
137	Kimberlina Loamy Fine Sand, cool, 0 to 2 percent slopes
152	Norob-Halloran Complex, 0 to 5 percent slopes

Michael Baker INTERNATIONAL

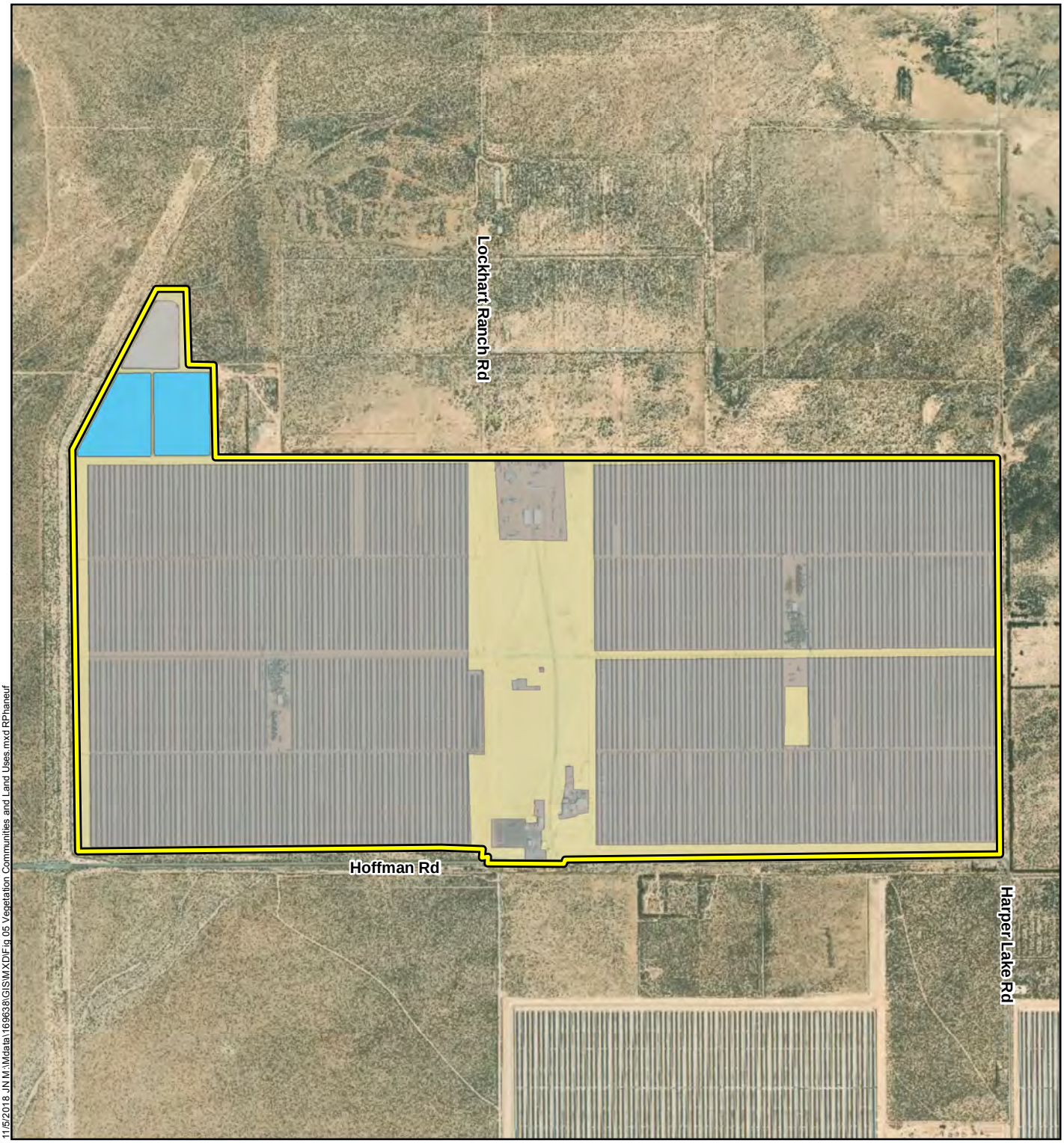
0 0.125 0.25 Miles

Source: ArcGIS Online, 2018

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

USDA Soils

Figure 4



11/5/2018 JN M:\Mdata\169638\GIS\MXD\Fig 05 Vegetation Communities and Land Uses.mxd RPhaneuf

Legend

Survey Area

Vegetation Communities/Land Uses

- Bare Ground (178.58 acres)
- Developed (805.92 acres)
- Open Water (24.17 acres)

Michael Baker INTERNATIONAL

0 0.125 0.25 Miles

Source: ArcGIS Online, 2018

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

Vegetation Communities and Land Uses

Figure 5

Table 1. Vegetation Communities and Land Uses within the Survey Area

Vegetation Communities and Land Uses	Acreage
Urban/Developed (12000)	805.92
Bare Ground	178.58
Open Water	24.17
TOTAL*	**1,008.68**

* Total may not equal to sum due to rounding.

Urban/Developed (12000)

Developed portions of the survey area include the SEGS VIII and IX solar fields along with infrastructure and facilities associated with said solar fields.

Bare Ground

Bare ground mapped on-site includes unpaved pathways associated with site maintenance activities (i.e., solar field and facilities inspection) and an open area dividing the SEGS VIII and IX solar fields.

Open Water

Open water mapped on-site includes the process water evaporation ponds located at the northwest corner of the project site.

3.4 GENERAL WILDLIFE OBSERVATIONS

The projects site contains areas of minimal vegetation or friable soils necessary to support various wildlife species. Species common to disturbed areas were observed during the general survey. Some common species observed include common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), mallard (*Anas platyrhynchos*), and horned lark (*Eremophila alpestris*). A barn owl (*Tyto alba*) was observed within an athel tree (*Tamarix aphylla*) roughly 80 feet east of the project site. In addition, several nest mounds of harvester ant (*Pogonomyrmex* spp.) were observed throughout the survey area. Refer to Appendix B for a complete list of wildlife species observed during the field survey.

Section 4 Special-Status Biological Resources

The following discusses the potential for special-status plant and wildlife species and special-status vegetation communities to occur within the survey area. “Potential to occur” determinations were based on the presence or absence of suitable habitat for each special-status species evaluated, as well as the general ecological requirements for each species and known occurrences on and/or within the vicinity of the survey area. All CNDDB occurrences documentation of special-status species and vegetation communities and USFWS-designated critical habitats within a 5-mile radius of the survey area are shown in Figure 6, *Special-Status Biological Resources and Critical Habitat Documented Within a 5-mile Radius*. Please note that occurrences within the survey area were observed prior to the construction of SEGS VIII and IX (built in 1990); therefore, the dates of those occurrences are provided in Figure 6 for clarification. An evaluation of the potential for each species identified in the database records search to occur on-site is presented in Appendix C.

4.1 SPECIAL-STATUS SPECIES

The results of the 9-quadrangle database record searches revealed documented occurrences for a total of ten (10) special-status plants species and sixteen (16) special-status wildlife species. Species determined to have a “Moderate” or “High” potential for occurring warrant a discussion. However, all of the special-status species with documented occurrences were evaluated by Michael Baker as having a “Low” or “Not Expected” potential for occurrence and are therefore not discussed further.

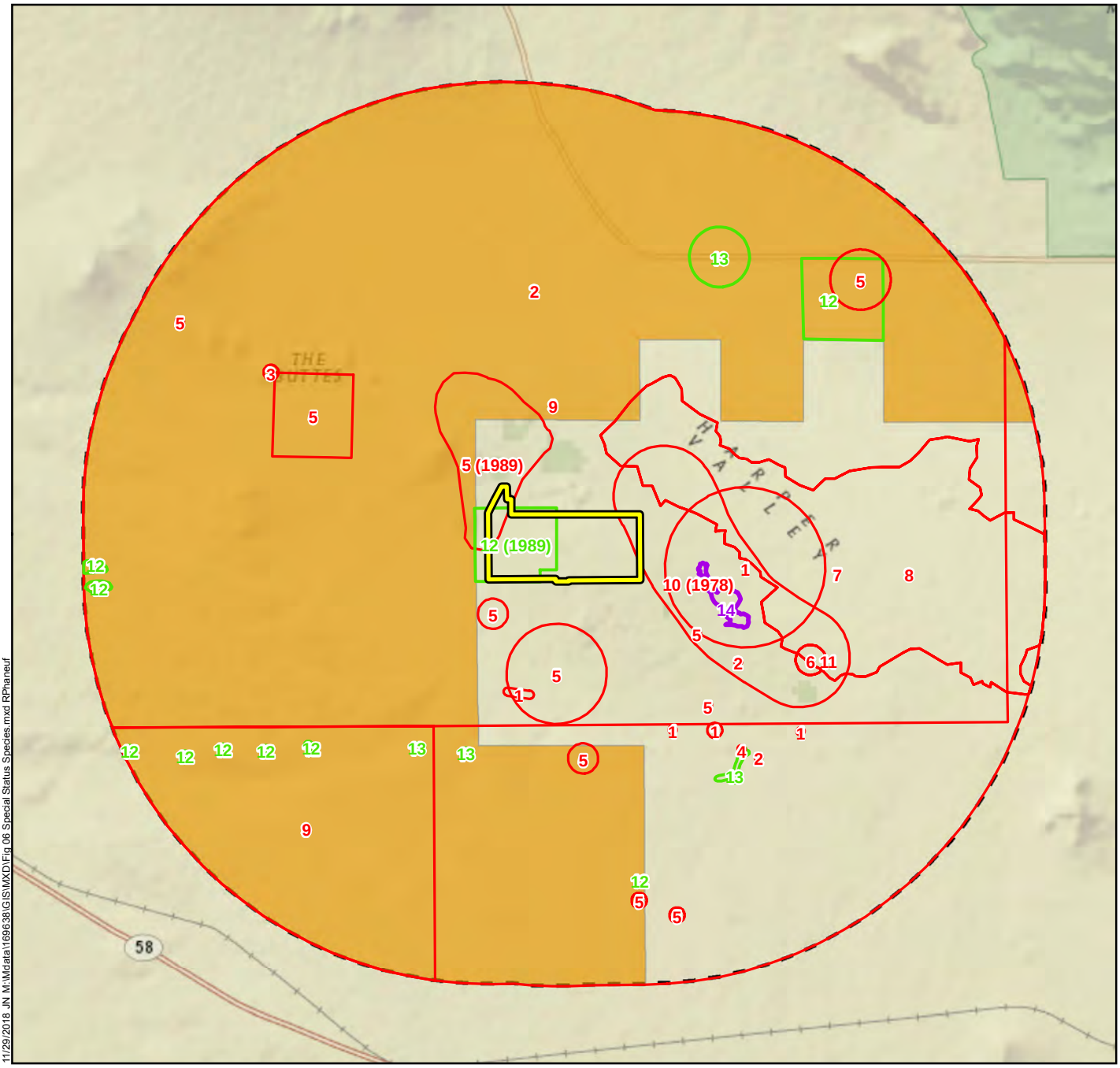
No special-status plant or wildlife species were observed during the field survey. Based on the literature review and database searches and on-site habitat suitability assessments, Michael Baker determined that the survey area does not contain suitable habitat for any special-status plant or wildlife species.

4.1.1 Special-Status Plant Species

No special-status plant species were observed during the field survey. Further, Michael Baker determined that no special-status plant species have a moderate or high potential for occurring within the survey area.

4.1.2 Special-Status Wildlife Species

No special-status wildlife species were observed during the survey. Further, Michael Baker determined that no special-status wildlife species have a moderate or high potential for occurring within the survey area.



11/29/2018 JN M:\Mdata\169638\GIS\MXD\Fig_06_Special_Status_Species.mxd RPhaneuf

Legend

- Survey Area
- 5-mile Radius Buffer

Special Status Resources

- Animal
- Plant
- Vegetation Community

Critical Habitat

- Desert tortoise

ID	Animal	ID	Animal	ID	Plant	ID	Vegetation Community
1	burrowing owl	7	Mojave fringe-toed lizard	12	Barstow woolly sunflower	14	Transmontane Alkali Marsh
2	desert tortoise	8	mountain plover	13	desert cymopterus		
3	golden eagle	9	prairie falcon				
4	loggerhead shrike	10	western snowy plover				
5	Mohave ground squirrel	11	Yuma Ridgway's rail				
6	Mohave river vole						

0 1 2 Miles

Source: Esri, CNDDB

LOCKHART SOLAR PROJECT
BIOLOGICAL RESOURCES REPORT

Special-Status Species/Habitat Documented within a 5-mile Radius

Figure 6

4.2 SPECIAL-STATUS VEGETATION COMMUNITIES

No special-status vegetation communities were observed within (or in proximity to) the survey area. According to the CNDDB records search, one special-status habitat/vegetation community has been documented within the vicinity of the survey area, Transmontane Alkali Marsh, which was not observed present within the survey area.

4.3 NESTING BIRDS AND WILDIFE MOVEMENT

The survey area provides minimal nesting habitat for a limited number of ground-nesting bird species. In addition, several stick nests occupied by common raven were observed atop the power line towers located at the southern end of the survey area. Conversely, most ground-moving wildlife (e.g., mammals and reptiles) are unable to utilize the survey area to migrate and forage on-site due to the exclusionary fencing around the perimeter of the survey area. Due to the close proximity of desert tortoise (*Gopherus agassizii*) critical habitat, fencing to prevent tortoises of all sizes from entering the survey area was previously installed. This fencing prevents most wildlife from entering the survey area, except for small mammals and reptiles that may be able to pass through the fencing.

4.4 CRITICAL HABITAT

Currently, no USFWS-designated critical habitats (proposed or final) have been mapped within the survey area. Critical habitat for desert tortoise surrounds the project site to the south, west, and north, with the nearest portion of mapped critical habitat located approximately 0.15 mile to the west (refer to Figure 6).

4.5 LOCAL POLICIES AND ORDINANCES

There are no biological resources-related local policies or ordinances within the County of San Bernardino known to be applicable to the survey area.

Section 5 Recommendations

The following sections discuss the possible adverse impacts to biological resources that may occur from implementation of the proposed project and suggest appropriate mitigation measures that would reduce those impacts to less than significant levels.

5.1 SPECIAL-STATUS SPECIES

No special-status plant or wildlife species were observed within or surrounding the survey area by Michael Baker biologists during the field survey. Further, Michael Baker determined that the survey area does not contain suitable habitat for any special-status plant or wildlife species documented within the vicinity of the survey area.

5.1.1 Special-Status Plant Species

No special-status plant species were observed within the survey area. Further, Michael Baker determined that the survey area does not contain suitable habitat for any special-status plant species documented within the vicinity of the survey area. Therefore, no impacts to special-status plant species are expected to occur as a result of the proposed project.

5.1.2 Special-Status Wildlife Species

No special-status wildlife species were observed within the survey area. Further, Michael Baker determined that the survey area does not contain suitable habitat for any special-status wildlife species documented within the vicinity of the survey area. Therefore, no impacts to special-status wildlife species are expected to occur as a result of the proposed project.

5.2 SPECIAL-STATUS VEGETATION COMMUNITIES

No special-status vegetation communities were observed within the survey area. Therefore, no impacts to special-status vegetation communities are expected to occur as a result of the proposed project.

5.3 NESTING BIRDS AND WILDIFE MOVEMENT

Impacts to wildlife movement are not expected as a result of the project. Suitable nesting habitat is limited within the survey area. The following avoidance and minimization measures are recommended to reduce impacts to nesting birds to a less than significant level:

Suggested Mitigation Measures

BIO-1: If bird breeding season (typically January through July for raptors and February through August for other avian species) avoidance is not feasible, a qualified

biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or adjacent to the area proposed project site. The extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, nesting bird surveys shall be performed twice per week during the three weeks prior to the scheduled project activities.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

Nesting bird surveys are typically not required for construction activities occurring September through December; however, hummingbirds (Family Trochilidae), for example, are known to nest year-round; therefore, a pre-construction nesting bird survey for activities outside of the breeding season should be conducted within 24 hours of construction to ensure full compliance with the regulations.

5.4 CRITICAL HABITAT

Currently, no USFWS-designated critical habitat has been mapped within the survey area. Therefore, no impacts to critical habitat are expected to occur as a result of the proposed project.

5.5 LOCAL POLICIES AND ORDINANCES

There are no biological resources-related local policies or ordinances within the City or the County of San Bernardino known to be applicable to the survey area.

Section 6 References

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Appendix A Site Photographs

Photograph 1 – View of desert tortoise fencing along the southern end of the survey area, facing southwest.

Photograph 2 – View of bare ground in the center of the survey area, facing southeast.

Photograph 3 – View of a row of solar panels at the northern end of the survey area, facing south.

Photograph 4 – View of process water evaporation pond at the northwest end of the survey area, facing southwest.

Photograph 5 – View of cooling tower and power block in the eastern half of the survey area, facing north.

Photograph 6 – View of proposed work area in the eastern half of the survey area, facing west.

Photograph 7 – View of common raven nest atop a power pole at the southern end of the survey area, looking southeast.

Photograph 8 – View of the southern edge of the survey area, facing west.

Appendix B Plants and Wildlife Species Observed List

Scientific Name*	Common Name	Cal-IPC Rating**
Plants		
Atriplex polycarpa	allscale saltbush	
*Bromus tectorum**	cheat grass	High
Heliotropium curassavicum	salt heliotrope	
*Salsola tragus**	Russian thistle	Limited
*Schismus barbatus**	common Mediterranean grass	Limited
*Sisymbrium irio**	London rocket	Limited
Spergularia bocconi	Boccone's sand spurry	
*Tamarix ramosissima**	saltcedar	High
Reptiles		
Uta stansburiana elegans	western side-blotched lizard	
Birds		
Amphispiza bilineata	black-throated sparrow	
Anas platyrhynchos	mallard	
Artemisiospiza nevadensis	sagebrush sparrow	
Corvus corax	common raven	
Eremophila alpestris	horned lark	
Haemorhous mexicanus	house finch	
Larus californicus	California gull	
Lophodytes cucullatus	hooded merganser	
Oxyura jamaicensis	ruddy duck	
Passerculus sandwichensis	savannah sparrow	
Podiceps nigricollis	eared grebe	
Sayornis nigricans	black phoebe	
Setophaga coronata	yellow-rumped warbler	
Sturnus vulgaris	common starling	
Mammals		
Lepus californicus	black-tailed jackrabbit	

* Non-native plant species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High — These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate — These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited — These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes

result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Appendix C Special-Status Species Table

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
PLANTS			
Abronia villosa* var. *aurita **chaparral sand-verbena**	-- / -- 1B.1	Annual herb. Blooms January through September. Occurs in sandy areas in chaparral, coastal scrub, and desert dunes. Known elevations range from 50 to 4,985 feet amsl.	**Not Expected.** Suitable habitat (sandy places in desert scrub, chaparral, and coastal scrub) is not present within the survey area. Further, the nearest occurrence is over 10 miles to the southeast.
Canbya candida **white pygmy-poppy**	-- / -- 4.2	Annual herb. Blooms March through June. Occurs in sandy places in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Known elevations range from 2,280 to 5,280 feet amsl.	**Not Expected.** Suitable habitat (sandy places in Joshua tree woodland, desert scrub, and pinyon and juniper woodland) is not present within the survey area. Further, the nearest occurrence is over 10 miles to the southwest.
Chorizanthe spinosa **Mojave spineflower**	-- / -- 4.2	Annual herb. Blooms March through July. Occurs in chenopod scrub, Mojavean desert scrub, Joshua tree woodland, and playas. Known elevations range from 2,735, to 2,915 feet amsl.	**Not Expected.** Suitable habitat (desert scrub, Joshua tree scrub, and chenopod scrub) is not present within the survey area. Further, the nearest occurrence is over 2.5 miles to the northeast.
Cymopterus deserticola **desert cymopterus**	-- / -- 1B.2	Perennial herb. Blooms March through May. Found on fine to coarse, loose, sandy soils of flats in old dune areas with well-drained sand in Joshua tree woodland and Mojavean desert scrub. Known elevations range from 2,065 to 4,920 feet amsl.	**Not Expected.** Suitable habitat (loose, sandy soils in Joshua tree woodland and desert scrub) is not present within the survey area. Further, the nearest occurrence is over 2.5 miles to the southwest.
Diplacus mohavensis **Mojave monkeyflower**	-- / -- 1B.2	Annual herb. Blooms April through June. Found on dry, sandy or rocky washes along the Mojave River, in Joshua tree woodland and Mojavean desert scrub. Known elevations range from 1,965 to 5,740 feet amsl.	**Not Expected.** Suitable habitat (dry, sandy washes in desert scrub) is not present within the survey area. Further, the nearest occurrence is over 10 miles to the southeast.

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Eriophyllum mohavense **Barstow woolly sunflower**	-- /-- 1B.2	Annual herb. Blooms April through May. Found in silty or sandy areas w/ saltbush scrub, or creosote bush scrub. Known elevations range from 1,985 to 4,232 feet amsl.	**Not Expected.** Suitable habitat (sandy places in desert scrub) is not present within the survey area. There is an occurrence within the project site; however, there is limited data on this occurrence and suitable habitat is not currently present within the project site.
Lycium torreyi **Torrey's box-thorn**	-- / -- 4.2	Shrub. Blooms March through May. Occurs on sandy, rocky washes, streambanks, and desert valleys in Mojavean desert scrub and Sonoran desert scrub. Known elevations range from -150 to 3,600 feet amsl.	**Not Expected.** Suitable habitat (sandy washes in desert scrub) is not present within the survey area. Further, the nearest occurrence is over 8 miles to the southwest.
Mentzelia tridentata **creamy blazing star**	-- / -- 1B.3	Annual herb. Blooms March through May. Found in Mojavean desert scrub. Known elevations range from 2,200 to 3,805 feet amsl.	**Not Expected.** Suitable habitat (desert scrub) is not present within the survey area. Further, the nearest occurrence is over 8 miles to the northeast.
Muilla coronata ***crowned muilla***	-- / -- 4.2	Perennial herb. Blooms March through April. Occurs on barren flats and ridges in sandy, granitic soils in Joshua tree woodland, pinyon and juniper woodland, Mojavean desert scrub, and chenopod scrub. Known elevations range from 2,200 to 6,430 feet amsl.	**Not Expected.** Suitable habitat (sandy soils in desert scrub) is not present within the survey area. Further, the nearest occurrence is over 10 miles to the southeast.
Pediomelum castoreum **Beaver Dam breadroot**	-- / -- 1B.2	Perennial herb. Blooms April through May. Found on sandy soils of desert washes and road cuts in Joshua tree woodland and Mojavean desert scrub. Known elevations range from 1,965 to 3,495 feet amsl.	**Not Expected.** Suitable habitat (sandy soils of desert washes and road cuts) is not present within the survey area. Further, the nearest occurrence is over 10 miles to the southwest.

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
INVERTEBRATES			
Bombus crotchii **Crotch bumble bee**	-- / -- G3G4 / S1S2	Found from coastal California east to the Sierra-Cascade crest and south into Mexico. Nectar plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	**Not Expected.** Suitable habitat (nectar plants) is not present within the survey area. Further, the nearest occurrence is over 9 miles to the southwest.
Bombus occidentalis ***western bumble bee***	-- / -- G2G3 / S1	Found along the western United States. Nectar plant genera include *Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus/ Ericameria*, and *Eriogonum*.	**Not Expected.** Suitable habitat (nectar plants) is not present within the survey area. Further, the nearest occurrence is over 9 miles to the southwest.
FISH			
Siphateles bicolor mohavensis **Mohave tui chub**	FE / SE, FP G4T1 / S1	Endemic to the Mojave River basin; adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.	**Not Expected.** Suitable habitat (alkaline, mineralized waters of the Mojave River basin) is not present within the survey area. Further, the nearest occurrence is over 9 miles to the southeast.
AMPHIBIANS			
Anaxyrus californicus **arroyo toad**	FE / SSC G2G3 / S2S3	Inhabits washes, arroyos, sandy riverbanks, and riparian areas with willows, sycamores, oaks, and cottonwoods. Has extremely specialized habitat needs, which include exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding.	**Not Expected.** Suitable habitat (washes, arroyos, sandy riverbanks, and riparian areas) is not present within the survey area. Further, the nearest occurrence is over 15 miles to the southeast.

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
REPTILES			
Gopherus agassizii **desert tortoise**	FT / ST G3 / S2S3	Most commonly occurs in desert scrub, desert wash, and Joshua tree habitats (i.e., almost every desert habitat). Requires friable soils for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms is preferred.	**Not Expected.** Suitable habitat (friable soils in desert scrub) is not present within the survey area. Further, no suitable burrows were observed during the survey and the entire site is developed with barriers that would prevent this species from entering the site.
Uma scoparia **Mojave fringe-toed lizard**	-- / -- G3G4 / S3S4	Found in fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert scrub. Shrubs or annual plans may be necessary for arthropods found in the diet.	**Not Expected.** Suitable habitat (loose sand in dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert scrub) is not present within the survey area. Further, the nearest occurrence is over 2.5 miles to the east.
BIRDS			
Aquila chrysaetos **(Nesting & wintering)** **golden eagle**	-- / FP G5 / S3	Inhabits rolling foothills, mountain areas, sage-juniper flats, and deserts. Preferred habits include broadleaved upland forest, cismontane woodland, coastal prairie, and Great Basin grassland. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Not Expected.** Suitable foraging habitat (deserts) and suitable nesting habitat (cliff-walled canyons) are not present within the survey area. Further, the nearest occurrence is roughly 3 miles to the northeast.
Athene cunicularia **(Burrow sites & some wintering sites)** **burrowing owl**	-- / SSC G4 / S3	Primarily found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation, but it persists and even thrives in some landscapes highly altered by human activity, such as earthen canals, berms, rock piles, and pipes. Subterranean nester, most often dependent upon burrowing mammals, most notably, the California ground squirrel (*Otospermophilus beecheyi*).	**Not Expected.** Suitable habitat (open grasslands and scrublands, California ground squirrel burrows) is not present within the survey area. Further, the nearest occurrence is roughly 1 mile to the east in undeveloped habitat.

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
Charadrius alexandrinus nivosus **western snowy plover**	FT / -- G3T3 / S2S3	Found in sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**Not Expected.** Suitable foraging habitat (sandy beaches, salt pond levees, and shores of large alkali lakes) is not present within the survey area. Further, the nearest occurrence is roughly 1 mile to the east.
Charadrius montanus **mountain plover**	-- / -- G3 / S2S3	Found in short grasslands, freshly plowed fields, newly sprouting grain fields, and somethings sod farms. Prefers short vegetation, bare ground, and flat topography. Also prefers grazed areas with burrowing rodents.	**Not Expected.** Suitable foraging habitat (grasslands and agricultural fields) is not present within the survey area. Further, the nearest occurrence is roughly 2.5 miles to the east.
***Falco mexicanus* (Nesting)** **prairie falcon**	-- / WL G5 / S4	Inhabits dry, open terrain, either level or hilly, in Great Basin grasslands, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grasslands. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Not Expected.** Suitable foraging habitat (desert scrub and grasslands) is not present within the survey area. Location information is suppressed.
Lanius ludovicianus **loggerhead shrike**	-- / SSC G4 / S4	Found in broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Not Expected.** Suitable habitat (desert scrub, woodlands) is not present within the survey area. Further, the nearest occurrence is roughly 2.5 miles to the southeast.
Rallus obsoletus yumanensis **Yuma Ridgway's rail**	FE / ST G5T3 / S1S2	Prefers stands of cattails and tule dissected by narrow channels of flowing water containing crawfish. Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea.	**Not Expected.** Suitable foraging habitat (freshwater marshes) is not present within the survey area. Further, the nearest occurrence is roughly 2.5 miles to the southeast.

Scientific Name **Common Name**	**Status*** **Federal / State** **CRPR *or*** **G-Rank / S-Rank**	**Habitat Preferences and Distribution Affinities**	**Potential for Occurrence**
MAMMALS			
Microtus californicus mohavensis **Mohave river vole**	-- / SSC G5T1 / S1	Occurs only in weedy herbaceous growth in wet areas and riparian scrub along the Mojave River. May be found in some irrigated pastures. Burrows into soft soil. Feeds on leafy parts of grasses, sedges and herbs. Clips grasses to form runways from burrow.	**Not Expected.** Suitable habitat (wet areas and riparian scrub along the Mojave River, and irrigated pastures) is not present within the survey area. Further, the nearest occurrence is roughly 2.5 miles to the southeast.
Taxidea taxus **American badger**	-- / -- G5 / S3	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground where it can burrow and prey on burrowing rodents.	**Not Expected.** Suitable habitat (shrub, forest, and herbaceous) is not present within the survey area. Further, the nearest occurrence is roughly 8.5 miles to the southeast.
Xerospermophilus mohavensis **Mohave ground squirrel**	-- / ST G2G3 / S2S3	Inhabits open desert scrub, alkali scrub, and Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mojave Desert. Prefers sandy to gravelly soils; avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.	**Not Expected.** Suitable habitat (sandy and gravelly soils in open desert scrub, alkali scrub, and Joshua tree woodland) is not present within the survey area. Further, the nearest occurrence is roughly 0.25 mile to the south.

* **FESA Classifications**

FE	Federally Endangered
FT	Federally Threatened

CESA Classifications

SE	State Endangered
ST	State Threatened
SCT	State Candidate for Listing as Threatened
SSC	California Species of Special Concern
FP	Fully Protected
WL	Watch List

California Rare Plant Rank (CRPR)

1A	Plants presumed extirpated in California and either rare or extinct elsewhere
1B	Plants rare, threatened, or endangered in California and elsewhere
2A	Plants presumed extirpated in California, but common elsewhere
2B	Plants rare, threatened, or endangered in California, but more common elsewhere
3	Plants about which more information is needed - a Review List
4	Plants of limited distribution - a Watch List

Threat Ranks

.1	Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)

.3 Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

G-Rank / S-Rank

Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5, ranging from critically imperiled (G1/S1) to demonstrably secure (G5/S5), with variations and qualifiers[1].

Infraspecific Taxon Conservation Status Ranks

Infraspecific taxa refer to subspecies, varieties, and other designations below the level of the species. Infraspecific taxon status (T-ranks) apply to plants and animals only; these T-ranks do not apply to ecological communities. The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks.

[1] http://explorer.natureserve.org/granks.htm

APPENDIX E

AGREEMENT FOR MITIGATION OF IMPACTS ON DESERT TORTOISES ALONG HARPER LAKE ROAD BY LUZ SOLAR PARTNERS LTD. VIII AND LUZ SOLAR PARTNERS LTD. IX

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HARPER LAKE ROAD
TORTOISE MONITORING
AND FENCING AGREEMENT

I. AGREEMENT

The Desert Tortoise Preserve Committee (Preserve Committee), California Energy Commission (Commission), and Bureau of Land Management (Bureau) hereafter referred to as the Parties, hereby agree that the Preserve Committee, after full execution of this agreement and the "Agreement for Mitigation of Impacts on Desert Tortoises along Harper Lake Road by Luz Solar Partners Ltd. VIII and Luz Solar Partners Ltd IX", and upon receipt of a lump sum payment in the amount of $489,300 from Luz Solar Partners Ltd. VIII (LSP VIII) and Luz Solar Partners Ltd. IX (LSP IX), under the oversight of the Commission and the Bureau shall take all reasonable and necessary actions to satisfy the Commission's SEGS VIII Biological Resources Condition of Certification 4 f., as amended (incorporated by reference into the Department's Biological Opinion, as amended), and the Bureau's Right-of-Way Grant CA--21591, Exhibit D-Environmental Protection Stipulation Numbers 3.J. and 3.K., as amended (which incorporates by reference the U.S. Fish and Wildlife Service's Biological Opinion, as amended).

II. PURPOSE

A. The purpose of this agreement is to establish the relationship between the Parties regarding the use of the $489,300 provided to the Preserve Committee by LSP VIII and LSP IX for the purposes described in Paragraph I. and II B. of this agreement.

B. The purpose of the fund provided by LSP VIII and LSP IX to the Preserve Committee is to:

1. Pay the cost of tortoise monitoring activities along Harper Lake Road until monitoring is no longer required, as specified in this agreement;

2. Acquire the long-term right for installation of tortoise-proof fencing and gates and, where appropriate, under-road culverts, on private property along Harper Lake Road;

3. Install tortoise-proof fencing and gates along both sides of Harper Lake Road from Highway 58 to Lockhart Road;

4. Install tortoise-proof "wing" fencing perpendicular to Harper Lake Road at Roy Street, Santa Fe Road, Lockhart Road, and the Atchison, Topeka and Santa Fe railroad tracks;

5. Install four under-road culverts; and

6. To maintain the tortoise-proof fencing, gates and culverts.

III. GOALS

A. To obtain the approval of all owners of land along Harper Lake Road, between Highway 58 and Lockhart Road, for the installation of approximately 11.4 miles of tortoise-proof fencing, and where applicable underground culverts, on their property at the earliest possible date.

B. That the four under-road culverts be installed within one year of the Preserve Committee's receipt of the $489,300.

C. That both sides of Harper Lake Road between Highway 58 and Lockhart Road be completely fenced with tortoise-proof fencing, and gates as appropriate, at the earliest possible date.

IV. DUTIES

A. **Desert Tortoise Preserve Committee**

The Preserve Committee shall be responsible for the following:

1. Establishing and placing $409,300 of the $489,300 received from LSP VIII and LSP IX into an interest bearing restricted savings account (or equivalent) with the Naval Weapons Center Federal Credit Union in Ridgecrest, CA. The account shall be named: Harper Lake Road Desert Tortoise Fence Account. Account records shall be available for inspection at any time by the Parties.

2. Placing $80,000 of the $489,300 into an interest bearing Certificate of Deposit maintenance account. The interest, not principal, from this Certificate of Deposit shall be used for long-term maintenance of the tortoise fence and culverts, except in a defined emergency. Account records shall be available for inspection at any time by the Parties.

3. Obtaining Commission Compliance Project Manager (CPM) authorization for each transfer of funds from the $409,300 restricted savings account to the interest bearing checking account. Transfers from the Certificate of Deposit maintenance account will not require CPM approval, but will be itemized in the quarterly reports.

4. Providing a tortoise monitor to patrol Harper Lake Road from its intersection with Highway 58 north to the intersection with Lockhart Road in accordance with all the provisions of the attached Interim Procedures for Protecting Desert Tortoises Along Harper Lake Road (Monitoring Protocol) as revised February, 1994. This monitoring shall begin upon the Preserve Committee's receipt of the funding for the purposes of this agreement, and shall continue until 50 percent of the length of the complete tortoise fence has been installed, or until the funds are exhausted, whichever occurs first.

5. Obtaining approvals in accordance with this agreement from landowners of properties abutting Harper Lake Road between its intersection with Highway 58 and Lockhart Road for the installation and long-term maintenance of tortoise-proof fencing and gates along both sides of Harper Lake Road, and where applicable for underground culverts subject to the approval of the San Bernardino County Transportation and Flood Control Department.

6. The purchase and storage of fencing, gate and culvert materials for installation along Harper Lake Road.

7. Acquiring permission from The Gas Company for the installation of tortoise-proof fencing and under-road culverts within The Gas Company's underground gas pipeline easement along Harper Lake Road.

8. Acquiring all necessary permits for the installation of tortoise-proof fencing or under-road culverts from San Bernardino County Department of Transportation and Flood Control.

9. The engineering design drawings for the installation of the four under-road culverts.

10. Providing quarterly written progress reports to the California Energy Commission and the Bureau of Land Management. These reports shall include an itemized listing of all expenditures for the period covered by the report as well as cumulative to-date expenditures.

11. The installation of tortoise-proof fencing and gates (according to the design specified in Paragraph V. A. and V. B. herein) along both sides of Harper Lake Road between its intersections with Highway 58 and Lockhart Road.

12. The installation of a total of approximately 0.3 miles of tortoise-proof wing fencing (according to the design specified in Paragraph V. A. herein) along both sides of Santa Fe Road and Roy Street, along both sides of the Atchison, Topeka and Santa Fe railroad tracks on each side of Harper Lake Road, and along the south side of Lockhart Road and along the northern, east-west boundary opposite Lockhart Road.

13. The installation of four under-road culverts (according to the design specified in Paragraph V. C. herein) subject to approval of the San Bernardino County Transportation and Flood Control Department.

14. The long-term maintenance of the tortoise-proof fencing and gates installed along both sides of Harper Lake Road between its intersections with Highway 58 and Lockhart Road.

15. The long-term maintenance of the tortoise-proof wing fencing installed along both sides of Santa Fe Road and Roy Street, along both sides of the Atchison, Topeka and Santa Fe railroad tracks on each side of Harper Lake Road, and along the south side of Lockhart Road and along the northern, east-west boundary opposite Lockhart Road.

16. The long-term maintenance of the under-road culverts installed along Harper Lake Road.

BLM ?
Co. of San Bernadino

B. California Energy Commission

1. The Commission shall have sole responsibility for authorizing the expenditure of funds for all purposes proposed by the Preserve Committee regarding this agreement.

2. The Commission shall respond in writing as quickly as possible, normally within 10 working days of the date of receipt of each and every Preserve Committee request for authorization for fund transfer. All transfers of funds from the Harper Lake Road Desert Tortoise Account savings to checking, except those for fence maintenance, shall be subject to Commission approval.

C. Bureau of Land Management

1. The Bureau shall be responsible for surveying and marking Harper Lake Road, Roy Street, Santa Fe Road, Lockhart Road, and the Atchison, Topeka and Santa Fe railroad tracks for the installation of the tortoise-proof fencing and the under-road culverts.

V. FENCE AND CULVERT DESIGN

A. Fence and Wing Fence Design

Two (2) inch diameter, seven (7) foot, sixteen (16) gauge steel posts at one hundred (100) foot intervals. At ten (10) foot intervals between each imbedded post will be Type 133 seven (7') foot high "T" bar posts driven thirty (30) inches deep. Four (4) strands of ten (10) gauge tension wires spaced fifteen inches apart will be placed on each post. Tortoise fence (1/2" x 1/2" x 36 " galvanized steel hardware cloth) will be installed twelve (12") inches below grade with the balance above grade attached to the tension wire using steel hog rings at approximately thirty six (36") inch intervals. The tortoise fence will be attached to the posts using steel tie wires.

B. Gate Design

Each gate will have tortoise fencing (1/2" x 1/2" x 36" steel hardware cloth) attached to the bottom portion of the gate.

C. Culvert Design

Culverts shall be corrugated metal pipe a minimum of 18" high and forty (40) feet long. Installation requirements depend on the specific location, and the requirements stipulated by the San Bernardino County Department of Transportation and Flood Control as part of their permit.

D. Gap Protection

Gaps between gate poles and gates and the bottoms of the gates should have appropriate material attached at the opening side of the gate to provide, to the extent possible, an effective barrier to tortoise passage.

VI. AGREEMENT MONITORING

Representatives assigned by the Parties shall monitor the progress of the Preserve Committee in meeting the objectives/goals of this agreement.

VII. AGREEMENT AMENDMENTS

Amendments to this agreement may be initiated by any party to the agreement. Proposed amendments shall be served on all of the parties to this agreement in writing. Representatives of the parties to the agreement shall meet, in person or by telephone, to discuss the proposed change(s), and render a decision. The CPM shall provide each party to this agreement with a written summary of the representatives decision and amended agreement language.

VIII. AGREEMENT TERMINATION

If the Desert Tortoise Preserve Committee terminates operation for any reason, or if it decides not to administer the funds pursuant to this Agreement, the Preserve Committee shall tender the remaining funds to the California Energy Commission for deposit into a Special Deposit Fund Account which will be created for use exclusively to carry out the terms of this Agreement. If the Commission should decline to accept the funds, then the Preserve Committee shall tender the funds to the Bureau of Land Management for deposit into a 7122 Account for use in carrying out this Agreement. The Preserve Committee shall make the tender within 30 days of its decision to terminate.

7/11/95
THOMAS DODSON — Date
Desert Tortoise Preserve
Committee, Inc.
A California Nonprofit Corporation

7-11-95
ROBERT L. THERKELSEN — Date
California Energy Commission
State of California

7/11/95
HENRI BISSON — Date
Bureau of Land Management
U. S. Department of the Interior