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SOLAR ENERGY GENERATING SYSTEMS UNIT VIII (88-AFC-01C) FINAL DECOMMISSIONING PLAN

Staff Analysis and Recommendation

Pursuant to Condition of Certification **DECOM-1** in the Final Commission Decision (Decision) for the Solar Energy Generating Systems Unit VIII (88-AFC-01C), staff recommends that the California Energy Commission (CEC) approve the Final Decommissioning Plan (Final Plan) for the facility. Staff has reviewed the Final Plan (revised May 5, 2020) and concludes that implementation of the plan would ensure facility decommissioning avoids significant effects on the environment and complies with all applicable and current laws, ordinances, regulations, and standards (LORS), as required by DECOM-1. Staff's analysis identifies the conditions of certification from the Decision that are applicable to decommissioning activities and necessary to ensure no significant effects and compliance with LORS. Additional conditions of certification proposed by the project owner in the Final Plan and by staff to ensure LORS conformance and to mitigate potential impacts from decommissioning activities are provided in this analysis for adoption by the CEC.

BACKGROUND

On May 4, 2020, Luz Solar Partners VIII, Ltd. (project owner), an indirect wholly owned subsidiary of Terra-Gen, LLC, filed the Final Decommissioning Plan (TN: 232903) with the CEC for the Solar Energy Generating Systems Unit VIII (SEGS VIII) facility, as required by Condition of Certification, Requirement 1 in the "Decommissioning" section of the Decision. This condition is referred to as "DECOM-1" in this analysis.

SEGS VIII is a solar thermal power plant that uses parabolic mirrors to concentrate solar energy for transfer into heat transfer fluid, which is then used to create steam to generate up to 80 megawatts (MW) of electric power for the Southern California Edison transmission grid. The CEC certified SEGS VIII on March 29, 1989 and the facility went online in December 1989. SEGS VIII is located at 43880 Harper Lake Road, 7 miles northeast of Highway 58 on a 500-acre site near Hinkley, California, in unincorporated San Bernardino County.

In November 2019, the project owner submitted a draft decommissioning plan for the SEGS VIII facility. On January 3, 2020, CEC staff filed a notice in the SEGS VIII docket of a public workshop held on January 14, 2020 to discuss the SEGS VIII draft decommissioning plan. Staff mailed the notice to a list of property owners and interested agencies and distributed the notice electronically via the SEGS VIII list serv. Staff did not

receive any public comments on the draft decommissioning plan. The SEGS VIII Final Decommissioning Plan incorporates revisions to the draft plan in response to CEC staff comments provided at the January 14, 2020 workshop, and in response to additional written comments from CEC staff provided to the project owner on March 5, 2020.

DECOMMISSIONING PLAN APPROVAL PROCESS

The purpose of the CEC's review process is to analyze whether the proposed decommissioning would comply with applicable LORS and avoid significant effects on the environment.

Staff has concluded that decommissioning of the SEGS VIII facility would have less than significant effects on the environment and would comply with all applicable LORS with the continued implementation of existing conditions of certification in the Final Commission Decision, and with the implementation of new conditions in the areas of Air Quality, Biological Resources, Cultural Resources, Hazardous Materials Management, Land Use, Public Health, Soil and Water Resources, Transportation, Transmission Line Safety and Nuisance, and Worker Safety and Fire Protection. In addition, decommissioning would not affect any population including the environmental justice population as shown in **Environmental Justice Figure 1, Figure 2, and Table 1** in the Staff Analysis.

For additional information, visit the CEC's webpage for SEGS VIII. Related documents, including the Final Decommissioning Plan, are accessible through this webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" (SEGS VIII docket log) option to review the compliance docket logs and corresponding documents.

This staff analysis is being mailed to the CEC's list of interested persons who have requested service by mail, affected public agencies, and owners and occupants of property contiguous to the project. It has also been sent electronically to the SEGS VIII listserv in accordance with Title 20, California Code of Regulations, section 1209. The listserv is an automated system by which links to information about the facility are emailed to anyone who has subscribed. To subscribe, go to the CEC's webpage for the SEGS VIII project (linked above), scroll down the right side of the project webpage to the box labeled "Subscribe," and provide the requested contact information.

Staff intends to recommend approval of the SEGS VIII Final Decommissioning Plan at the CEC's August 12, 2020, Business Meeting. At the business meeting, any person may present oral or written statements relevant to the proposed Final Decommissioning Plan.

Any person may comment on the Staff Analysis. Those who wish to comment are asked to submit their comments by 5:00 p.m. on Monday, August 10, 2020.

To use the CEC's electronic commenting feature, go to the CEC's webpage for SEGS VIII (linked above), click on the "Comment on this Proceeding" or "Submit e-Comment" link,

and follow the instructions in the online form. Be sure to include the facility name in your comments. Once the CEC's Docket Unit files your comments in the docket, you will receive an email with a link to them. Written comments may also be mailed to:

California Energy Commission
Docket Unit, MS-4
SEGS VIII (88-AFC-01C)
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with and published by the Docket Unit will be added to the facility Docket Log and be publicly accessible on the CEC's webpage for the facility.

If you have questions about this notice, please contact John Heiser, Compliance Project Manager, at (916) 653-8236 or via email at John.Heiser@energy.ca.gov.

For information on participating in the CEC's review of the SEGS VIII Final Decommissioning Plan, please contact the CEC's Public Advisor at (916) 654-4489, or at (800) 822-6228 (toll-free in California). The Public Advisor's Office can also be contacted via email at publicadvisor@energy.ca.gov.

News media inquiries should be directed to the CEC's Media Office at (916) 654-4989, or by email at mediaoffice@energy.ca.gov.

Date: 7/23/2020

/S/

CHRIS DAVIS, Compliance Office Manager
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STAFF ANALYSIS

SOLAR ENERGY GENERATING SYSTEMS UNIT VIII (88-AFC-01C)

FINAL DECOMMISSIONING PLAN

**SOLAR ENERGY GENERATING SYSTEMS UNIT VIII
(88-AFC-01C)
FINAL DECOMMISSIONING PLAN
STAFF ANALYSIS**

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FACILITY DECOMMISSIONING

John Heiser

INTRODUCTION

On May 4, 2020, Luz Solar Partners VIII, Ltd. (project owner), an indirect wholly owned subsidiary of Terra-Gen, LLC, docketed a Final Decommissioning Plan (TN: 232903) with the California Energy Commission (CEC) requesting to begin safe layup and decommissioning activities at the Solar Electric Generating Systems Unit VIII (SEGS VIII) site as early as October 2020, pending CEC approval of the Final Decommissioning Plan (Final Plan).

SEGS VIII is a solar thermal power plant that uses parabolic mirrors to concentrate solar energy for transfer into heat transfer fluid, which is then used to create steam to generate up to 80 megawatts (MW) of electric power for the Southern California Edison (SCE) transmission grid. The CEC certified SEGS VIII on March 29, 1989, and the facility went online in December 1989. SEGS VIII is located at 43880 Harper Lake Road, 7 miles northeast of Highway 58 on a 500-acre site near Hinkley, California, in unincorporated San Bernardino County.

The Final Decommissioning Plan fulfills the compliance requirement of Condition of Certification (COC), Requirement 1 in the "Decommissioning" section of the Commission Final Decision (Decision) for SEGS VIII. This condition is referred to as "DECOM-1" in this analysis.

The Final Decommissioning Plan incorporates revisions to the draft Decommissioning Plan that was submitted to the CEC in November 2019. Revisions were made in response to CEC staff comments provided at a publicly noticed, CEC Staff Workshop held on January 14, 2020, and in response to additional written comments provided by CEC staff on March 5, 2020.

After safe layup, decommissioning, and demolition activities have been completed, the project owner will request termination of the CEC license for SEGS VIII. Upon termination, the County of San Bernardino would assume jurisdiction over the SEGS VIII site. The battery energy storage system (BESS) approved by the CEC on July 8, 2020 for use by the SEGS VIII and IX facilities would remain subject to the jurisdiction and oversight of the CEC until SEGS IX is decommissioned and its license is terminated by the CEC at an undetermined future date. While SEGS VIII shares numerous facility components with SEGS IX, this plan is for the decommissioning of SEGS VIII only. The project owner has expressed the intention to decommission SEGS IX at a future date to be determined.

The project owner obtained a conditional use permit (CUP) from the County of San Bernardino on October 3, 2019 for the redevelopment of the SEGS VIII site for a solar photovoltaic (PV) project and the BESS.

CONDITIONS FOR FACILITY DECOMMISSIONING

The project owner filed the Final Decommissioning Plan with the CEC for approval pursuant to Condition of Certification, Requirement 1 in the "Decommissioning" section of the Commission Decision. Requirement 1 states:

1. Prior to commencing decommissioning activities for SEGS Unit VIII, Luz [project owner] 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.

Requirement 1 also specifies that the project owner shall not commence decommissioning activities of SEGS VIII until approval of the decommissioning plan is obtained from the CEC CPM. It further specifies that the project owner shall comply with any requirements incorporated by the CEC as a condition of the decommissioning plan.

NECESSITY FOR FACILITY DECOMMISSIONING

The decommissioning of SEGS VIII is a result of economic considerations, maintenance costs and the evolving energy markets of California. The facility was designed as a solar thermal power plant that uses parabolic mirrors to concentrate solar energy onto heat transfer fluid, which is used to create steam to generate up to 80 MW of solar thermal electricity for the SCE transmission grid and has been in operation for more than 30 years. Once decommissioning and demolition of certain plant facilities and operational equipment is complete, the project owner intends to request termination of the SEGS VIII CEC license and ultimately re-use the site for a solar PV facility. The solar PV facility will be constructed and operated under the jurisdiction of San Bernardino County. The solar PV facility would also be connected to the recently approved BESS.

FACILITY DECOMMISSIONING ACTIVITIES

While SEGS VIII shares numerous project facilities with SEGS IX, this plan is for the decommissioning of SEGS VIII only. The project owner has expressed the intention to decommission SEGS IX at a future date to be determined.

Upon the cessation of current solar thermal power generation activities, the following initial decommissioning activities would take place to remove 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 would 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 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.
- Conduct equipment liquidation/sale, recycling, 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 (at either the project site or elsewhere) or permanently removed from the site. The planned disposition of the current project facilities and equipment is discussed below.
- Conduct equipment liquidation/sale, recycling, 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 (at either the project site or elsewhere) or permanently removed from the site. The planned disposition of the current project facilities and equipment is discussed below. A full description of decommissioning and demolition activities including a proposed schedule for closure is included in Section 3.4 of the Final Decommissioning Plan.

SEGS VIII and IX Project Location



PLANT STAFFING AND SECURITY

Select plant staff would remain on site throughout decommissioning activities. Existing security measures on site would restrict public access during decommissioning and layup. The entire site would 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.

SAFE POWER PLANT EQUIPMENT LOCKOUT

The safe layup process would include the de-energization of certain control systems and the partial de-energization of others. The project owner would 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 is listed below. All equipment requiring lockout/tagout would be appropriately locked out and de-energized before handling and removal:

- Steam turbine: Disable and decouple starting means
- Generator step-up Transformer: remove high and low side connections
- Generators: remove links to iso-phase busses
- Natural gas supply: blind and/or air gap the supply
- Steam turbine starting motors: disconnect and ground cabling to motors

REMOVAL OF HAZARDOUS MATERIALS

Table 2.1 in the Final Plan lists the primary hazardous materials expected to be handled during the decommissioning process. These materials include heat transfer fluid (HTF), lead acid batteries, diesel, hydraulic oil, lubricating oil, and mineral oil. Any additional operational chemicals listed as hazardous in the Spill Prevention, Control, and Countermeasure (SPCC) plan, 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 would be performed prior to the start of demolition.

All residual materials and chemicals would be removed prior to demolition for recycling or 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.

Transportation of 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 in the final decommissioning plan lists the properties and toxicity of the primary hazardous waste materials that are expected to be removed.

The SPCC plan for the site would be updated to cover spill prevention, control, and counter measures 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 storm water would be specified in the Storm Water Pollution Prevention Plan (SWPPP), which would be updated for decommissioning activities, if necessary.

GENERATOR TIE-LINE

The existing 13.5-mile, 220-kilovolt (kV) generator tie-line would remain in place and be utilized by the BESS, future solar PV facility, and for the continued operation of SEGS IX. During safe layup, SEGS VIII would be isolated from the generator tie-line by disconnection of the generator tie-line conductors between the switchyard and the associated substation.

Unless they can be reused, onsite transmission poles and conductors would be removed. Conductors would either be sold as scrap metal to be recycled or sent to a licensed disposal facility. The switchyard would remain in place for continued use by SEGS IX, the BESS, and the future PV project.

The SEGS VIII substation would remain in place if it can be upgraded for solar PV use; otherwise, it would be removed.

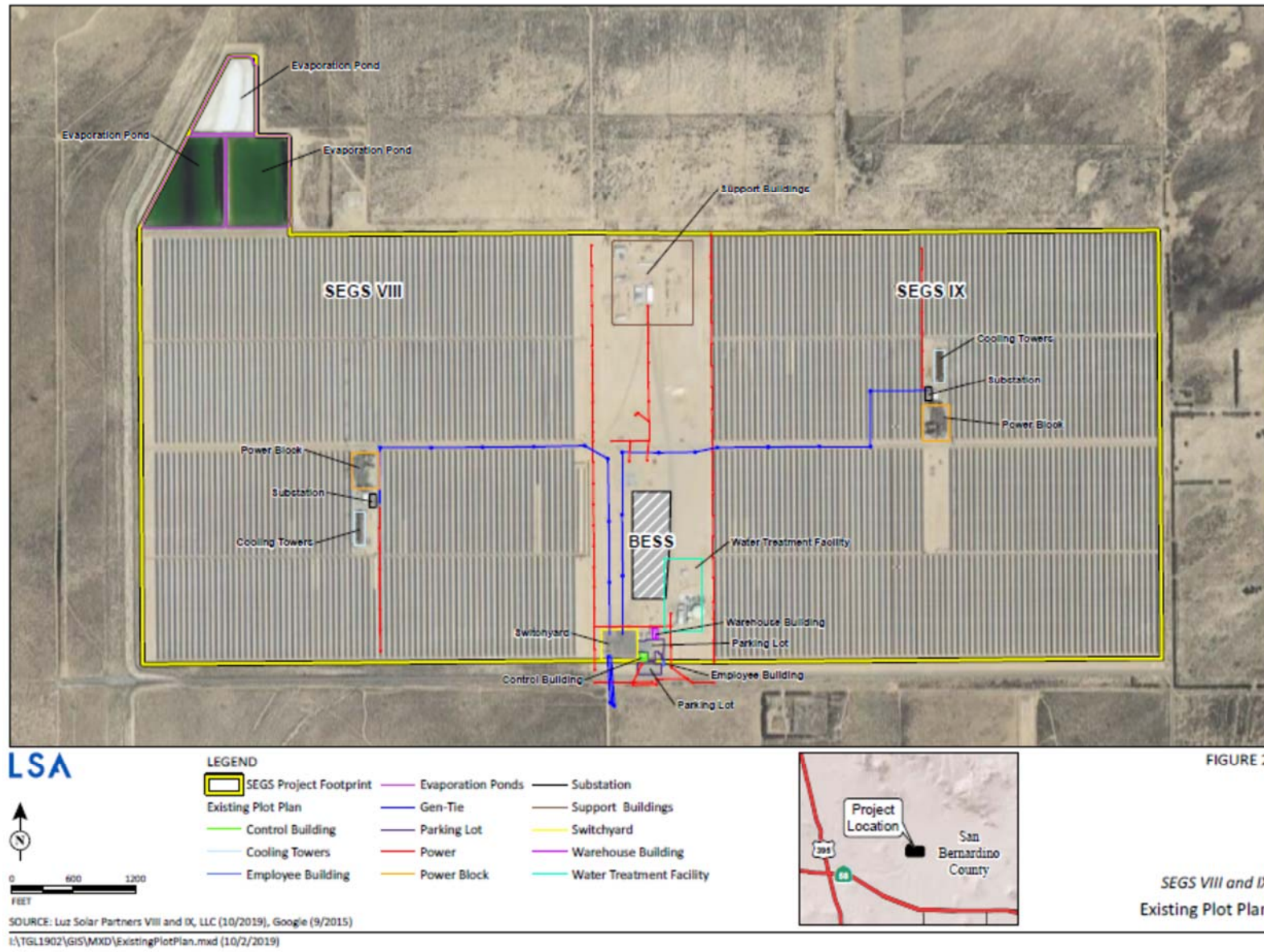
NATURAL GAS SUPPLY LINE

During safe layup for SEGS VIII, the natural gas pipeline serving SEGS VIII would be cut and capped in place at the on-site isolation point at the natural gas distribution yard. After the pipeline is purged, it would be grouted, prior to being left in place in accordance with applicable LORS.

FACILITIES TO REMAIN IN PLACE

Some of the SEGS VIII facilities may remain in place, including solar tracker foundations, and underground utilities and installations for use by the BESS or future PV facility. Facilities to remain in place, both within the SEGS VIII footprint and within the shared facilities (SEGS VIII and IX) footprint, are listed below. A plot plan of existing facilities is included as Figure 2.

SEGS VIII and IX Existing Plot Plan



Facilities to Remain in Place within SEGS VIII Footprint

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

SEGS VIII and SEGS IX Shared Facilities to Remain in Place

- 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)

* On-site water wells: all onsite wells that would not be used to service the PV facility would be properly abandoned in accordance with California Department of Water Resources Bulletin 74 series (74-81, 74-90, and updates).

** Septic system: the septic system would be drained and properly abandoned in accordance with the California Plumbing Code, Section 722, and San Bernardino County Land Use Services Department Building and Safety Division Demolition Guidelines. This would entail a final inspection from the County of San Bernardino, Building & Safety Division.

*** The portion of the natural gas supply line serving only SEGS VIII would be purged, cut and capped in place.

FACILITIES TO BE REMOVED

The following lists facilities that would be removed from the SEGS VIII site. 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)
- SEGS VIII cooling towers: This includes an evaporative cooling tower system.
- SEGS IX cooling towers would remain in place until SEGS IX is decommissioned.
- Power block: This includes storage tanks, steam turbine generator, transformers, heat exchangers, power block, pumps, and other ancillary equipment.
- Parabolic mirrors, above ground supports, above ground 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 list of facilities to remain, may be removed if they would 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 to the extent possible for safe transport, then hauled off for reuse or recycling.
- Storage tanks would 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.

- Turbine generator, heaters, condenser 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 would all be removed.

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 SEGS VIII 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 maybe used as road base for the new PV facility as permitted by , the CEC compliance project manager or a delegate chief building official.

The natural gas pipeline serving SEGS VIII would 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 would not be reused for the future PV project would be cut, grouted, and capped at or below the ground surface but not removed. A map of the buried utilities that are abandoned in place shall be prepared and submitted at the conclusion of decommissioning activities. SEGS maintains their current as-built construction plans including underground pipe locations. These can be updated as necessary to reflect abandoned lines and provided to San Bernardino County upon request.

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 completed using traditional heavy construction equipment including but not limited to front-end loaders, track-mounted and rubber-tired excavators, bulldozers, concrete crushers, dump trucks and heavy haul trucks.

The decommissioning and demolition work would require approximately 15 to 20 environmental specialists and 40 to 50 on-site demolition workers. Truck traffic would

consist of flatbed and lowboy delivery trucks (5-axle) for mobilization and demobilization, and dump trucks (4-axle) during the demolition phase of the project.

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.

The following table provides the total number of truck trips for materials that would be hauled off site during decommissioning and the anticipated number of trips 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
Totals		970	21

Although various types of decommissioning and demolition equipment would be utilized to dismantle each type of structure or equipment, dismantling would proceed according to the following general staging process.

The first stage consists of safe layup of project facilities including removal of HTF, which would 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.

SUMMARY OF STAFF’S ANALYSIS OF THE FINAL DECOMMISSIONING PLAN

CEC staff reviewed the Final Decommissioning Plan for potential environmental effects and consistency with applicable LORS.

Staff has concluded that the technical areas of Efficiency and Reliability, Facility Design, and Transmission System Engineering are not affected by decommissioning of SEGS VIII.

Staff has concluded that in the following technical areas, impacts to the environment are less than significant and the project would remain in compliance with all applicable LORS with the continued implementation of existing conditions of certification (COCs) in the SEGS VIII Final Decision: Noise, Socioeconomics, Visual Resources, and Waste Management.

For the technical areas of Air Quality, Biological Resources, Cultural Resources, Geology and Paleontological Resources, Hazardous Materials Management, Land Use, Public Health, Soil and Water Resources, Transportation, Transmission Line Safety and Nuisance, and Worker Safety and Fire Protection, staff has concluded that impacts on the environment would be less than significant and decommissioning would comply with all applicable LORS with the continued implementation of existing conditions of certification in the Decision, and with the implementation of new decommissioning-specific COCs in these technical areas. As part of the new decommissioning specific COCs, staff has included verification language that requests monthly compliance reports to be submitted to the compliance project manager within prescribed time frames.

In addition, decommissioning would not affect any population including the environmental justice population as shown in **Environmental Justice Figure 1, Figure 2,** and **Table 1** in the Environmental Justice section of the Staff Analysis.

Staff’s conclusions for each technical or environmental area are shown in **Facility Decommissioning Table 1** on the following page and summarized below the table. For details, see the individual technical sections of the staff analysis.

Facility Decommissioning Table 1

Technical Areas Reviewed	Technical Area Not Affected	New Conditions of Certification (COCs) Proposed	Conforms with Applicable LORS	CEQA		
				Potentially Significant Impact	Less Than Significant Impact with New COCs	Less Than Significant Impact
Air Quality and Greenhouse Gases		X	X		X	
Biological Resources		X	X		X	
Cultural and Tribal Cultural Resources		X	X		X	
Efficiency and Reliability	X					
Facility Design	X					
Geology and Paleontological Resources		X	X		X	
Hazardous Materials Management		X	X		X	
Land Use		X	X			X
Noise			X			X
Public Health		X	X		X	
Socioeconomics			X			X
Soil and Water Resources		X	X		X	
Transportation		X	X		X	
Transmission Line Safety and Nuisance			X			X
Transmission System Engineering	X					
Visual Resources			X			X
Waste Management			X			X
Worker Safety and Fire Protection		X	X		X	

Air Quality and Greenhouse Gases. The proposed decommissioning and demolition of SEGS VIII would generate emissions of criteria pollutants, including oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter less than 10 microns (PM₁₀), fine particulate matter less than 2.5 microns (PM_{2.5}), and oxides of sulfur (SO_x), as well as greenhouse gases. The proposed decommissioning and demolition activities are scheduled to be complete within 6 to 8 months. Decommissioning activities would generate emissions from fugitive dust, tailpipe emissions from

construction equipment used, waste/recycling truck trips, and construction worker commutes.

The emissions from the proposed demolition and decommissioning of the SEGS VIII are temporary and less than Mojave Desert Air Quality Management District significance thresholds. Staff concludes that with the adoption of five new conditions of certification, the decommissioning and demolition would not result in significant adverse air quality and GHG emissions impacts. The proposed COCs, **D-AQ-1** to **D-AQ-5**, are discussed in the Air Quality technical analysis below.

Biological Resources. No special-status plant or wildlife species were observed during field surveys. Based on literature review, database searches, and on-site habitat suitability assessments, it has been determined that the project site does not contain suitable habitat for any special-status plant or wildlife species. Birds may nest on the site or adjacent, which could be impacted by plan activities. Staff concludes that the proposed activities would not result in potentially significant adverse impacts on biological resources, with implementation of Biological Resources COCs, **Requirements 3, 4, 6, and 7** in the Decision, and project owner-proposed conditions of certification **D-BIO-1** and **D-BIO-2**. Implementation of these conditions of certification would ensure activities comply with applicable LORS.

Cultural and Tribal Cultural Resources. Staff concludes that decommissioning and demolition of the project would have a less than significant impact to cultural or tribal cultural resources with implementation of the COCs proposed by the project owner, and the COCs in the Decision. The project owner would monitor any ground-disturbance in areas that were not already disturbed during construction and that could potentially contain any buried, as-yet unknown cultural or tribal cultural resources. Decommissioning and demolition of the facility would not cause any impacts to any California Register of Historical Resources (CRHR)-eligible resources near the project site.

The three new decommissioning and demolition related COCs, **D-CUL-1, D-CUL-2, and D-CUL-3**, in combination with three of the existing Cultural Resources COCs, **Requirements 4, 5, and 7**, would be sufficient to reduce impacts from the proposed decommissioning and demolition to a less than significant level to both cultural resources and tribal cultural resources, and ensure compliance with applicable LORS.

Efficiency and Reliability. Power Plant Efficiency and reliability are related to plant operation, not plant decommissioning or demolition. There would be no impacts on efficiency and reliability as the result of the decommissioning and demolition.

Facility Design. There would be no construction as the result of decommissioning, and thus, there would be no impact on Facility Design.

Geology and Paleontological Resources. Staff concludes the proposed decommissioning of the facility would not result in significant environmental impacts in terms of geologic resources, paleontologic resources, or geologic hazards, provided the owner complies with existing Cultural Resources COCs, **Requirements 4, 5, and 7**, and decommissioning conditions **D-PAL-1** through **D-PAL-3**. The proposed decommissioning would not require any change to the COCs related to geology or geologic hazards in the Decision for SEGS VIII.

Hazardous Materials Management. Staff reviewed the decommissioning plan identifying all decommissioning activities which include handling, recycling, and disposal of hazardous materials once the facility ceases operation. The hazardous materials to be handled during decommissioning include heat transfer fluid (HTF), lead acid batteries, diesel fuel, hydraulic oil, lubricating oil, and mineral oil. Condition of Certification **D-HAZ-1** proposed in the decommissioning plan would have the project owner update the Hazardous Materials Business Plan (HMBP) as needed to reflect new hazardous materials used during decommissioning.

Staff recommends adoption of the decommissioning and demolition plan and concludes that with the implementation of condition **D-HAZ-1**, the hazardous material impacts to the environment would be less than significant and decommissioning would comply with applicable LORS.

Land Use. The project owner will obtain a demolition permit from the County of San Bernardino's Land Use Services Department, Building and Safety Division. With implementation of the project owner's proposed condition, **D-LU-1**, the project would comply with applicable land use LORS. No COCs in the Decision pertaining to Land Use apply to the decommissioning and demolition activities at the SEGS VIII site. Decommissioning and demolition activities would not physically divide an established community or cause a significant environmental impact due to a conflict with LORS adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, the activities would not result in the conversion of farmland or forest land.

Noise. The decommissioning and demolition activities would temporarily elevate the ambient noise levels in the surrounding areas. Decommissioning and demolition activities would be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday, in accordance with the County of San Bernardino Development Code. The project would also comply with occupational noise safety requirements and provide hearing protection to workers during demolition activities. Noise generated during these activities would be controlled with implementation of the existing Noise COCs in the Decision. Construction equipment would be muffled in accordance with manufacturers' specifications and given that the nearest sensitive receptor is over 1 mile from the project site, the demolition activities would not exceed the acceptable noise levels for residential areas.

Staff concludes that decommissioning and demolition activities would comply with the applicable LORS and create less-than-significant noise impacts.

Public Health. Potential risks to public health during decommissioning and demolition would be associated with contact or exposure to hazardous waste, exposure to toxic substances in contaminated soil, as well as diesel exhaust from off-road equipment operation during demolition activities. Staff concludes that implementation of proposed conditions, **D-PH-1, D-PH-2**, in addition to proposed conditions in the **Air Quality, Hazardous Materials Management, Worker Safety and Fire Protection**, and **Waste Management** sections of this staff analysis, would ensure that the decommissioning and demolition activities outlined in the SEGS VIII Facility Decommissioning Plan, would comply with applicable LORS and would not result in significant public health impacts.

Socioeconomics. The decommissioning of SEGS VIII would take approximately 6 to 8 months to complete, beginning shortly after obtaining CEC approval of the Final Decommissioning Plan. Demolition activities associated with decommissioning would require a peak workforce of approximately 60 workers. The large workforce in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) is sufficient for the activities associated with decommissioning of SEGS VIII. If some workers were to temporarily relocate closer to the project site, there is sufficient housing in the nearby city of Barstow. The decommissioning of SEGS VIII would have less than significant socioeconomic impacts.

Soil and Water Resources. Decommissioning activities would take place within the existing facility footprint. In addition to the existing conditions of certification in the Decision, the project owner is proposing three additional conditions, **D-S&W-1** through **D-S&W-3**, to ensure that impacts of the decommissioning and closure activities on soil and water resources would be less than significant. Condition of Certification **D-S&W-1** requires the project owner to submit a notice of intent 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). According to Condition **D-S&W-2** the project owner would develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the decommissioning and demolition of SEGS VIII. The SWPPP would identify erosion control measures to be implemented and maintained during decommissioning and demolition activities. The SWPPP would be submitted to San Bernardino County for review and approval prior to the start of decommissioning activities. Condition **D-S&W-3** requires the project owner to submit Grading and Erosion Control plans for review and approval by the County of San Bernardino prior to the start of construction-related demolition activities.

Staff concludes that the proposed decommissioning of the facility would not result in significant environmental impacts in terms of soil and water resources, provided that the owner complies with the existing COCs in the Decision as well as conditions proposed by

the project owner, **D-S&W-1** through **D-S&W-3**. The proposed decommissioning would not require any change to the conditions of certification related to soil and water resources in the Decision for SEGS VIII.

Transportation. The proposed activities would generate a maximum of 21 daily truck trips during the 6 to 8-month decommissioning and demolition period. Transportation COCs, **Requirements 1** through **3, 7, 13, and 14** in the Decision are applicable to decommissioning and demolition. **Requirements 4** through **6** and **8** through **12** in the Decision are not applicable to the decommissioning and demolition. The project owner has proposed **D-TRAFFIC-1** and **D-TRAFFIC-2** to be implemented during decommissioning and demolition. **D-TRAFFIC-1** would require a Construction Management Plan to ensure compliance with the San Bernardino County Congestion Management Program's objectives and policies. **D-TRAFFIC-2** would require the use of licensed haulers and approved vehicles to ensure compliance with all applicable regulations for the transport of hazardous, toxic, and flammable materials.

The SEGS VIII decommissioning and demolition activities would generate a negligible amount of temporary vehicle trips, which would not conflict with CEQA Guidelines section 15064.3, subdivision (b), with regards to vehicle miles traveled. Additionally, with the implementation of Transportation COCs, **Requirements 1** through **3, 7, 13, and 14** in the Decision and **D-TRAFFIC-1** and **D-TRAFFIC-2** in the Final Decommissioning Plan, the proposed activities would not conflict with LORS addressing the circulation system, substantially increase hazards, or result in inadequate emergency access. Therefore, the decommissioning and demolition of SEGS VIII would result in less than significant impacts to transportation.

Transmission Line Safety and Nuisance. The existing generator tie-line and switchyard would remain in place and be used for the continued operation of SEGS IX, the BESS, and future solar PV facility. During safe layup, the SEGS VIII generator tie-line conductors would be disconnected between the switchyard and generator substation. The transmission poles and conductors would either re-used or removed. The generator substation would either remain in place if it could be upgraded or removed. Any future use of these would be conditioned by the new owner for the new use.

Staff concludes the decommissioning activities outlined in the SEGS VIII Final Decommissioning Plan would not result in significant impacts related to transmission line safety and nuisance.

Transmission System Engineering. The demolition activities would not involve the generator tie-line. The existing 13.5-mile 220 kilovolt (kV) generator tie-line would remain in place and would be utilized for the BESS, future PV facility, and the continued operation of SEGS IX. No conditions of certification in the Decision apply to the demolition from a transmission system engineering perspective. Therefore, decommissioning would not affect Transmission System Engineering.

Visual Resources. Review of aerial and street imagery shows the project site is not located within a scenic vista as defined by CEC staff, and the decommissioning and demolition activities would not substantially damage scenic resources or degrade the visual character or quality of public views of the site and its surroundings.

Demolition activities would occur during daylight hours. Existing facility lighting and temporary lighting would be used to maintain site security at night. Outdoor lighting would be directed away from surrounding properties and the public right of way. Light fixtures would be hooded/shielded.

The demolition of SEGS VIII would remove parabolic troughs and their reflectivity, a power block with a cooling tower and its emitted publicly visible water vapor plumes. Staff concludes decommissioning and demolition of the facility would comply with LORS and would not substantially damage or degrade a scenic vista, scenic resources, or the existing visual character or quality of public views of the project site and its surroundings.

Waste Management. Based on final decommissioning plan provided by the owner 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 as required by applicable LORS. The site would be secured 24 hours per day during the decommissioning activities.

Based on the information provided by the project owner, staff concludes the proposed decommissioning of the facility would result in less than significant environmental impacts in terms of waste management. The proposed decommissioning would not require any change to the COCs related to waste management in the Decision for SEGS VIII.

Worker Safety and Fire Protection. Industrial environments are potentially dangerous during the demolition of facilities. Workers involved in the proposed demolition of SEGS VIII would be exposed to loud noises, moving equipment, trenches, and confined space ingress and egress problems. Workers may experience falls, trips, burns, lacerations, or numerous other injuries. They have the potential to be exposed to falling equipment, materials or structures, chemical spills, hazardous waste, fires, explosions, and electrical sparks and electrocution.

The project owner has proposed two additional conditions of certification, **D-WS-1** and **D-WS-2**, to be implemented during decommissioning and demolition. Staff recommends adoption of the decommissioning and demolition plan and concludes that with the implementation of new conditions **D-WS-1, and D-WS-2**, the impacts on worker safety and fire protection would be less than significant and decommissioning would comply with applicable LORS.

Environmental Justice. Staff concludes that all impacts on the environment would be mitigated to less than significant levels with implementation of existing conditions of certification in the Decision and additional conditions identified in the Staff Analysis. Decommissioning would not affect any population including the environmental justice population as shown in **Environmental Justice Figure 1, Figure 2, and Table 1** in the Staff Analysis.

STAFF RECOMMENDATIONS AND CONCLUSIONS

Staff concludes that implementation of the SEGS VIII Final Decommissioning Plan would not result in significant adverse environmental impacts, and would comply with all applicable and current laws, ordinances, regulations, and standards, with implementation of existing conditions of certification in the SEGS VIII Decision and the additional proposed conditions in the areas of Air Quality, Biological Resources, Cultural Resources, Hazardous Materials Management, Land Use, Public Health, Soil and Water Resources, Transmission Line Safety and Nuisance, Transportation, and Worker Safety and Fire Protection. Staff recommends that the CEC approve the Final Decommissioning Plan and adopt the new proposed conditions of certification to make them binding and enforceable by CEC staff during the decommissioning process.

AIR QUALITY AND GREENHOUSE GASES

Tao Jiang

INTRODUCTION

In this section, CEC staff discusses the proposed Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the Final Decommissioning Plan (TN 232903) in relation to the technical area of **Air Quality and Greenhouse Gases**. The purpose of this analysis is to determine whether decommissioning and demolition of the facility would avoid significant impacts on air quality and greenhouse gases (GHG) and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is an existing 80-MW solar thermal power plant located at 43880 Harper Lake Road, in an unincorporated portion of San Bernardino County. The facility uses parabolic mirrors to concentrate solar energy onto heat transfer fluid, which is used to create steam to generate solar thermal electricity. Depending on the amount of sunlight available, natural gas heaters are also used to create enough thermal energy. After decommissioning is completed and the CEC's license is terminated, the project owner proposes to replace the current solar thermal facilities with cleaner solar PV facilities. The project decommissioning would generate short-term decommissioning/demolition-related emissions. However, implementation of solar PV technologies would be approved and overseen by San Bernardino County, not the CEC. The decommissioning/demolition of SEGS VIII would represent a net air quality and GHG benefit due to the elimination of the natural gas fired heaters and cooling tower emissions.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The following federal, state, and local LORS and policies pertain to the emissions and the mitigation of air quality and GHG impacts during the decommissioning. Staff's analysis describes or evaluates the proposed facility's compliance with these requirements, shown in **Air Quality Table 1**.

Air Quality Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable LORS	Description	SEGS VIII Consistency
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.	<u>Consistent:</u> 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 would be registered through, and comply with, the California Air Resources Board (CARB), Portable Equipment Registration Program (PERP).
Title V Permits	Sets forth permitting requirements for major sources of emissions across the country.	<u>Consistent:</u> 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 would be retired.
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.	<u>Consistent:</u> 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 California Air Resources Board Portable Equipment Registration Program (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.	<u>Consistent:</u> 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.	<u>Consistent:</u> If portable equipment requiring permits is used for the decommissioning and demolition activities, that equipment would 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-	<u>Consistent:</u> 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

Applicable LORS	Description	SEGS VIII Consistency
	by-year fleet average requirements, as well as recordkeeping and reporting.	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.	Consistent: 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.	Consistent: 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.	Consistent: AQ-SC4 would require the project owner to 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.	Consistent: The project owner would ensure that the demolition contractor complies with this requirement.
Rule 403.2 – Fugitive Dust	Limits fugitive PM emissions from transport, construction, handling and storage activities.	Consistent: AQ-SC1 require the project owner to ensure the contractor uses 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.	Consistent: No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.

Applicable LORS	Description	SEGS VIII Consistency
Rule 405 – Solid Particulate Matter Weight	Limits PM emissions based on process weight.	<u>Consistent:</u> 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.	<u>Consistent:</u> 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.	<u>Consistent:</u> 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.	<u>Consistent:</u> 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.	<u>Consistent:</u> 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.	<u>Consistent:</u> No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Regulation XV – Emission Standards for Specific Toxic Air Contaminants	Sets limits on toxic air contaminants from stationary sources.	<u>Consistent:</u> 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.	<u>Consistent:</u> No MDAQMD permits would be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

None of the conditions of certification (COCs) in the SEGS VIII Final Commission Decision (or subsequent amendments) would apply during the decommissioning and demolition to mitigate air quality and GHG effects or ensure LORS compliance.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner proposed the following COCs during decommissioning and demolition to ensure that activities conform with applicable LORS. Staff proposes a verification step for each of them, as shown in **bold/underline**.

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 (PM₁₀), by addressing objectives, key contacts, roles and responsibilities, dust sources, and control measures.

Verification: The project owner shall submit the DCP and any modifications to the compliance project manager (CPM) within five working days of its submittal to MDAQMD.

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.

Verification: The project owner shall submit to the CPM a Monthly Compliance Report (MCR) which demonstrate compliance with condition D-AQ-2.

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).

Verification: The project owner shall submit to the CPM an MCR which demonstrates compliance with condition D-AQ-3.

D-AQ-4: The project owner shall ensure that equipment used during decommissioning complies with MDAQMD 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.

Verification: The project owner shall submit to the CPM an MCR which demonstrate compliance with condition D-AQ-4.

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.

Verification: At least 60 days prior to the start of decommissioning, the project owner shall submit to the CPM, for approval, the name and contact information for the AQS and/or AQS delegates. The project owner shall submit to the CPM an MCR which demonstrate compliance with condition D-AQ-5.

ANALYSIS

The proposed decommissioning and demolition of SEGS VIII would generate emissions of criteria pollutants, including oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter less than 10 microns (PM₁₀), fine particulate matter less than 2.5 microns (PM_{2.5}) and oxides of sulfur (SO_x), as well as greenhouse gases. The proposed decommissioning and demolition process would last a total of approximately 6 months. Decommissioning activities would generate emissions from fugitive dust, tailpipe emissions from construction equipment used, waste/recycling truck trips, and construction worker commutes.

Total estimated criteria pollutant and GHG emissions during decommissioning and demolition as estimated by the project owner are summarized in **Air Quality Table 2** and **3**. Staff verified the project owner's calculations. The emissions are also compared with MDAQMD emissions thresholds.

Air Quality Table 2
SEGS VIII Decommissioning and Demolition Daily Emissions(lbs/day)

Construction Stage	CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
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 – Go - Gen Demo	1.93	6.97	25.75	0.07	41.27	4.88	7,303
Maximum Daily Emissions	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: TN 232903, Appendix C.

Air Quality Table 3
SEGS VIII Decommissioning and Demolition Annual Emissions (tons/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 – Go - 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
MDAQMD Threshold	100	25	25	25	15	12	100,000
Exceedance	No	No	No	No	No	No	No

Source: TN 232903, Appendix C.

As shown in **Air Quality Tables 2 and 3**, the emissions from the decommissioning and demolition would not exceed the MDAQMD significance thresholds for any criteria pollutants and GHG emissions. Therefore, the air quality and GHG impact from the project decommissioning and demolition would be less than significant. To ensure the decommissioning and demolition activities would conform with applicable LORS, the project owner proposed new conditions **D-AQ-1** through **D-AQ-5**, as shown above. Staff concurs with project owner’s proposal, and adds verifications to these COCs.

CONCLUSIONS AND RECOMMENDATIONS

The emissions from the proposed demolition and decommissioning of SEGS VIII are temporary and less than MDAQMD significance thresholds. Staff concludes that with the adoption of the new conditions of certification **D-AQ-1** to **D-AQ-5**, the decommissioning and demolition would not result in significant adverse air quality and GHG emissions impacts.

BIOLOGICAL RESOURCES

Carol Watson

INTRODUCTION

In this section, CEC staff discusses the Solar Electric Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) in relation to the technical area of **Biological Resources**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on biological resources and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

The project owner had a biological survey report of the SEGS VIII site completed to support the conditional use permit process with the County of San Bernardino for future redevelopment of the site for a solar photovoltaic facility. The site, located in the Mojave Desert near the town of Hinkley, consists of highly disturbed areas of bare ground 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 site during the survey. In addition, based on topographic 9-quadrangle database record searches, the ten special-status plants species and sixteen special-status wildlife species known to occur within the vicinity of the site are either not expected or have a low potential, to occur within or surrounding the site.

Further, bird nesting opportunities and wildlife movement are limited and relatively restricted throughout most of the site, respectively, due to a lack of vegetative cover on-site, and development and infrastructure within and surrounding the site. In addition, no U.S. Fish and Wildlife Service-designated critical habitat has been mapped within the survey area.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Several LORS apply to the project. No new LORS have been enacted since the project was permitted in 1989; although the San Bernardino County General Plan was updated in 2007. LORS are listed below in **Biological Resources Table 1**.

Biological Resources Table 1
Applicable Laws, Ordinances, Regulations, and Standards

LORS	Description	Consistency
Federal LORS		
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, the project owner will update the Biological Resources Mitigation Implementation Plan (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.	The project owner submitted an application to obtain a CWA 404 permit issued by the United States Army Corps of Engineers and a CWA 401 water quality certification issued by the Lahontan Regional Water Quality Control Board prior to construction of the project. Compliance would be managed through use of the Construction Storm Water Pollution Prevention Plan (SWPPP).
Endangered Species Act 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 SEG8 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. Existing Biological Resources COC, Requirement 6 addresses proper reporting of impacts to rare, threatened, or endangered species. No sensitive biological resources or habitats occur on site.

State LORS		
Native Plant Protection Act, Fish and Game Code sections 1900–1913	Prohibits taking of endangered and rare plants from the wild and requires that California Department of Fish and Wildlife (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.	The project owner 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, 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."	The project owner would comply with this requirement through implementation of the project BRMIP as may be modified for decommissioning.
Streambed Alteration Agreement, Fish and Game Code, 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.
Local LORS		
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.
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APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

The following conditions of certification (COCs) reflect those originally imposed on the project, including those modified through subsequent amendments. These COCs were developed to reduce the significant biological impacts of the SEGS Unit VIII project to acceptable levels and are now considered appropriate to reduce any decommissioning potential impacts to below the level of significance. They retain original numbering. Particular portions, or subheadings, of COCs that CEC staff has deemed inapplicable to the decommissioning and demolition activities are shown in ~~striketrough~~. All remaining terms are applicable to decommissioning activities and will be monitored during decommissioning to ensure compliance. Additionally, in the applicable COCs, all instances of the former project owner, Luz, shall be considered to reflect the current project owner.

Requirement 1: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 2: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 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.

Requirement 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 twomile 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, Ltd., and Luz Solar Partners IX, Ltd., shall execute the Agreement for Mitigation of Impacts on Desert Tortoises Along Harper Lake Road By Luz Solar Partners VIII, Ltd., and Luz Solar Partners IX, Ltd., ("Master Agreement"). This Agreement contains provisions for payment by Luz Solar Partners VIII, Ltd., and Luz Solar Partners IX, Ltd., 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 SEGS Unit VIII and for all Luzowned 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.

Requirement 5: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 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.

Requirement 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.

Requirement 8: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 9: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 10: Not applicable to SEGS VIII decommissioning/demolition.

Requirement 11: Not applicable to SEGS VIII decommissioning/demolition.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

Additional conditions of certification have been proposed by the project owner and are incorporated into staff's analysis and recommended for CEC approval, with certain modifications. These conditions are presented below, and several of them are considered appropriate to minimize any potential impacts. Staff's proposed modifications to the project owner's proposed conditions are depicted in **bold/underline**; deletions are shown in ~~strikethrough~~.

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~~ **shall** 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 **designated** 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). **A nesting bird survey and monitoring report shall be prepared and submitted to the CPM at the conclusion of nesting season, and identification of any special-status species (including raptor) nesting behavior shall be reported within three business days.**

Verification: A Designated biologist shall perform nesting bird surveys as indicated above; and shall also implement buffers immediately upon discovery of a nest. Written reports and photos (if available) shall be made to the CEC CPM of special status nesting birds on site, according to the above-specified timeline. A nesting bird survey and monitoring report containing photos, survey methodology, site conditions, and description of any avoidance measures (such as buffers) implemented during each survey shall be provided to the CEC CPM at the conclusion of each nesting season while work was being performed.

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.

Verification: The Designated Biologist shall monitor the viability of the desert tortoise fencing during decommissioning activities, and the project owner shall ensure that necessary repairs are made promptly. The condition of the fence shall be reported on in the BRMIP, per BIO-6 Verification requirements. Any major damage, such as blowouts due to rain events shall be reported to the CEC CPM within two business days and accompanied by photos and a written report.

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.

CEC Biological Resources Staff Response: Staff considers proposed condition D-BIO-3 duplicative, as it is previously captured in existing condition of certification BIO-4, enumerated in the previous section. Accordingly, staff is recommending approval of this condition, but staff has not proposed a separate verification for this condition.

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).

CEC Biological Resources Staff Response: Staff considers proposed condition D-BIO-4 duplicative, as it is also captured in existing condition of certification BIO-4 (in the previous section), and which, as originally written, is more prescriptive. Accordingly, staff is recommending approval of this condition, but staff has not proposed a separate verification for this condition.

ANALYSIS

Staff has reviewed the Decommissioning Plan (plan) for conformance with applicable LORS and potential environmental effects.

LORS Conformance.

With implementation of applicable COCs, the project would conform with all federal, state, and local LORS.

Environmental Impacts.

No special-status plant or wildlife species were observed during the field surveys (LSA 2020). Based on literature review, database searches, and on-site habitat suitability

assessments, it has been determined that the project site does not contain suitable habitat for any special-status plant or wildlife species. Birds may nest on the site or adjacent, which could be impacted by plan activities. Staff concludes that the proposed plan would not result in potentially significant adverse impacts on biological resources, with implementation of Biological Resources Conditions of Certification, **Requirements 3, 4, 6, and 7** in the Decision, and the approval of new project owner-proposed conditions **D-BIO-1** and **D-BIO-2**, as modified by staff. Staff also recommends approval of new owner-proposed conditions **D-BIO-3** and **D-BIO-4** but does not consider them to be necessary to mitigate environmental impacts or conform with LORS due to the project's existing conditions of certification which remain applicable to decommissioning.

CONCLUSIONS AND RECOMMENDATIONS

Staff concludes that with respect to Biological Resources, implementation of Conditions of Certification, **Requirements 3, 4, 6, and 7** in the Commission Decision, and approval of proposed conditions **D-BIO-1** and **D-BIO-2**, would reduce impacts to less than significant levels, and the proposed decommissioning/demolition can proceed as proposed. Implementation of these conditions of certification would ensure activities comply with applicable LORS.

REFERENCES

CEC 1989 - California Energy Commission. *Commission Decision Application for Certification for LUZ Engineering Corporation SEGS Project (Harper Lake) Unit VIII*. March 1989. Sacramento, California. P800-89-04.

LSA 2020. SEGS VIII (88-AFC-01C) Final Decommissioning Plan. May 1, 2020. TN 232903.

CULTURAL AND TRIBAL CULTURAL RESOURCES

Mathew Braun

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS) Decommissioning and Demolition Plan (Plan) (TN 232903) in relation to **Cultural and Tribal Cultural Resources**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on cultural and tribal cultural resources and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

A cultural resources analysis conducted by CEC staff during licensing of SEGS VIII identified 62 cultural resources prior to construction of the project. These included 14 historic isolates, 17 historic sites, 9 historic structures, 17 prehistoric isolates, 4 prehistoric sites, and 1 multi-component site. Two of these resources were potentially eligible for the California Register of Historical Resources (CRHR) (CEC 1989 p. 259). No additional cultural resources were discovered during construction of the project.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The following state and local LORS related to cultural and tribal cultural resources apply to the decommissioning activities at the SEGS VIII site.

Cultural Resources Table 1
Applicable Laws, Ordinances, Regulations, and Standards

LORS	Description	Consistency
California Code of Regulations, Title 14, section 4852	Defines the terms "cultural resource" to include buildings, sites, structures, objects, and historic districts.	Decommissioning and demolition would not adversely affect cultural resources
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 impact any known cultural resources
San Bernardino County General Plan (2007) - Conservation Element	The General Plan establishes a cultural resource sensitivity overlay map. Also, the General Plan establishes goals to identify and protect important cultural resources.	The facility is located outside of the cultural resource sensitivity layer on the overlay map. Also, decommissioning

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Three of the Cultural Resources COCs in the Commission Decision applicable during construction are applicable to the project during decommissioning and demolition. At the time of certification Paleontological Resources were categorized with Cultural Resources; however, these resources are discussed in the **Geology and Paleontological Resources** section of this decommissioning analysis.

Requirement 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 resources management and field experience) to the CEC CPM [compliance project manager] for review and approval. The CEC CPM must review the qualifications of and approve of in writing, Luz's [the project owner'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.

Verification: Luz [the project owner] shall submit to the CEC CPM for review and 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.

Requirement 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 measure proposed to mitigate impacts 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 [the project owner'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 [the project owner] 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 [the project owner], 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 [the project owner] 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.

Requirement 7: Luz [the project owner] shall prepare and present paleontologic and cultural resources 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 and paleontologic 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 [the project owner] 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 [the project owner] shall submit to the CEC CPM evidence of presentations to all personnel who may be involved with ground clearance or earth moving activities.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner submitted three additional COCs for decommissioning and demolition of the project.

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 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 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.

ANALYSIS

Staff reviewed the Plan for potential environmental effects and consistency with applicable LORS. Based on a review of LORS and potential environmental effects, staff determined that decommissioning and demolition of the project would have a less than significant impact to cultural or tribal cultural resources with implementation of the COCs submitted by the project owner in the decommissioning plan and the COCs in the Final Commission Decision. The project owner will monitor any ground-disturbance in areas that were not already disturbed during construction and that could potentially contain any buried, as-yet unknown cultural or tribal cultural resources. Decommissioning and demolition of the project would not cause any impacts to any CRHR-eligible resources near the project site.

CONCLUSIONS AND RECOMMENDATIONS

Staff concludes that the proposed plan would have a less than significant impact on cultural or tribal cultural resources. Staff reviewed the ethnographic and historic literature to determine whether any environmental justice populations use or reside in the project area. No known hunting and gathering areas would be impacted by the proposed decommissioning and demolition, therefore Native Americans are not considered members of the environmental justice population for this project.

The three new decommissioning and demolition related COCs, **D-CUL-1**, **D-CUL-2**, and **D-CUL-3**, in combination with three of the existing Cultural Resources COCs, **Requirements 4, 5, and 7**, would be sufficient to reduce impacts from the proposed decommissioning and demolition to a less than significant level to both cultural resources and tribal cultural resources, and ensure compliance with applicable LORS.

REFERENCES

CEC 1989 – California Energy Commission. *Commission Decision Application for Certification for LUZ Engineering Corporation SEGS Project (Harper Lake) Unit VIII*. March 1989. Sacramento, California. P800-89-04.

LSA 2020 – LSA. *Final Facility Decommissioning Plan, Solar Energy Generating System (SEGS), 88-AFC-01, San Bernardino County, California*. Submitted by Luz Solar Partners VIII, Ltd.

EFFICIENCY AND RELIABILITY

Kenneth Salyphone

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the plan (TN 232903) in relation to the technical area of **Efficiency and Reliability**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on power plant efficiency and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

The SEGS VIII operated as a concentrated solar thermal power facility generating 80 megawatts of electricity. It would undergo decommissioning and demolition activities. Demolition activities would include the dismantling and removal of above-ground structures – parabolic mirrors and supports, steam turbine generators, cooling towers, storage tanks, heaters, condensers and other ancillary equipment.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

None.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

None.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

None.

ANALYSIS

The technical area of Efficiency and Reliability is related to plant operation, not plant decommissioning or demolition. There would be no efficiency impacts as the result of decommissioning.

CONCLUSIONS AND RECOMMENDATIONS

Since Efficiency and Reliability is only related to plant operation, there would be no efficiency impacts.

REFERENCES

SEGS VIII 2020 – Solar Energy Generation Systems, Unit VIII (TN 232903). Final Decommissioning Plan. May 2020. Accessed on: June 19, 2020. Available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=232903&DocumentContentId=65342>

GEOLOGY AND PALEONTOLOGICAL RESOURCES

Gary Maurath

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) (88-AFC-01C) decommissioning and demolition, as described in the plan (LSA 2020) in relation to the technical area of **Geology and Paleontological Resources**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would be undertaken in a manner that avoids significant impacts on geology and paleontological resources and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

The SEGS VIII facility is an existing solar thermal electric power plant located on typically flat alluvial fans of the Mojave Desert along the western edge of the dry lakebed of Harper Lake. Prior to construction of the facility, the land was used for agricultural production and it was taken out of production because of the high cost of pumping groundwater for irrigation (CEC 1989).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

LORS	Description	Consistency
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.	Basic grading and erosion control of soils would be implemented. Shoring is not anticipated to be needed.
California Public Resources Code, section 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, impacts to paleontological resources are not anticipated. If paleontological resources are encountered, the project will comply with the standard procedures for appropriate

LORS	Description	Consistency
		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, impacts to paleontological resources are not anticipated. If paleontological resources are encountered, the project will comply with the standard procedures for assessing and mitigating impacts to paleontological resources.
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, impacts to paleontological resources are not anticipated. If paleontological resources are encountered, the project will comply with the standard procedures for assessing and mitigating impacts to 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, impacts to paleontological resources are not anticipated. If paleontological resources are encountered, the project will comply with the standard procedures for assessing and mitigating impacts to paleontological resources.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

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.

Four of the Cultural Resources COCs in the Commission Decision applicable during construction are applicable to the project during decommissioning and demolition. At the time of certification paleontological resources were categorized with cultural resources and were discussed in the **Cultural Resources** section of the Decision.

The applicable COCs are listed below. The name "Luz" has been replaced with "[Owner]" in these requirements.

Requirement 1: [Owner] 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. [Owner] also will be responsible for the recovery, preparation for analysis, analysis, and duration of any paleontologic resource materials encountered during construction at the SEGS Unit VIII site.

Information copies of communications related to any paleontologic resources monitoring and mitigation work being conducted at the 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, [Owner's] contractors or sub-contractors, and/or other parties interested in the monitoring and mitigation work.

Requirement 2: [Owner] 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, [Owner's] designated paleontologic specialist prior to any ground clearance or disturbance at 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 SEGS Unit VIII site.

Requirement 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.

[Owner], 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 [the Owner], 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 SEGS Unit VIII site to observe paleontologic resources monitoring and data recovery activities.

Requirement 7: [Owner] 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.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner submitted three additional COCs for decommissioning and demolition of the project. They are:

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 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 paleontologist 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 paleontologist 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 paleontologist can determine the significance and sensitivity of the find. The designated paleontologist 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 paleontologist, 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.

ANALYSIS

Based on Final Decommissioning Plan provided by the owner, disturbance of soil at the site would be limited to areas immediately surrounding elements of the facility that would be removed, such as support structures and connections to buried utilities. It is highly unlikely that this disturbance would extend beyond the depth of soil that was disturbed during their construction. However, it is possible that excavations could extend to depth

where undisturbed Pleistocene-age sediments are encountered. In the event excavation activities penetrate undisturbed material, the potential impacts to such resources can be effectively mitigated through application of the existing Cultural Resources Conditions of Certification, **Requirements 1, 2, 3, and 7**, in combination with three new proposed decommissioning conditions **D-PAL-1** through **D-PAL-3**. Therefore, impacts to paleontological resources are expected to be less than significant. The proposed decommissioning of the project would not result in any necessary changes or deletions to the conditions of certification for engineering geology or paleontological resources.

CONCLUSIONS AND RECOMMENDATIONS

Staff concludes the proposed decommissioning of the facility would not result in significant environmental impacts in terms of geologic resources, paleontologic resources, or geologic hazards, provided the owner complies with existing Cultural Resources COCs **Requirements 1, 2, 3, and 7**, and decommissioning conditions **D-PAL-1** through **D-PAL-3**. The proposed decommissioning would not require any change to the conditions of certification related to geology or geologic hazards adopted by the Energy Commission in its Final Decision and any subsequent amendments for SEGS VIII (CEC 1989).

REFERENCES

CEC 1989 - California Energy Commission final decision on the application for certification of SEGS VIII Harper Dry Lake, 29 March 1989, Docket No. 88-AFC-01

LSA 2020 - Final Facility Decommissioning Plan Solar Energy Generating System (SEGS) VIII (88-AFC-01C), San Bernardino County, California. Docket Number 88-AFC-01C, TN: 232903.

HAZARDOUS MATERIALS MANAGEMENT

Ryan Casebeer and Brett Fooks

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the decommissioning plan (TN 232903) in relation to the technical area of **Hazardous Materials Management**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant hazardous materials management impacts to the environment and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Hazardous Material Management Table 1 outlines the federal, state and local laws and policies that apply to the protection of public health and hazardous materials management for the SEGS VIII decommissioning. Staff's analysis examines the project's compliance with these requirements.

Hazardous Material Management Table 1
LORS Applicable to Hazardous Materials Management

Applicable LORS	Description	Consistency
Federal		
The Superfund Amendments and Reauthorization Act of 1986 (42 USC §9601 et seq.)	Contains the Emergency Planning and Community Right to Know Act (also known as SARA Title III).	Decommissioning and demolition activities would comply with these requirements.
The Clean Air Act (CAA) of 1990 (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 materials.	Decommissioning and demolition activities would comply with these requirements.
The CAA section on risk management plans (42 USC §112(r))	Requires states to implement a comprehensive system informing local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of both SARA Title III and the CAA are reflected in the California Health and Safety Code, section 25531, et seq.	

Applicable LORS	Description	Consistency
49 CFR 172.800	The U.S. Department of Transportation (DOT) requirement that suppliers of hazardous materials prepare and implement security plans.	Decommissioning and demolition activities would comply with these requirements.
49 CFR Part 1572, Subparts A and B	Requires suppliers of hazardous materials to ensure that all their hazardous materials drivers are in compliance with personnel background security checks.	Decommissioning and demolition activities would comply with these requirements.
The Clean Water Act (CWA) (40 CFR 112)	Aims to prevent the discharge or threat of discharge of oil into navigable waters or adjoining shorelines. Requires a written spill prevention, control, and countermeasures (SPCC) plan to be prepared for facilities that store oil that could leak into navigable waters.	Decommissioning and demolition activities would comply with these requirements.
State		
Title 8, California Code of Regulations, section 5189	Requires facility owners to develop and implement effective safety management plans that ensure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the Risk Management Plan (RMP) process.	Decommissioning and demolition activities would comply with these requirements.
California Health and Safety Code, section 25531 to 25543.4	The California Accidental Release Program (CalARP) requires the preparation of a Risk Management Plan (RMP) and off-site consequence analysis (OCA) and submittal to the local Certified Unified Program Agency for approval.	Decommissioning and demolition activities would comply with these requirements.
California Health and Safety Code, section 41700	Requires that "No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property."	Decommissioning and demolition activities would comply with these requirements.
Title 19, California Code of Regulations, Division 2, Chapter 4.5, Articles 1-11	Sets forth the list of regulated substances and thresholds, the requirements for owners and operators of stationary sources concerning the prevention of accidental releases, the accidental release prevention programs approved under Section 112 of the federal Clean Air Act (CAA) Amendments of 1990 and	Decommissioning and demolition activities would comply with these requirements.

Applicable LORS	Description	Consistency
	mandated under the CalARP Program, and how the CalARP Program relates to the state's Unified Program.	
Local (or locally enforced)		
San Bernardino County Fire Department's Hazardous Materials Division	The Certified Unified Program Authority (CUPA) with responsibility to review Risk Management Plans and Hazardous Materials Business Plans is the San Bernardino County Fire Department. The CUPA 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.	Decommissioning and demolition activities would comply with these requirements.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Staff has reviewed the existing COCs for the project in the Commission Decision and there are none that would apply during decommissioning and demolition.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

Staff has reviewed the SEGS VIII Final Decommissioning Plan. The project owner has proposed one additional condition of certification to be implemented during decommissioning and demolition, identified as:

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

ANALYSIS

Staff reviewed the decommissioning plan identifying all decommissioning activities which include handling, recycling and disposal of hazardous materials once the facility ceases operation. The hazardous materials to be handled during decommissioning include heat transfer fluid (HTF), lead acid batteries, diesel fuel, hydraulic oil, lubricating oil, and mineral oil. The SEGS VIII decommissioning plan proposed one condition, **D-HAZ-1**, which would have the project owner update the Hazardous Materials Business Plan (HMBP) as needed to reflect new hazardous materials used during decommissioning. During decommissioning, the SPCC plan would be updated to cover spill prevention and countermeasures for handling of these materials. Prior to removing the equipment, all hazardous materials will be drained or transferred. The transfer of diesel fuel, HTF, hydraulic fluids and oils would be directly from the tanks or storage containers to a tanker

truck. After removal, all tanks and storage containers would be rinsed and the remaining water containing low concentrations of contaminants would be transferred into a tanker truck for disposal. The planned use, handling, disposal, and transportation of the hazardous materials from the facility would continue to be in compliance with applicable LORS.

During the demolition of the SEGS VIII project, there are several hazardous materials that would be used in the decommissioning, including gasoline, diesel fuel, oil, lubricants, welding gases, and small quantities of solvents. No extremely hazardous or regulated hazardous materials would be used on site specifically for demolition. None of these materials pose a significant potential for offsite impacts as a result of the quantities on site, their relative low toxicity, their physical state, and/or their environmental mobility. Any impact of spills or other releases of these materials would be limited to the site because of the small quantities involved, and/or the temporary containment berms used by contractors. Petroleum hydrocarbon-based motor fuels, mineral oil, lube oil, and diesel fuels represent limited off-site hazards even in larger quantities.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends adoption of the decommissioning and demolition plan and concludes that with the implementation of condition **D-HAZ-1**, the hazardous material impacts to the environment would be less than significant and decommissioning would comply with applicable LORS.

REFERENCES

CEC 1989 – California Energy Commission – SEGS VIII Harper Dry Lake Final Decision
March 29, 1989

SEGS 2020 – Solar Energy Generating Systems VIII. (TN 232903). SEGS VIII (88-AFC-01C) Final Decommissioning Plan, dated May 1, 2020. Available online at:
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

LAND USE

Jeanine Hinde

INTRODUCTION

In this section, CEC staff discuss the Solar Energy Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) relating to the topic of **Land Use**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on land use and comply with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

The SEGS VIII solar thermal power plant is located in western San Bernardino County in the Mojave Desert. The *County of San Bernardino 2007 General Plan* shows that the site has the land use designation of RL, Rural Living. The RL designation applies to areas “with existing land uses that include limited agriculture; mining and quarrying; energy production operations; public and private recreation areas; rural residences and vacation cabins; and watershed, wildlife, and open space uses” (County of San Bernardino 2007). The Mojave Solar Project is located immediately southeast of SEGS VIII and IX. The site is otherwise within an extensive, open space area several miles northwest of Barstow.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Decommissioning and demolition activities would not conflict with land use plans or policies. The project owner will obtain a demolition permit from the San Bernardino County (County) Building and Safety Division to ensure compliance with County regulatory requirements for the partial or complete removal of a permitted building or structure. (See the subsection below, “Additional Proposed Measures.”)

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

No adopted COCs pertaining to Land Use apply to the decommissioning and demolition activities at the SEGS VIII site.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner obtained a conditional use permit (CUP) from the county that includes decommissioning and demolition of the existing SEGS VIII facility and redevelopment of the site for a photovoltaic and battery energy storage system. The county’s conditions of approval for the CUP include a requirement for a demolition permit for any buildings or structures to be demolished. The project owner proposes the following measure to obtain

a demolition permit according to county requirements. Staff has added verification in **bold/underline**:

D-LU-1: The project owner shall obtain a demolition permit from the County of San Bernardino prior to the start of demolition activities.

Verification: The project owner shall submit a copy of the demolition permit to the CEC CPM within two business days of issuance from the County of San Bernardino and prior to the start of demolition activities.

ANALYSIS

The project owner will obtain a demolition permit from the county's Land Use Services Department, Building and Safety Division. With implementation of the project owner's proposed condition, **D-LU-1**, the project would comply with applicable land use LORS.

Decommissioning and demolition of SEGS VIII would include dismantling and removing power block equipment, cooling towers, parabolic mirrors and associated apparatus, and some of the support and miscellaneous buildings. Various hazardous materials would be removed from the site. Implementation of adopted conditions of certification and proposed decommissioning-specific conditions of certification would ensure that environmental impacts relating in part to land use would be avoided or reduced to less than significant. (The other sections of this document discuss all environmental issues, including potential air quality impacts from mechanized equipment; hazardous materials handling and transport; management, removal, and disposal of waste materials; impacts on transportation routes; and noise and vibration effects.)

CONCLUSIONS AND RECOMMENDATIONS

No adopted COCs pertaining to Land Use apply to the decommissioning and demolition activities at the SEGS VIII site. With implementation of the project owner's proposed condition, **D-LU-1**, as amended by staff, the project would comply with applicable land use LORS. Decommissioning and demolition activities would not physically divide an established community or cause a significant environmental impact due to a conflict with LORS adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, the activities would not result in the conversion of farmland or forest land.

REFERENCES

County of San Bernardino 2007 – *County of San Bernardino 2007 General Plan*. Section II – Land Use. Pages II-8 and II-9. Prepared by URS Corporation. Santa Ana, CA. Adopted March 13, 2007; Effective April 12, 2007; Amended April 24, 2014. Available online at: <http://cms.sbcounty.gov/lus/Planning/GeneralPlan.aspx>.

SEGS VIII 2020 - Final Facility Decommissioning Plan, dated May 2020. (TN 232903).

Available online at:

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

NOISE

Kenneth Salyphone

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the decommissioning plan (TN 232903) in relation to the technical area of **Noise**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant noise impacts and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII operated as a concentrated solar thermal power facility generating 80 megawatts of electricity. It would undergo decommissioning and demolition activities. Demolition activities would include the dismantling and removal of above-ground structures – parabolic mirrors and its supports, steam turbine generators, cooling towers, storage tanks, heaters, condensers and other ancillary equipment.

SEGS VIII shares a parcel totaling 1,073 acres located within a Rural Living Land use district. The nearest residences are located 1.6 miles and nearest business/off-site worksite is 10.2 miles from the project. A private airport is located approximately 14 miles to the south.

There are no sensitive noise receptors within 1 mile of the project area.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Noise Table 1 below identifies the noise LORS related to SEGS VIII.

Noise Table 1
Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description	Consistency
Federal		
Occupational Safety & Health Act (OSHA), Title 29, Code of Federal Regulations, § 1910.95. Title 29, USC §651 et seq.	Regulated 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 area and hearing protection will be required.	Decommissioning and demolition activities would comply with these requirements.
State		
California Occupational Safety & Health Act (Cal-OSHA): Title 8, California Code of Regulations, § 5095 et seq.	Establishes 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		
County of San Bernardino (SB) 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.

FEDERAL

Under the Occupational Safety and Health Act of 1970, the Department of Labor, Occupational Safety and Health Administration (OSHA) adopted regulations Title 29 § 1910.95, designed to protect workers against the effects of occupational noise exposure.

These regulations list permissible noise exposure levels as a function of the amount of time during which workers are exposed to those noise levels. The regulations further specify a hearing protection program that involves monitoring the noise to which workers are exposed, assuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any hearing degradation.

STATE

The California Occupational Safety and Health Administration (Cal-OSHA) has adopted occupational noise exposure regulations (California Code of Regulations Title 8 § 5095) that set employee noise exposure limits. These standards are equivalent to federal OSHA standards (see **Noise Table 1**).

LOCAL

County of San Bernardino

Project decommissioning and demolition noise within the county of San Bernardino would be regulated by the San Bernardino County General Plan and the County Development Code.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

The following are applicable Noise COCs in the Decision that would be implemented during the decommissioning and demolition activities to ensure compliance with applicable LORS.

Requirement 1: The project will comply with occupancy noise safety requirements and provide hearing protection to workers during demolition activities.

Requirement 2: All construction equipment used for decommissioning and demolition shall be muffled in accordance with manufacturers' specifications.

Requirement 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.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

None are proposed.

ANALYSIS

The decommissioning and demolition activities would temporarily elevate the ambient noise levels in the surrounding areas. Decommissioning and demolition activities would be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday, in accordance with the County of San Bernardino Development Code. The project would also comply with occupational noise safety requirements and provide hearing protection to workers during demolition activities.

Construction equipment would be muffled in accordance with manufacturers' specifications and given that the nearest sensitive receptor is over 1 mile from the project site, the demolition activities would not exceed the acceptable noise levels for residential areas.

CONCLUSIONS AND RECOMMENDATIONS

The project decommissioning and demolition activities would comply with the applicable LORS and create less-than-significant noise impacts.

REFERENCES

SEGS VIII 2020 – Solar Energy Generation Systems, Unit VIII (TN 232903). Final Decommissioning Plan. May 2020. Accessed on: June 19, 2020. Available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=232903&DocumentContentId=65342>

PUBLIC HEALTH

Nancy Fletcher

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the Plan (TN 232903) in relation to the technical area of **Public Health**. The purpose of this analysis is to determine whether decommissioning and demolition of the project in accordance with the Final Decommissioning Plan would avoid significant public health impacts and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is located near Harper Lake in unincorporated San Bernardino County. San Bernardino County is part of the Mojave Desert Air Basin (MDAB) and considered nonattainment for state and federal ambient air quality standards of ozone and particulate matter less than ten microns (PM10). The project site is very arid, characterized with low annual rainfall, hot summers, and moderate winters.

The surrounding area has a low population density. However, maps indicate there are structures near the site that could be residences or worksites.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Staff reviewed the SEGS VIII Final Decommissioning Plan to determine compliance with the listed laws, ordinances, regulations, and standards (LORS) and practices in **Public Health Table 1**. Staff notes additional LORS related to public health are included in the **Air Quality, Hazardous Materials Management, Worker Safety and Fire Protection**, and **Waste Management** sections of this staff analysis.

Public Health Table 1
Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description	Consistency
Federal		
Title 29 U.S. Code (USC) section 651 et seq (Occupational Safety and Health Act of 1970)	This act mandates safety requirements in the workplace.	The project owner would be required to comply with Worker Safety and Fire Protection conditions of certification. These conditions are consistent with OSHA requirements.
Title 40, Code of Federal Regulations, part 50 (National Primary and Secondary Ambient Air Quality Standards)	Part 50 establishes the National Ambient Air Quality Standards (NAAQS). NAAQS define levels of air quality that are necessary to protect public health.	The Public Health and Air Quality conditions of certification would require the project owner to follow strategies to reduce emissions from decommissioning

Applicable LORS	Description	Consistency
		and demolition activities. With the adherence to these emission control strategies, the decommissioning and demolition activities are not expected to significantly impact the MDAB NAAQS attainment status.
Title 40, Code of Federal Regulations, part 51 (Requirements for Preparation Adoption and Submittal of Implementation Plans)	Requires emission reporting and control strategies for the attainment and maintenance of national standards.	The project owner would be required to comply with all Public Health and Air Quality LORS including the Mojave Desert Air Quality Management District (MDAQMD) rules and regulations. The required emission control strategies for decommissioning and demolition are consistent with the Mojave Desert Air Quality Management District requirements for attainment and maintenance.
Title 40, Code of Federal Regulations, part 61 (National Emission Standards for Hazardous Air Pollutants)	Part 61 establishes national emission standards for hazardous air pollutants. Subpart M establishes requirements for demolition and renovation activities.	MDAQMD Rule 1000 incorporates Subpart M by reference. Proposed condition of certification D-PH-1 would require the project owner to comply with the MDAQMD asbestos program. Proposed condition of certification D-PH-1 would require the project owner to comply with the MDAQMD asbestos program. The MDAQMD asbestos program is consistent with Subpart M requirements.
State		
Health & Safety Code, sections 40910-40930 (District Plans to Attain State Ambient Air Quality Standards)	State Ambient Air Quality Standards (CAAQS) should be achieved and maintained.	The Public Health and Air Quality conditions of certification would require the project owner to follow strategies to reduce emissions from decommissioning and demolition activities. With the adherence to these emission control strategies, the decommissioning and demolition activities are not expected to significantly impact the MDAB CAAQS attainment status.
Health & Safety Code, sections 41700-41701 (General Limitations)	Establishes nuisance and visible emission requirements. Prohibits discharge of such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance.	The Public Health and Air Quality conditions of certification would require measures that would reduce the potential for nuisance or visible emissions from decommissioning and demolition activities.
Title 13, California Code of Regulations, section 2449 (General Requirements for In-	Imposes idling limits of five minutes, requires a plan for emission reductions for medium to large fleets, requires all vehicle with	The Public Health and Air Quality conditions of certification would require strategies to reduce emissions from decommissioning and

Applicable LORS	Description	Consistency
Use Off-Road Diesel Fueled Fleets)	engines greater than 25 horsepower to be reported to the California Air Resources Board (CARB) and labeled, and restricts adding older vehicles into fleets.	demolition activities. With the adherence to these emission control strategies, the decommissioning and demolition activities are not expected to significantly impact the MDAB CAAQS attainment status.
Local		
County of San Bernardino Development Code	Implements the goals and policies of the General Plan by regulating land uses within the unincorporated areas of the County. Includes provisions for the reduction of diesel emissions and fugitive dust control.	The project owner would be required to comply with the proposed conditions of certification. The proposed conditions of certification are consistent with the County of San Bernardino Development Code requirements.
Mojave Desert Air Quality Management District Regulation IV – Prohibitions Rule 403 (Fugitive Dust)	Establishes requirements to minimize fugitive dust. Requires every reasonable precaution to minimize fugitive dust emissions from activities and prohibits visible dust beyond the emission source's property line.	The Public Health and Air Quality conditions of certification would require the project owner to follow strategies to minimize fugitive dust consistent with the MDAQMD requirements.
Mojave Desert Air Quality Management District Regulation IV – Prohibitions Rule 403.2 (Fugitive Dust Control for the Mojave Desert Planning Area)	Establishes requirements for demolition activity to implement specific control measures to ensure the national ambient air quality standards for PM10 will not be exceeded.	The Public Health and Air Quality conditions of certification would require the project owner to follow strategies to minimize fugitive dust consistent with the MDAQMD requirements.
Mojave Desert Air Quality Management District Regulation X– Emission Standards for Additional Specific Air Contaminants Rule 1000 (National Emission Standards for Hazardous Air Pollutants)	Incorporates by reference all the applicable provisions regarding National Emission Standards for Hazardous Air Pollutants in Title 40, Code of Federal Regulations, part 61.	MDAQMD Rule 1000 incorporates Subpart M by reference. Proposed condition of certification D-PH-1 would require the project owner to comply with the MDAQMD asbestos program. Proposed condition of certification D-PH-1 would require the project owner to comply with the MDAQMD asbestos program. The MDAQMD asbestos program is consistent with Subpart M requirements.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Decommissioning activities would take place within the existing project footprint. The existing Public Health Conditions of Certification in the Decision would not be applicable to the decommissioning and demolition activities.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner is not proposing additional conditions of certification exclusive to **Public Health**. The project owner is proposing additional conditions relevant to public

health included in the **Air Quality, Hazardous Materials Management, Worker Safety and Fire Protection**, and **Waste Management** sections of this staff analysis, to be implemented during decommissioning and demolition. Staff proposes new Conditions of Certification, **D-PH-1** and **D-PH-2**, shown below.

Staff is proposing the following COCs specific to public health for adoption by the CEC.

D-PH-1: The project owner shall ensure all required asbestos related notification and removal testing is performed prior to demolition. The project owner shall comply with all Mojave Desert Air Quality Management District (MDAQMD) Rule 1000 asbestos requirements. The project owner shall include a statement of compliance with all asbestos related activities in the monthly compliance report.

Verification: The project owner shall submit the monthly compliance report to the Compliance Program Manager (CPM) within 30 days of the end of each month.

D-PH-2: The project owner shall comply with the County of San Bernardino Development Code control measures for diesel exhaust emissions. The project owner shall include a statement of compliance in the monthly compliance report.

Verification: The project owner shall submit the monthly compliance report to the CPM within 30 days of the end of each month.

ANALYSIS

Luz Solar Partners VIII, Ltd., (project owner) is proposing to decommission SEGS VIII to make way for a new photovoltaic (PV) solar facility (not under the jurisdiction of the CEC). Decommissioning activities are divided into four stages and is anticipated to take 6-8 months. The project owner plans to continue with the construction and operation of the approved BESS.

The project owner is proposing to terminate SEGS VIII current solar thermal power generation activities. Decommissioning activities include draining all fluids categorizing and removing all wastes from the site, identifying systems required for the continued operation of SEGS IX, the BESS and the future PV solar facility, installing temporary support facilities, liquidating equipment, dismantling and demolition of above-ground structures, removing and crushing concrete, removing/dismantling underground facilities.

HAZARDOUS MATERIALS

Decommissioning and demolition activities involve the handling of hazardous materials. The Decommissioning Plan identified heat transfer fluid, lead acid batteries, lead, asbestos, diesel, hydraulic oil, lubricating oil, and mineral oil as potential hazardous materials that would be handled. Crystalline silica is discussed in the fugitive dust section.

Exposure to hazardous materials could pose potential health risks. The predominant route of public exposure to toxic substances is through inhalation of vapors, fumes, and dust. Another potential exposure route includes absorption through skin or eye. Exposure through ingestion is not expected.

Lead acid batteries could contain sulfuric acid and lead. Sulfuric acid is considered non-flammable, corrosive to the skin, eyes and digestive track, and a respiratory track irritant. Lead exposure can result lead toxicity. Lead toxicity targets the nervous system. Lead exposure could also result in anemia. Lead could also be present in other structures and pipes.

Asbestos containing material can become a health hazard when disturbed. Asbestos is classified as a known carcinogen and may also increase the risk of other lung diseases. Health risks from asbestos exposure increases with heavier exposure and longer exposure periods. However, asbestos related diseases have also occurred with brief exposures.

Diesel fuel is combustible, an irritant to the skin, hazardous if ingested, and an inhalation hazard. Diesel particulate matter from the exhaust of diesel-powered equipment is discussed below.

Heat transfer fluid is combustible and hazardous if ingested. Potential health impacts from exposure through inhalation are not expected during decommissioning and demolition activities. The potential risks of inhalation evaluated in the Final Decision were based on the heat transfer fluid use at elevated temperatures.

Hydraulic oils are considered combustible and considered hazardous if ingested. Different types could also cause nerve damage or irritate the skin or eyes upon contact.

Lubricating oils are considered combustible and considered hazardous if ingested. Lubricating oils could also cause respiratory irritation following prolonged periods of oil mist inhalation.

Mineral oil is considered combustible and considered a minor health hazard. Mineral oil can cause irritation if contacted with eyes. Inhalation of mineral oil mist can cause adverse respiratory effects.

HAZARDOUS MATERIALS HANDLING AND REMOVAL

The **Worker Safety and Fire Protection** of this staff analysis includes a review of the decommissioning activities and includes the project owner's proposed new proposed conditions **D-WS-1** and **D-WS-2** requiring a personal protective equipment and exposure monitoring program, and training to protect worker safety. The adoption of **D-WS-1** and **D-WS-2**, as modified by staff, would take the place of and supersede existing Public Health Conditions of Certification, **Requirements 3, 4, and 5** in the Decision.

The **Hazardous Materials Management** analysis includes a review of the decommissioning activities for the heat transfer fluid, lead acid batteries, diesel fuel, hydraulic oil, lubricating oil, and mineral oil. The analysis concluded the planned use, handling, disposal, and transportation of the hazardous materials from the facility would continue to be in compliance with applicable LORS. The safe handling of these material would lower the risk of any significant offsite impacts as a result of the quantities on site, their relative low toxicity, their physical state, and/or their environmental mobility.

The **Waste Management** analysis reviews the breakdown and removal of structures and facilities. The project owner is proposing four additional measures to be implemented during decommissioning and demolition to conform with applicable LORS.

Currently, lead is not known to be present in site structures and pipes. The decommissioning plan stated lead testing would be performed prior to demolition. Lead containing materials should be identified to ensure any material containing lead would be handled and disposed of properly.

Staff's review of potential risks posed by hazardous materials to be managed during decommissioning and demolition indicates they have low volatility and low acute toxicity and pose little risk to the offsite public. The proposed safety handling measures included within the project owner's decommissioning and demolition plan, combined with proposed conditions in the **Air Quality, Hazardous Materials Management, Worker Safety and Fire Protection**, and **Waste Management** sections of this staff analysis, would mitigate risks to public health to a level that is less than significant.

Asbestos-containing structures and material are also not currently known to be present on the site. However, there are several LORS pertaining to the handling and disposal of asbestos containing materials since it can become an airborne hazard. The project owner stated that the testing would be performed prior to the start of demolition.

The federal Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as specified under 40 CFR 61, Subpart M, applies to asbestos removal and demolitions and is enforced locally by the Mojave Desert Air Quality Management District (MDAQMD). MDAQMD Rule 1000 adopts the federal asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements by reference. Project owners are responsible for submitting a notification of demolition/renovation or an asbestos checklist

indicating a demolition/renovation form is not required to the MDAQMD. Staff recommends new Public Health Condition of Certification **D-PH-1** to incorporate the requirements of the MDAQMD asbestos program.

In addition, 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 provides the applicant with disposal authorization. The project owner is required to perform asbestos testing of demolition debris prior to disposal.

FUGITIVE DUST

Decommissioning and demolition activities would result in short-term localized air quality impacts from fugitive dust. Fugitive dust can be generated by mobilization and demolition at the site, vehicle travel over paved and unpaved surfaces, storage piles, and dust from concrete loading, crushing, and unloading operations. Potential risks to public health during decommissioning and demolition from fugitive dust would be associated with increased exposure to particulate matter, potential exposure to crystalline silica from concrete operations, and toxins disturbed in the soil.

Concrete crushing at construction sites can generate respirable crystalline silica dust. Silica dust has been classified as a lung carcinogen. The inhalation of silica dust can cause the formation of scar tissue which reduces the lungs ability to take in oxygen, lung disease, chronic obstructive pulmonary disease, and kidney disease.

The Occupational Safety and Health Administration (OSHA) has developed standards to limit worker exposure to respirable crystalline silica. Worker exposure to crystalline silica can occur from the use of jackhammers, chipping tools, grinders, and crushing machines. OSHA requires a written exposure control plan identifying tasks that involve exposure and methods used to protect workers. OSHA requirements are addressed in the **Worker Safety and Fire Protection** section of this staff analysis.

MDAQMD Fugitive Dust Rule 403 requires a person to take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading clearing of land, and solid waste disposal. MDAQMD Rule 403 also requires visible dust to stay within a property line and every reasonable precaution to prevent visible particulate matter from being deposited on public roadways.

MDAQMD Fugitive Dust Control for the Mojave Desert Planning Area Rule 403.2 includes control measures in the Mojave Desert Planning Area Federal PM10 Attainment Plan. This rule requires construction/demolition of a source disturbing 100 or more acres to prepare

and submit a dust control plan. This rule is intended to ensure the National Ambient Air Quality Standards for PM10 are not exceeded due to anthropogenic fugitive dust.

MDAQMD Rule 403.2 outlines specific elements to be included in the plan depending on the size of the construction/demolition activity. A dust control plan should be accessible on site and maintained for at least two years after the date of entry. In addition, MDAQMD Dust Control Plan Approval Requirements includes written guidance regarding the approval of such plans. The guidance states the dust control plan should include reasonably foreseeable or planned, as well as existing, activities on the site.

The **Air Quality** analysis recommends the addition of a new proposed condition **D-AQ-1**, requiring the project owner to develop a Dust Control Plan (DCP) to be submitted to the MDAQMD.

Valley Fever

Valley fever is an illness caused by a fungus found in the soil and dirt of regions including the southwestern United States. Symptoms include fever, chest pain, and coughing, among other signs. In California, the fungus is found in many areas of the San Joaquin Valley. The fungi's spores can be released into the air by anything that disrupts the soil, such as farming, construction, and wind. The fungi can then be breathed into the lungs and cause valley fever, also known as acute coccidioidomycosis. Historically, San Bernardino County has not been considered a highly endemic region for valley fever. However, annual recorded cases of coccidioidomycosis in San Bernardino County have been increasing. According to the California Department of Public Health (CDPH 2020), 101 cases have been recorded in 2020 as of May 31st. In comparison, the 2019 May report included 87 cases and the 2018 May report included 33 cases. Incorporating every reasonable precaution to control fugitive dust would lower the likelihood of potential exposure to the fungus causing valley fever. Concerns with Valley Fever would be adequately addressed through dust control requirements and measures addressed in the **Worker Safety and Fire Protection** section of this staff analysis.

EQUIPMENT EXHAUST

The demolition activities would include the operations of diesel-fueled construction equipment. Diesel engines are a major source of fine-particle pollution. California classifies diesel exhaust or diesel particulate matter (DPM) as a toxic air contaminant based on its potential to cause cancer. Risks are associated with the level and duration of exposure.

Prolonged exposure to DPM can increase risks of cardiovascular, cardiopulmonary and respiratory disease, and lung cancer. Short term exposures to high concentrations of DPM can result in headache, dizziness, and irritation of the eye, nose and throat. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Children are also more susceptible than healthy adults

to fine particles since their lungs and respiratory systems are still developing. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children.

Any diesel equipment used at the site would be required to meet State of California diesel requirements. As applicable, the diesel equipment used would need to be registered through the Statewide Portable Equipment Registration Program or Diesel Off-road On-line Reporting System and associated equipment permits would need to be retained onsite. In addition, the California Air Resources Board (CARB) developed an airborne toxic control measure to limit diesel fueled commercial motor vehicle idling.

The County of San Bernardino Development Code establishes general performance standards to mitigate environmental impacts from new and existing land uses. The County of San Bernardino Development Code includes measures for controlling diesel exhaust emissions. Measures include idling requirements for off-road diesel vehicle/equipment operations, the fuel requirements, engine and equipment maintenance requirements, signs requiring vehicles to turn off engines when parked, MDAQMD requirements, temporary traffic control, onsite electrical connections where feasible to reduce the use of diesel-powered tools and generators, and substituting electric and gasoline powered equipment for diesel equipment where feasible. In addition, the developer is responsible for certifying the construction equipment is properly serviced and maintained in good operating condition.

Staff is recommending Public Health Condition of Certification **D-PH-2**, requiring compliance with County of San Bernardino Development Code for controlling diesel exhaust emissions.

NUISANCE

Decommissioning and demolition activities could potentially result in nuisance from fugitive dust and odors from equipment and vehicle diesel exhaust. As discussed above, a dust control plan would be required for controlling fugitive generated from decommissioning. Concerns with nuisance would be adequately addressed through the recommended conditions of certification in the **Public Health** and **Air Quality** sections.

Odors

Decommissioning and demolition activities could result in odors from construction equipment and vehicle diesel exhaust. It is anticipated these odors would be temporary and intermittent and controlled through diesel requirements such as idling restrictions. The SEGS VIII Final Decommissioning Plan does not include any other activities that are expected to generate objectionable odors. Therefore, the decommissioning and demolition activities are not expected to generate odors that result in a public nuisance impacting a substantial population at any off-site location.

AMBIENT STANDARDS

The SEGS VIII Final Decommissioning Plan was evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant which the MDAB is in non-attainment. The expected emissions from decommissioning construction activities including fugitive dust and vehicle exhaust were calculated and compared to the MDAQMD's regional air quality significance thresholds. Individual projects that do not generate emissions that exceed the MDAQMD's recommended daily thresholds for project specific impacts are not expected to cause a significant impact.

Although the proposed decommissioning and demolition activities do not exceed Mojave Air Quality Management District thresholds, the Mojave Desert Air Basin (MDAB) is in non-attainment status for ozone and PM10. The proposed public health conditions of certification incorporate best management practices for decommissioning and demolition activities. These measures would reduce emissions of PM10 and ozone precursors. Therefore, the demolition and decommissioning activities are not expected to significantly impact the MDAB attainment status.

CONCLUSIONS AND RECOMMENDATIONS

Potential risks to public health during decommissioning and demolition would be associated with contact or exposure to hazardous waste, exposure to toxic substances in contaminated soil, as well as diesel exhaust from off-road equipment operation during demolition activities. Staff concludes that implementation of proposed Conditions of Certification, **D-PH-1** and **D-PH-2**, in addition to staff and project owner proposed conditions in the **Air Quality, Hazardous Materials Management, Worker Safety and Fire Protection**, and **Waste Management** sections of this staff analysis, would ensure that the decommissioning and demolition activities outlined in the SEGS VIII Final Decommissioning Plan would comply with applicable LORS and would not result in significant impacts to public health.

REFERENCES

CEC 1989 – California Energy Commission – SEGS VIII Harper Dry Lake Final Decision
March 29, 1989

CEC 1990 – California Energy Commission – SEGS IX-X Harper Dry Lake Final Decision
February 14, 1990

CEC 2020 – California Energy Commission – SEGS VIII and IX BESS Staff Analysis (TN
233096) May 22, 2020

CDPH 2020 – Center for Infectious Diseases Division of Communicable Disease Control
Infectious Diseases Branch Surveillance and Statistics Section –
Coccidioidomycosis in California Provisional Monthly Report January - May 2020

LSA 2020 – Luz Solar Partners, Ltd., VIII – SEGS VIII (88-AFC-01C) Final
Decommissioning Plan (TN 232903) May 4, 2020

SBC 2020 – County of San Bernardino Land Use Services Division–County of San
Bernardino County 2007 Development Code –Amended May 2, 2019

SOCIOECONOMICS

Ellen LeFevre

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) in relation to the technical area of **Socioeconomics**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on socioeconomics and comply with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is located in San Bernardino County near the unincorporated community of Hinkley and approximately 29 miles west of the city of Barstow. The setting for the labor supply for decommissioning and demolition activities would be the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) which covers Riverside and San Bernardino counties.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

There are no socioeconomic LORS applicable to the decommissioning and demolition activities.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

No adopted COCs pertaining to socioeconomics apply to the decommissioning and demolition activities at the SEGS VIII site.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

None.

ANALYSIS

The decommissioning of SEGS VIII would take approximately 6 to 8 months to complete. Demolition activities associated with decommissioning would require a peak workforce of approximately 60 workers. The large workforce in the Riverside-San Bernardino-Ontario MSA is sufficient for the activities associated with decommissioning of SEGS VIII. If some workers were to temporarily relocate closer to the project site, there is sufficient housing in the nearby city of Barstow. The decommissioning of SEGS VIII would have less than significant socioeconomic impacts.

CONCLUSIONS AND RECOMMENDATIONS

From a socioeconomic standpoint, the activities associated with the Final Decommissioning Plan would have less than significant workforce-related impacts on population, housing, and public services including fire and police protection, schools, parks, recreation and other public facilities.

REFERENCES

CA DOF 2020 – California Department of Finance (CA DOF). E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2020, with 2010 Benchmark, May 2020. Available online at:
<http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>

EDD 2019 – Employment Development Department, State of California (CA EDD). Labor Market Information Division, 2016-2026 Occupational Employment Projections, San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area, (San Benito and Santa Clara Counties), data last update May 28, 2019. Available online at:
<https://data.edd.ca.gov/Employment-Projections/Long-Term-Occupational-Employment-Projections/4yzm-uyfq>

SEGS VIII 2020 - Final Facility Decommissioning Plan, dated May 2020. (TN 232903). Available online at:
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

SOIL AND WATER RESOURCES

Abdel-Karim Abulaban

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) (88-AFC-01C) decommissioning and demolition, as described in the decommissioning plan (LSA 2020) in relation to the technical area of **Soil and Water Resources**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on soil and water resources and comply with applicable and current laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is an existing solar thermal electric generation facility located on flat alluvial fans of the Mojave Desert along the western edge of the dry lakebed of Harper Lake. Prior to construction of the project the land was used for agricultural production and later retired because of the high cost of pumping groundwater for irrigation (CEC 1989).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Staff has reviewed the LORS identified in the Decision for the SEGS VIII project and determined that they are still applicable.

Soil and Water Resources Table 1
Applicable Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description	Consistency Determination
Federal		
Clean Water Act (33 USC Section 1257 et seq.)	<p>The Clean Water Act (CWA) (33 USC § 1257 et seq.) requires states to set standards to protect water quality, which includes regulation of storm water and wastewater discharges during construction and operation of a facility. California established its regulations to comply with the CWA under the Porter-Cologne Water Quality Control Act of 1967.</p> <p>The CWA also establishes protection of navigable waters. Activities that result in the dredging or filling of jurisdictional waters of the United States require authorization under a Section 404 permit issued by the Army Corps of Engineers (USACE). The USACE may grant authorization under either an individual permit or a nationwide permit to address operations that may affect the ephemeral washes. Section 404 permits are also subject to CWA Section 401 water quality certification through the Regional Water Quality Control Board (RWQCB).</p> <p>Section 401 certification through the RWQCB is required if there are potential impacts to surface waters of the State and/or Waters of the United States, such as perennial and ephemeral drainages, streams, washes, ponds, pools, and wetlands. The RWQCB can require impacts to these waters to be quantified and mitigated.</p>	Consistent. Consistency ensured by compliance with Measures D-S&W-1 and D-S&W-2
State		
The Porter-Cologne Water Quality Control Act of 1967, Water Code Sec 13000 et seq	Requires the State Water Resources Control Board (SWRCB) and the nine RWQCBs to adopt water quality criteria to protect state waters. Those regulations require that the RWQCBs issue Waste Discharge Requirements specifying conditions for protection of water quality as applicable. Section 13000 also states that the State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters of the State from degradation.	Consistent. Consistency ensured by compliance with Measures D-S&W-1 and D-S&W-2
State Water Resources Control Board General Permit CAS000002.	The SWRCB regulates storm water discharges associated with construction projects affecting areas greater than or equal to 1 acre to	Consistent. Consistency ensured by compliance

Applicable LORS	Description	Consistency Determination
	protect state waters. Under General Permit CAS000002, the SWRCB has issued a National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharges associated with construction activity. Projects can qualify under this permit if specific criteria are met and an acceptable Storm Water Pollution Prevention Plan (SWPPP) is prepared and implemented after notifying the SWRCB with a Notice of Intent.	with Measures D-S&W-1 and D-S&W-2
California Water Code Section 13240, 13241, 13242, 13243, & Water Quality Control Plan for the Lahontan Region (Basin Plan)	The Basin Plan establishes water quality objectives that protect the beneficial uses of surface water and groundwater in the Region. The Basin Plan describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies and provides comprehensive water quality planning. The following chapters are applicable to determining appropriate control measures and cleanup levels to protect beneficial uses and to meet the water quality objectives: Chapter 2, Present and Potential Beneficial Uses; Chapter 3, Water Quality Objectives, and the sections of Chapter 4, Implementation, entitled "Requirements for Site Investigation and Remediation," "Cleanup Levels," "Risk Assessment," "Stormwater Problems and Control Measures," "Erosion and Sedimentation," "Solid and Liquid Waste Disposal to Land," and "Groundwater Protection and Management."	Consistent. Consistency ensured by compliance with Measure D-S&W-4
Local		
County of San Bernardino General Plan and Development Code	Grading in San Bernardino County is subject to terms and conditions of San Bernardino County's General Plan, Development Code and California Building Code, based upon the 2006 International Building Code. If a county grading permit is required, the grading plan would need to be completed in compliance with San Bernardino County's General Plan and Development Code.	Consistent. Consistency ensured by compliance with Measure D-S&W-3
San Bernardino County Development Code Section 82.13.080, Soil Erosion and Sediment Control Plans/Permits	Section 82.13.080 establishes regulations and procedures to control human existing and potential induced accelerated erosion. Elements of this ordinance include project planning, preparation of Soil Erosion and Sediment Control Plans, runoff control, land clearing, and winter operations.	Consistent. Consistency ensured by compliance with Measures D-S&W-1 through D-S&W-3 .

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Decommissioning activities would take place within the existing project footprint. The existing COCs would not apply to the decommissioning and demolition activities. The decommissioning and demolition activities would not violate, or require action related to, the conditions of certification contained in the **Soil and Water Resources** section of the Decision for SEGS VIII.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

In addition to the existing conditions of certification, the project owner is proposing the following three additional decommissioning conditions, **D-S&W-1** through **D-S&W-3**, to ensure that impacts of the decommissioning activities on soil and water resources would be less than significant.

D-S&W-1: Prior to beginning site mobilization for decommissioning, the Project Owner shall submit a Notice of Intent 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.

Numerous facilities would be left in place. However, if they would not be used for the PV and BESS projects (for example the on-site water wells and natural gas supply line), or if these projects are not built, then the facilities would need to be removed or properly abandoned. Since a portion of the gas supply line would still be needed for SEGS IX operation, and since SEGS IX is expected to be decommissioned at an undetermined future date, the natural gas supply line would need to be properly abandoned at that time as part of the decommissioning of SEGS IX.

In order to ensure the proper abandonment of any underground utility lines and piping that would not be needed for SEGS IX or used for the future PV and BESS projects, staff proposes decommissioning condition **D-S&W-4**.

D-S&W-4: Any underground utility lines and piping that will be abandoned in place shall be cut, grouted, and capped at or below the ground surface. A map of all buried utility lines and piping that are proposed to be abandoned in place shall be prepared and submitted before decommissioning and closure are finalized.

Verification: Before decommissioning and closure are finalized, the project owner shall prepare a map showing any and all buried utility lines and piping and submit it to the compliance project manager for approval.

The conditions proposed by the project owner, **D-S&W-1** through **D-S&W-3**, and the staff proposed condition, **D-S&W-4**, are adequate to ensure that there would be no unmitigated significant impacts on soil and water resources. The decommissioning and closure activities would not violate, or require action related to, the conditions of certification contained in the Soil and Water Resources section of the decision for this project.

ANALYSIS

Based on the draft final decommissioning plan provided by the owner disturbance of soil at the site would be limited to areas immediately surrounding elements of the facility that will be removed, such as support structures and connections to buried utilities.

Since the project is located within a topographically closed drainage basin and does not drain to waters of the United States, the project owner would not need to apply for coverage under the State Water Resources Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2012-0006-DWQ). However, the project owner is voluntarily proposing to apply for coverage under the Construction General Permit and prepare the required SWPPP containing BMPs to ensure that impacts to water quality from decommissioning and closure activities would be less than significant.

The project was also built on low risk soils in terms of erosion, and discharges to a waterbody classified as non-sensitive for sedimentation, Harper Lake. The proposed activity is therefore a low threat to local water quality.

SEGS VIII does not have a COC that limits water usage. SEGS IX is limited to 950 acre-feet per year (AFY) during operation by Water Supply COC, **Requirement 4** in the license for that facility. The two SEGS solar thermal power plants averaged 954 AFY between 2010 and 2013, but only 615 AFY for 2017. The combined projects therefore appear to be using less water than was originally anticipated. Decommissioning and closure activities would require substantially less water than the project has been using for operation. The water, pumped from groundwater wells onsite, would be used primarily

for dust control. The water usage for decommissioning and closure activities would not be expected to create an adverse impact.

After considering all the activities involved in the decommissioning and closure plan, the project would not result in any additional environmental impacts in terms of soil and water resources in comparison with the original analysis for the final decision and certification of the project. The project would also continue to comply with applicable LORS.

In order to avoid negative impacts to the quality of groundwater and soil at the site, it would be necessary to ensure that no pathways for preferential movement of contaminants are created because of decommissioning this project. Therefore, it is necessary to ensure that any subsurface excavations created as part of this project decommissioning, such as wells, septic systems, and buried utility lines, be decommissioned in such a fashion as to preclude the possibility that surface, or subsurface, contamination would be able to migrate along high permeability pathways, such as an abandoned well casing or buried conduit. To ensure this does not occur, staff has proposed additional language, as described above in **D-S&W-4**, for approval by the CEC along with the three project owner-proposed conditions. If approved, adherence to the final decommissioning plan as supplemented by **D-S&W-4** would ensure impacts would be less than significant.

The two projects, SEGS VIII and IX, have been using an onsite water treatment system (OWTS) consisting of three evaporation ponds for treatment and disposal of operational wastewater generated by the two projects. The existing OWTS would continue to be utilized for the operation of SEGS IX and would be closed once both SEGS VIII and IX are decommissioned in accordance with Lahontan RWQCB regulations. A SEGS VIII & IX Evaporation Ponds Closure Plan, prepared and submitted to Lahontan RWQCB on May 29, 1992, would be updated as needed per the regional water board's most current standards. The closure plan currently assumes that all solid waste (e.g., salts, sands, HDPE liners, polyvinyl chloride leak detection drains, Geonet Geotextile) from two of the ponds would be moved to the third pond. The two ponds that have been emptied would then be "clean" closed. The third pond would be sealed/capped as a landfill (LSA 2019).

If the project owner complies with the existing as well as the owner-proposed COCs, as well as the staff-proposed COC, and properly performs underground conduit abandonment as discussed above, impacts to soil and water resources would be less than significant. The proposed decommissioning of the project would not result in any necessary changes or deletions to the existing COCs related to soil and water resources.

CONCLUSIONS AND RECOMMENDATIONS

With the CEC's approval of the Final Decommissioning Plan and the adoption of the three conditions of decommissioning proposed by the project owner, **D-S&W-1** through **D-S&W-3**, and staff's proposed condition **D-S&W-4**, staff concludes that the proposed decommissioning of the facility would not result in significant environmental impacts in terms of soil and water resources.

REFERENCES

CEC 1989 - California Energy Commission final decision on the application for certification of SEGS VIII Harper Dry Lake, 29 March 1989, Docket No. 88-AFC-01.

LSA 2019 - Draft Facility Decommissioning Plan, Solar Energy Generating Systems (SEGS) IX, 89-AFC-01C, San Bernardino County, California. TN: 231367. Accessed at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=89-AFC-01C>. Accessed on June 25, 2020. Accessed June 29, 2020.

LSA 2020 - Final Facility Decommissioning Plan Solar Energy Generating System (SEGS) VIII (88-AFC-01C), San Bernardino County, California. Docket Number 88-AFC-01C, TN: 232903. May 2020.

TRANSPORTATION

Ellen LeFevre

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) in relation to the technical area of **Transportation**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on transportation and comply with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is located in San Bernardino County approximately 7 miles northeast of the intersection of Harper Lake Road and Highway 58. Primary access to the site would be from Harper Lake Road and Highway 58. Regional access includes Highway 395 and State Route 14. There is a railroad track located south of the project which runs east-west. A private airport is located approximately 14 miles southeast near Helendale and the Barstow Daggett County Airport is located approximately 33 miles southeast.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The following are transportation related LORS that are applicable to the proposed decommissioning and demolition activities.

Applicable LORS	Description
Federal	
Code of Federal Regulations, Title 49, Subtitle B, Sections 171-177 and 350-399	Requires proper handling and storage of hazardous materials during transportation.
State	
California Vehicle Code Division 2, 6, 12, 13, 14, 15	Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways, safe operation of vehicles, and the transportation of hazardous materials.
Local	
San Bernardino County Congestion Management Program	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.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

The following are SEGS VIII Transportation COCs as amended in the Final Commission Decision (Decision) that would apply during decommissioning and demolition:

- 1** Luz shall comply with the San Bernardino County and Caltrans restrictions on oversized 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 given 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.

- 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.

- 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 shall 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.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The following COCs are proposed by the project owner to be implemented during decommissioning and demolition to further 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).

ANALYSIS

LORS Conformance

Applicable LORS	Consistency Determination	Basis of Consistency
Code of Federal Regulations		
Title 49, Subtitle B, Sections 171-177 and 350-399: Requires proper handling and storage of hazardous materials during transportation.	Consistent. Consistency ensured with implementation of COC Requirement 13 and D-TRAFFIC-2 .	COC, Requirement 13 and D-TRAFFIC-2 require licensed haulers and approved vehicles for transport of hazardous, toxic, and flammable materials.
California Vehicle Code		
California Vehicle Code Division 2, 6, 12, 13, 14, 15: Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways, safe operation of	Consistent. Consistency ensured with implementation of COC Requirement 13 and D-TRAFFIC-2 .	COC Requirement 13 and D-TRAFFIC-2 require the project owner to comply with oversize and overweight vehicle regulations, and obtain necessary transportation permits. Hazardous, toxic, and

Applicable LORS	Consistency Determination	Basis of Consistency
vehicles, and the transportation of hazardous materials.		flammable materials shall be transported in compliance with Department of Transportation, state agency, and local agency requirements.
San Bernardino County Congestion Management Program		
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.	Consistent. Consistency ensured with implementation of D-TRAFFIC-1 .	D-TRAFFIC-1 requires the project owner to provide a CMP.

Environmental Impacts

The proposed activities would generate a maximum of 21 daily truck trips during the 6 to 8-month decommissioning and demolition period. The Transportation COCs, **Requirements 1** through **3, 7, 13, and 14** in the Final Decision are applicable to decommissioning and demolition. COC, **Requirements 4** through **6** and **8** through **12** are not applicable to the decommissioning and demolition. The project owner has proposed **D-TRAFFIC-1** and **D-TRAFFIC-2** to be implemented during decommissioning and demolition. **D-TRAFFIC-1** would require a CMP to ensure compliance with the San Bernardino County Congestion Management Program's objectives and policies. **D-TRAFFIC-2** would require the use of licensed haulers and approved vehicles to ensure compliance with all applicable regulations for the transport of hazardous, toxic, and flammable materials.

With implementation of the above COCs and the project owner's proposed conditions, the decommissioning and demolition of SEGS VIII would comply with applicable transportation LORS and have less than significant transportation impacts.

CONCLUSIONS AND RECOMMENDATIONS

The SEGS VIII decommissioning and demolition activities would generate a negligible amount of temporary vehicle trips, which would not conflict with CEQA Guidelines section 15064.3, subdivision (b), with regards to vehicle miles traveled. Additionally, with the implementation of COC, **Requirements 1** through **3, 7, 13, and 14** in the Final Decision and the adoption of **D-TRAFFIC-1** and **D-TRAFFIC-2** as proposed in the Final Decommissioning Plan, the proposed activities would not conflict with LORS addressing the circulation system, substantially increase hazards, or result in inadequate emergency access. Therefore, the decommissioning and demolition of SEGS VIII would result in less than significant impacts to transportation.

REFERENCES

SANBAG 2016 –San Bernardino Associated Governments (SANBAG). San Bernardino County Congestion Management Program, 2016 Update, dated June 2016.

Available online at: <https://www.gosbcta.com/wp-content/uploads/2019/10/2016-Congestion-Management-Plan-.pdf>

SEGS VIII 2020 – Final Facility Decommissioning Plan, dated May 2020. (TN 232903).

Available online at:

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

SEGS VIII 1989 – Final Decision (88-AFC-01C), dated March 1989. Available online at:

https://ww2.energy.ca.gov/sitingcases/pre1999_page/index.php?xkm=ajdkha2385duhkasd164dsasjd5598fhajkhs

TRANSMISSION LINE SAFETY AND NUISANCE

Nancy Fletcher

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition in relation to the technical area of **Transmission Line Safety and Nuisance**. The purpose of this analysis is to determine whether decommissioning and demolition of the project, as laid out in the Plan (TN 232903), would avoid significant transmission line safety and nuisance impacts and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is an 80-megawatt solar thermal power plant located on a 500-acre site near Hinkley, California. SEGS VIII is adjacent to Solar Energy Generating Systems Unit IX (SEGS IX). SEGS VIII and SEGS IX share supporting equipment and a recently approved battery energy storage system (BESS) common to both projects.

SEGS VIII includes a 220-kilovolt (kV) generator tie-line, power block substation, and on-site switchyard. An overhead transmission line connects the power block substation to the on-site switchyard. In addition, a new transmission line that will connect the BESS transformer to the on-site switchyard was approved but has not yet been constructed.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

The laws, ordinances, regulations, and standards (LORS) and practices listed in **Transmission Line Safety and Nuisance Table 1** apply to aviation safety, interference with radio frequency communication, audible noise, fire hazards, hazardous and nuisance shocks, and electric and magnetic fields. Staff reviewed the SEGS VIII decommissioning plan to determine compliance with the listed LORS. The LORS conformance determination is included in the "Analysis" subsection.

Transmission Line Safety and Nuisance Table 1
Laws, Ordinances, Regulations, and Standards

Applicable LORS	Description	Consistency
Aviation Safety		
Federal		
Title 14 Code of Federal Regulations Part 77 (Safe, Efficient Use and Preservation of the Navigable Airspace)	Describes the criteria used to determine the need for a Federal Aviation Administration (FAA) "Notice of Proposed Construction or Alteration" in cases of potential obstruction hazards.	Staff does not expect decommissioning and demolition activities to create an obstruction hazard.

FAA Advisory Circular 70/7460-1L (Obstruction Marking and Lighting)	Describes the FAA standards for marking and lighting objects deemed an air navigation hazard	Staff does not expect decommissioning and demolition activities to pose an air navigation hazard.
Communication Interference		
Federal		
Title 47 Code of Federal Regulations, part 15 (Radio Frequency Devices)	Regulates operation of devices that can interfere with communications.	Staff does not expect decommissioning and demolition activities to interfere with communications. T.
Federal Communications Commission (FCC) Communications Act of 1934 as amended by the Telecom Act of 1996	Creates the Federal Communication Commission tasked with regulating communications by radio, television, wire and satellite. The FCC regulations prohibit operations of radio frequency devices to cause interference with licensed services.	Staff does not expect decommissioning and demolition activities to interfere with communications.
State		
California Public Utilities Commission (CPUC) General Order 52 (GO-52)	Governs the construction and operation of power and communications lines to prevent or mitigate interference.	Staff does not expect decommissioning and demolition activities to interfere with communications.
Audible Noise		
State		
Governor's Office of Planning and Research State General Plan Guidelines	Includes recommendations for noise level standards to prevent the creation of incompatible land uses due to noise.	Significant audible noise is not expected from the decommissioning and demolition activities associated with the transmission line.
Local		
County of San Bernardino Noise Ordinance	Establishes standards for both noise-sensitive land use and noise-generating land uses.	Significant audible noise is not expected from the decommissioning and demolition activities associated with the transmission line.
Fire Hazards		
State		
Title 14, California Code of Regulations, sections 1250-1258 (Fire Prevention Standards for Electric Utilities)	Provides specific exemptions from electric pole and tower firebreak-clearance standards, electric conductor clearance standards, and specifies when and where standards apply. Incorporates provisions of Public Resources Code sections 4292-4296.	The decommissioning and demolition activities are not expected to create a fire hazard. The project owner would still need to adhere to applicable clearance standards for project lines/equipment remaining active.
CPUC GO-95 (Rules for Overhead Electric Line Construction)	Includes regulations to protect the public from potential fire hazards associated with power line facilities. Compliance is expected.	The decommissioning and demolition activities are not expected to create a fire hazard. The project owner would still need to adhere to applicable standards for project

		lines/equipment remaining active.
CPUC GO-165 (Inspection requirements for Electric Distribution and Transmission Facilities)	Establishes inspection cycles for electric distribution and transmission facilities (excluding facilities contained in a substation). Establishes inspection systems for transformers, switching/protective devices, regulators/capacitors and other specified equipment.	The decommissioning and demolition activities are not expected to create a fire hazard. The project owner would still need to adhere to applicable inspection and maintenance standards for project lines/equipment remaining active.
CPUC GO-166 (Standards for Operation, Reliability and safety During Emergencies and Disasters)	Establishes standards for electric utilities to ensure the utilities are prepared for emergencies and disasters. The measures include a Fire Prevention Plan (FPP) for facilities located in areas designated in the highest two tiers on the CPUC fire-threat map.	The SEGS VIII facility is not located in an area currently designated in the specified tiers requiring an FPP.
Hazardous and Nuisance Shocks		
State		
CPUC GO-95 (Rules for Overhead Electric Line Construction)	Governs clearance requirements to prevent hazardous shocks, grounding techniques to minimize nuisance shocks, and maintenance and inspection requirements.	The decommissioning and demolition activities are not expected to create hazardous or nuisance shocks. The project owner would still need to adhere to applicable safety standards for project lines/equipment remaining active.
Title 8, California Code of Regulations, section 2700 and the following (High Voltage Safety Orders)	Specifies requirements and minimum standards for safely installing, operating, working around, and maintaining electrical installations and equipment.	The decommissioning and demolition activities are not expected to create hazardous or nuisance shocks. The project owner would still need to adhere to applicable safety standards for project lines/equipment remaining active.
National Electrical Safety Code (NESC)	Specifies grounding procedures to limit nuisance shocks and specifies minimum conductor ground clearances.	The decommissioning and demolition activities are not expected to create hazardous or nuisance shocks. The project owner would still need to adhere to applicable safety standards for project lines/equipment remaining active.
Industry Standards		
Institute of Electrical and Electronics Engineers (IEEE) 1119 (IEEE Guide for Fence Safety Clearances in Electric-Supply Stations)	Specifies guidelines for grounding-related practices within the right-of-way and substations.	The decommissioning and demolition activities are not expected to create hazardous or nuisance shocks. The project owner would still need to adhere to applicable safety standards for

		project lines/equipment remaining active.
Electric and Magnetic Fields (EMF)		
State		
CPUC GO-131D (Rules Relating to the Planning and Construction of Electric Generation, Transmission/Power/Distribution Line Facilities and Substations Located in California)	Specifies application and noticing requirements for new line construction including EMF reduction.	There are no new transmission lines proposed as part of the decommissioning and demolition activities.
CPUC Decision 93-11-013	Specifies CPUC requirements for reducing power frequency electric and magnetic fields.	Decommissioning and demolition activities are not expected to produce EMF.
CPUC Decision 06-01-042	Re-affirms CPUC EMF Policy in 93-11-013. Staff does not expect significant EMF exposure from the continued operation of the generator tie-line.	Decommissioning and demolition activities are not expected to produce EMF.
Industry Standards		
Institute of Electrical and Electronics Engineers (IEEE) 644-1944 Standard Procedures for Measurement of Power Frequency Electric and Magnetic Fields from AC Power Lines	Specifies standard procedures for measuring electric and magnetic fields from an operating electric line. Staff does not expect significant EMF exposure from the continued operation of the generator tie-line.	Decommissioning and demolition activities are not expected to produce EMF.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

None of the Transmission Line Safety and Nuisance Conditions of Certification in the Final Commission Decision (or subsequent amendments) would apply directly to the demolition and decommissioning activities to mitigate safety and nuisance effects or ensure LORS compliance.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner and staff are not proposing any additional conditions for Transmission Line Safety and Nuisance.

ANALYSIS

Luz Solar Partners VIII, Ltd., (project owner) is proposing to decommission SEGS VIII to make way for a photovoltaic (PV) solar facility (not under CEC jurisdiction). The project owner plans to continue with the construction and operation of the approved BESS including the new BESS transmission line. The project owner is proposing to terminate SEGS VIII current solar thermal power generation activities and enter safe layup. The

existing generator tie-line and switchyard would remain in place and be used for the continued operation of SEGS IX and future PV solar and BESS facility. During decommissioning and demolition, the project site would continue to utilize the chain-link security fencing around the site with electronic gate access. During safe layup, the SEGS VIII generator tie-line conductors would be disconnected between the switchyard and generator substation. The transmission poles and conductors would either re-used or removed. The generator substation would either remain in place if it could be upgraded or removed. Any future use of these would be conditioned by the project owner for the new use.

CONCLUSIONS AND RECOMMENDATIONS

Staff concludes the decommissioning activities outlined in the SEGS VIII Final Decommissioning Plan would not result in significant transmission line safety and nuisance impacts. Any onsite worker safety considerations associated with the transmission line decommissioning and demolition activity would be addressed through **Worker Safety and Fire Protection** requirements.

REFERENCES

CEC 1989 – California Energy Commission – SEGS VIII Harper Dry Lake Final Decision
March 29, 1989

CEC 1990 – California Energy Commission – SEGS IX-X Harper Dry Lake Final Decision
February 14, 1990

CEC 2020 – California Energy Commission – SEGS VIII and IX BESS Staff Analysis (TN 233096) May 22, 2020

LSA 2020 – Luz Solar Partners VIII, Ltd., – SEGS VIII (88-AFC-01C) Final
Decommissioning Plan (TN 232903) May 4, 2020

TRANSMISSION SYSTEM ENGINEERING

Laiping Ng and Mark Hesters

The decommissioning and demolition activities would not involve the generator tie-line. The existing 13.5-mile 220 kV generator tie-line would remain in place and would be utilized for the future PV, battery energy storage system, and the continued operation of SEGS IX. Therefore, decommissioning would not affect the technical area of **Transmission System Engineering**.

VISUAL RESOURCES

Mark Hamblin

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) in relation to the technical area of **Visual Resources**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant impacts on visual resources and comply with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

The proposed decommissioning and demolition would occur at an existing operating solar thermal power facility (SEGS VIII) on relatively flat land in a rural largely undeveloped desert area along the west side of Harper Lake (dry lake), north-north west of the unincorporated community of Hinkley, San Bernardino County, California.

The Black Mountain Wilderness and Tiefert Mountains are to the northeast. The Antelope Valley, unincorporated community of Boron, and Edwards Air Force Base are to the west. U.S. Route 395, a major north-south federal highway, is to the west. California Route 58, a major east-west state highway is south.

The project owner intends to decommission and remove SEGS VIII and replace it with a new photovoltaic solar facility. Refer to the project description for details regarding the project.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Staff reviewed the *County of San Bernardino 2007 General Plan*, and San Bernardino County 2007 Development Code, Chapter 82.04 Residential Land Use Zoning District for some references to scenic quality specific to decommissioning and demolition activities as analyzed below.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

No adopted COCs pertaining to visual resources apply to the decommissioning and demolition activities at the SEGS VIII site.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

None.

ANALYSIS

The *County of San Bernardino 2007 General Plan*, Land Use Map shows the project site in a Rural Living Land Use Zoning District. Review of San Bernardino County 2007 Development Code, Chapter 82.04 Residential Land Use Zoning District, shows no conflict.

Review of aerial and street imagery shows the project site is not located within a scenic vista as defined by the Commission, and the decommissioning and demolition activities would not substantially damage scenic resources or degrade the visual character or quality of public views of the site and its surroundings.

Demolition activities would occur during daylight hours. Existing facility lighting and temporary lighting would be used to maintain site security at night. Outdoor lighting would be directed away from surrounding properties and the public right of way. Light fixtures would be hooded/shielded.

The demolition of SEGS VIII would remove parabolic troughs and their reflectivity, a power block with a cooling tower and its emitted publicly visible water vapor plumes.

Staff concludes decommissioning and demolition activities would not conflict with LORS and would have a less than significant impacts on visual resources.

CONCLUSIONS AND RECOMMENDATIONS

Decommissioning and demolition of the project would comply with LORS and would not substantially damage or degrade a scenic vista, scenic resources, or the existing visual character or quality of public views of the project site and its surroundings.

REFERENCES

- County of San Bernardino 2007a – *County of San Bernardino 2007 General Plan*.
Section II – Land Use. Pages II-8 and II-9. Prepared by URS Corporation. Santa Ana, CA. Adopted March 13, 2007; Effective April 12, 2007; Amended April 24, 2014. Available online at:
<http://cms.sbcounty.gov/lus/Planning/GeneralPlan.aspx>
- County of San Bernardino 2007b – 2007 Development Code, Chapter 82.04 Residential Land Use Zoning District. Available online at:
<https://cms.sbcounty.gov/lus/Planning/DevelopmentCode.aspx>
- SEGS VIII 2020 – Final Facility Decommissioning Plan, dated May 2020. (TN 232903). Available online at:
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

WASTE MANAGEMENT

Mike Conway

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) (88-AFC-01C) decommissioning and demolition, as described in the decommissioning plan (LSA 2020) in relation to the technical area of **Waste Management**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant waste management impacts and would comply with applicable laws, ordinances, regulations, and standards (LORS).

EXISTING SETTING

SEGS VIII is an existing solar thermal electric facility located on typically flat alluvial fans of the Mojave Desert along the western edge of the dry lakebed of Harper Lake. Prior to construction of the project, the land was used for agricultural production and it was taken out of production because of the high cost of pumping groundwater for irrigation (CEC 1989).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Applicable LORS	Description	Consistency Determination
Federal		
Title 42, United States Code (U.S.C.), §6901, et seq. Solid Waste Disposal Act of 1965 (as amended and revised by the Resource Conservation and Recovery Act of 1976, et al.)	The Solid Waste Disposal Act, as amended and revised by the Resource Conservation and Recovery Act (RCRA) et al., establishes requirements for the management of solid wastes (including hazardous wastes), landfills, underground storage tanks, and certain medical wastes. The statute also addresses program administration, implementation and delegation to states, enforcement provisions, and responsibilities, as well as research, training, and grant funding provisions.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8 .

Applicable LORS	Description	Consistency Determination
Title 42, U.S.C., §9601, et seq. Comprehensive Environmental Response, Compensation and Liability Act	The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as <i>Superfund</i> , establishes authority and funding mechanisms for cleanup of uncontrolled or abandoned hazardous waste sites, as well as cleanup of accidents, spills, or emergency releases of pollutants and contaminants into the environment.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
Federal Clean Water Act, 33 U.S.C. §1251 et seq.	The Clean Water Act controls discharge of wastewater to the surface waters of the U.S.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
State		
California Health and Safety Code (Health and Safety Code), Chapter 6.5, §25100, et seq. Hazardous Waste Control Act of 1972, as amended	This California law creates the framework under which hazardous wastes must be managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA program. It also provides for the designation of California-only hazardous wastes and development of standards (regulations) that are equal to or, in some cases, more stringent than federal requirements.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
Title 14, California Code of Regulations (CCR), Division 7, 17200, et seq.	These regulations further implement the provisions of the California Integrated Waste Management Act and set forth minimum standards for solid waste handling and disposal. The regulations include standards for solid waste management, as well as enforcement and program administration provisions.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
Title 22, (CCR), Division 4.5. Environmental Health Standards for the Management of Hazardous Waste	These regulations establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the California Hazardous Waste Control Act and federal RCRA. The Title 22 regulations are established and enforced at the state level by DTSC. Some generator and waste treatment standards are also enforced at the local level by Certified Unified Program Agencies (CUPAs).	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.

Applicable LORS	Description	Consistency Determination
Title 22, CCR, Section §66260.20(f), Chapter 10, Article 3, Classification of a Waste as Hazardous or Nonhazardous.	If a person wishes to classify and manage as nonhazardous a waste which would otherwise be a non-RCRA hazardous waste because it has mitigating physical or chemical characteristics which render it insignificant as a hazard to human health and safety, livestock and wildlife, that person shall apply to the Department of Toxic Substances Control (DTSC) for its approval to classify and manage the waste as nonhazardous.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
California Health and Safety Code (HSC) § 25100 <i>et seq.</i> (Hazardous Waste Control Act of 1972, as amended)	Creates the framework under which hazardous wastes must be managed in California. It mandates the DTSC under the California Environmental Protection Agency (CalEPA), to develop and publish a list of hazardous and extremely hazardous wastes and to develop and adopt criteria and guidelines for the identification of such wastes. It also requires hazardous waste generators to file notification statements with Cal EPA and create a manifest system to be used when transporting such wastes.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
California Health and Safety Code (HSC) § 25270-25270.13	25270. This chapter shall be known and may be cited as the Aboveground Petroleum Storage Act. 25270.2. For purposes of this chapter, the following definitions apply: (a) "Aboveground storage tank" or "storage tank" means a tank that has the capacity to store 55 gallons or more of petroleum and that is substantially or totally above the surface of the ground.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.
Title 27, CCR, §15100 <i>et seq.</i> (Unified Hazardous Waste and Hazardous Materials Management Regulatory Program)	Consolidates, coordinates, and makes consistent portions of the following six existing programs: <ul style="list-style-type: none"> • Hazardous Waste Generators and Hazardous Waste Onsite Treatment; • Underground Storage Tanks; • Hazardous Material Release Response Plans and Inventories; • California Accidental Release Prevention Program; 	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.

Applicable LORS	Description	Consistency Determination
	<ul style="list-style-type: none"> • Aboveground Storage Tanks (spill control and countermeasure plan only); • Uniform Fire Code Hazardous Material Management Plans and Inventories; <p>The statute requires all counties to apply to the CalEPA Secretary for the certification of a local unified program agency.</p>	
Local		
San Bernardino County Ordinance, Title 3 Health and Safety:	These regulations govern the use, generation, storage, and disposal of hazardous materials and wastes with San Bernardino County Fire Department serves as the local CUPA authorized to implement the provisions of the California Unified Program elements. San Bernardino County Public Works Department, Solid Waste Division, has developed a solid waste program to oversee the handling, processing, and disposal of non-hazardous solid waste to safeguard public health.	Consistent. Consistency ensured by Waste COC, Requirements 1, 6, and 8.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Decommissioning activities would take place within the existing project footprint. The existing COCs in the Decision are adequate to ensure there would be no unmitigated significant impacts to waste management, or unmitigated impacts to public health and safety due to waste management. The proposed decommissioning of the project would not result in any necessary changes or deletions to the COCs for Waste Management.

The applicable COCs are listed below.

Requirement 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.

Requirement 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.

Requirement 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.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

None.

ANALYSIS

Based on final decommissioning plan provided by the owner, 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 (LSA 2020).

Decommissioning would entail breakdown and removal of structures and facilities. Materials from these activities such as concrete, glass, and metal 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. Other wastes, including heat transfer fluid (HTF), lubricating oils, fuels, water treatment chemicals, universal waste, and possible lead- and asbestos-containing materials would be managed for proper containerization, profiling, and shipment off site for disposal or recycling (LSA 2020).

An exception to the above practices would be the decommissioning of the septic system. This would be completed in accordance with the applicable LORS identified above. Any material from the septic system that needs to be disposed of off-site would be handled in the same fashion as similar classified waste from site decommissioning.

Adherence to the applicable waste management COCs for the project during decommissioning activities and up until an order terminating CEC jurisdiction over the project is obtained by the project owner, along with compliance with the LORS applicable to waste management identified in this analysis, would ensure that impacts would be less than significant.

CONCLUSIONS AND RECOMMENDATIONS

Based on the information provided by the project owner, staff concludes the proposed decommissioning of the facility would not result in significant waste management impacts. The proposed decommissioning would not require any change to the COCs related to waste management adopted by the Energy Commission in its Final Decision for SEGS VIII (CEC 1989).

REFERENCES

CEC 1989 – California Energy Commission final decision on the application for certification of SEGS VIII Harper Dry Lake, 29 March 1989, Docket No. 88-AFC-01

LSA 2020 – Final Facility Decommissioning Plan Solar Energy Generating System (SEGS) VIII (88-AFC-01C), San Bernardino County, California. Docket Number 88-AFC-01C, TN: 232903.

WORKER SAFETY AND FIRE PROTECTION

Ryan Casebeer and Brett Fooks

INTRODUCTION

In this section, CEC staff discusses the Solar Energy Generating Systems Unit VIII (SEGS VIII) decommissioning and demolition, as described in the Plan (TN 232903) in relation to the technical area of **Worker Safety and Fire Protection**. The purpose of this analysis is to determine whether decommissioning and demolition of the project would avoid significant worker safety and fire protection impacts and would be in compliance with applicable laws, ordinances, regulations, and standards (LORS).

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Worker Safety and Fire Protection Table 1 outlines the federal and state laws and policies that apply to worker safety and fire protection for the SEGS VIII Decommissioning.

Worker Safety and Fire Protection Table 1
LORS Applicable to Worker Safety and Fire Protection

Applicable LORS	Description	Consistency Determination
Federal		
Title 29 U.S. Code (USC) section 651 et seq (Occupational Safety and Health Act of 1970)	This act mandates safety requirements in the workplace with the purpose of "[assuring] so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources" (29 USC § 651).	Decommissioning and demolition activities would comply with these requirements.
Title 29 Code of Federal Regulation (CFR) sections 1910.1 to 1910.1500 (Occupational Safety and Health Administration Safety and Health Regulations)	These sections define the procedures for promulgating regulations and conducting inspections to implement and enforce safety and health procedures to protect workers, particularly in the industrial sector.	Decommissioning and demolition activities would comply with these requirements.
State		
Title 8, California Code of Regulations (Cal Code Regs.) all applicable sections (Cal/OSHA regulations)	These sections require that all employers follow these regulations as they pertain to the work involved. This includes regulations pertaining to safety matters during construction, commissioning, and operations of power plants, as well as safety around electrical components, fire safety, and hazardous materials use, storage, and handling.	Decommissioning and demolition activities would comply with these requirements.

Applicable LORS	Description	Consistency Determination
Title 24 California Building Code, section 3(California Code of Regulations)	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.	Decommissioning and demolition activities would comply with these requirements.
California Fire Code, Part 9 of Title 24 of the California Code of Regulations	The Fire Code contains general provisions for fire safety.	Decommissioning and demolition activities would comply with these requirements.

APPLICABLE CONDITIONS OF CERTIFICATION IN DECISION

Staff has reviewed the existing conditions of certification in the Decision for the project and there are none that would apply during decommissioning and demolition.

ADDITIONAL PROPOSED CONDITIONS OF CERTIFICATION

The project owner proposed the following COCs during decommissioning and demolition to ensure that activities conform with applicable LORS. Staff proposes a verification step for each of them, as shown in **bold/underline**.

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.

Verification: At least thirty (30) days prior to the start of demolition, the project owner shall submit to the CPM for review and approval a copy of the project Demolition Health and Safety Program, the Demolition Emergency Action Plan, the Demolition Fire Prevention Plan, and the Demolition Explosives Plan to the SBCFD for review and comment. The project owner shall provide a letter with SBCFD's comments on the Demolition Health and Safety Program, Demolition Emergency Action Plan, the Demolition Fire Prevention Plan, and the Demolition Explosives Plan to the CPM.

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.

Verification: In the monthly compliance report to the CPM, the project owner shall provide copies of the training class sign-in sheets indicating the employees who were provided safety training during the month.

ANALYSIS

WORKER SAFETY

Industrial environments are potentially dangerous during the demolition of facilities. Workers involved in the proposed demolition of SEGS VIII would be exposed to loud noises, moving equipment, trenches, and confined space ingress and egress problems. The workers may experience falls, trips, burns, lacerations, and numerous other injuries. They have the potential to be exposed to falling equipment, materials or structures, chemical spills, hazardous waste, fires, explosions, and electrical sparks and electrocution.

DEMOLITION SAFETY AND HEALTH PROGRAM

Construction workers at SEGS VIII would be exposed to hazards typical of demolition of a power plant. During demolition one set of worker safety policies and procedures would be followed.

Construction Safety Orders (applicable to demolition) are published in Title 8 California Code of Regulations sections 1502, et seq. These requirements are promulgated by Cal/OSHA and would be applicable to the demolition phase of the project. The Demolition Safety and Health Program would include the following:

- Demolition Injury and Illness Prevention Program (8 Cal Code Regs. §1509)
- Demolition Fire Prevention Plan (8 Cal Code Regs. §1920)
- Demolition General Requirements (8 Cal Code Regs. §1920)
- Personal Protective Equipment Program (8 Cal Code Regs. §§1514-1522)
- Demolition and Emergency Action Program and Plan
- Demolition Fire Prevention Plan (8 Cal Code Regs 3221)

Additional programs under General Industry Safety Orders (8 Cal Code Regs. §§3200 to 6184), and Electrical Safety Orders (8 Cal Code Regs. §§2299 to 2974) would be established and implemented and would address many important worker safety and health issues. It is not staff's intent to list them all but some of the newer and revised Cal-OSHA regulations address such matters as excavation and trenching, employee exposure monitoring, hearing conservation, ergonomics, heat and cold stress monitoring and control, confined space entry, COVID-19 safety protocols, and Lock Out/Tag Out of dangerous operations and electrical circuits.

The project owner proposed condition, **D-WS-1**, would require the project owner to prepare or update the existing Health and Safety Plan elements to reflect the activities expected during decommissioning and demolition. The project owner's proposed measure does not specify the need to submit the health and safety plan to the compliance project manager (CPM) for review and approval. The submittal of the health and safety plan elements to the CPM would ensure that plans are in compliance with applicable LORS. Therefore, staff has added a verification step to the project owner's proposed condition which would ensure that the health and safety plan are compliant with applicable LORS. In addition, the proposed condition **D-WS-2** would ensure that all construction workers and visitors would undergo the required worker safety training. With the implementation of proposed conditions **D-WS-1** and **D-WS-2**, the demolition of the facility would not have a significant impact on worker health and safety and would comply with applicable LORS.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends adoption of the decommissioning and demolition plan and concludes that with the implementation of proposed conditions **D-WS-1**, and **D-WS-2**, impacts on worker safety and fire protection would be less than significant and the project would comply with applicable LORS.

REFERENCES

CEC 1989 – California Energy Commission – SEGS VIII Harper Dry Lake Final Decision
March 29, 1989

SEGS 2020 – Solar Energy Generating Systems VIII. (TN 232903). SEGS VIII (88-AFC-01C) Final Decommissioning Plan, dated May 1, 2020. Available online at:
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=88-AFC-01C>

ENVIRONMENTAL JUSTICE

Steve Kerr

INTRODUCTION

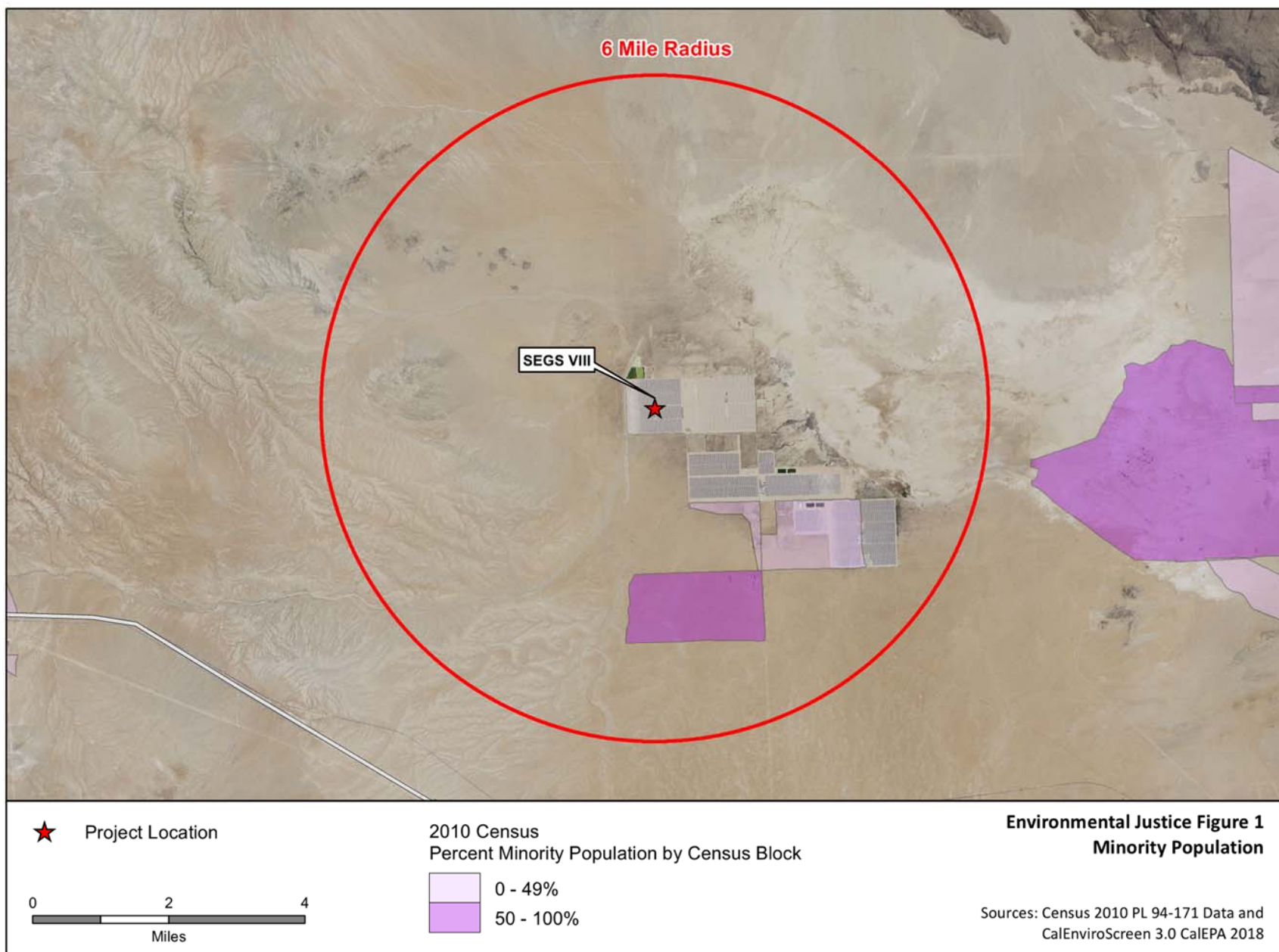
In this section, CEC staff discuss the Solar Energy Generating Systems Unit VIII (SEGS VIII) Decommissioning and Demolition Plan (TN 232903) relating to the topic of **Environmental Justice**. The purpose of this analysis is to evaluate the impacts of decommissioning and demolition on the environmental justice (EJ) population living within a six-mile radius of the facility.

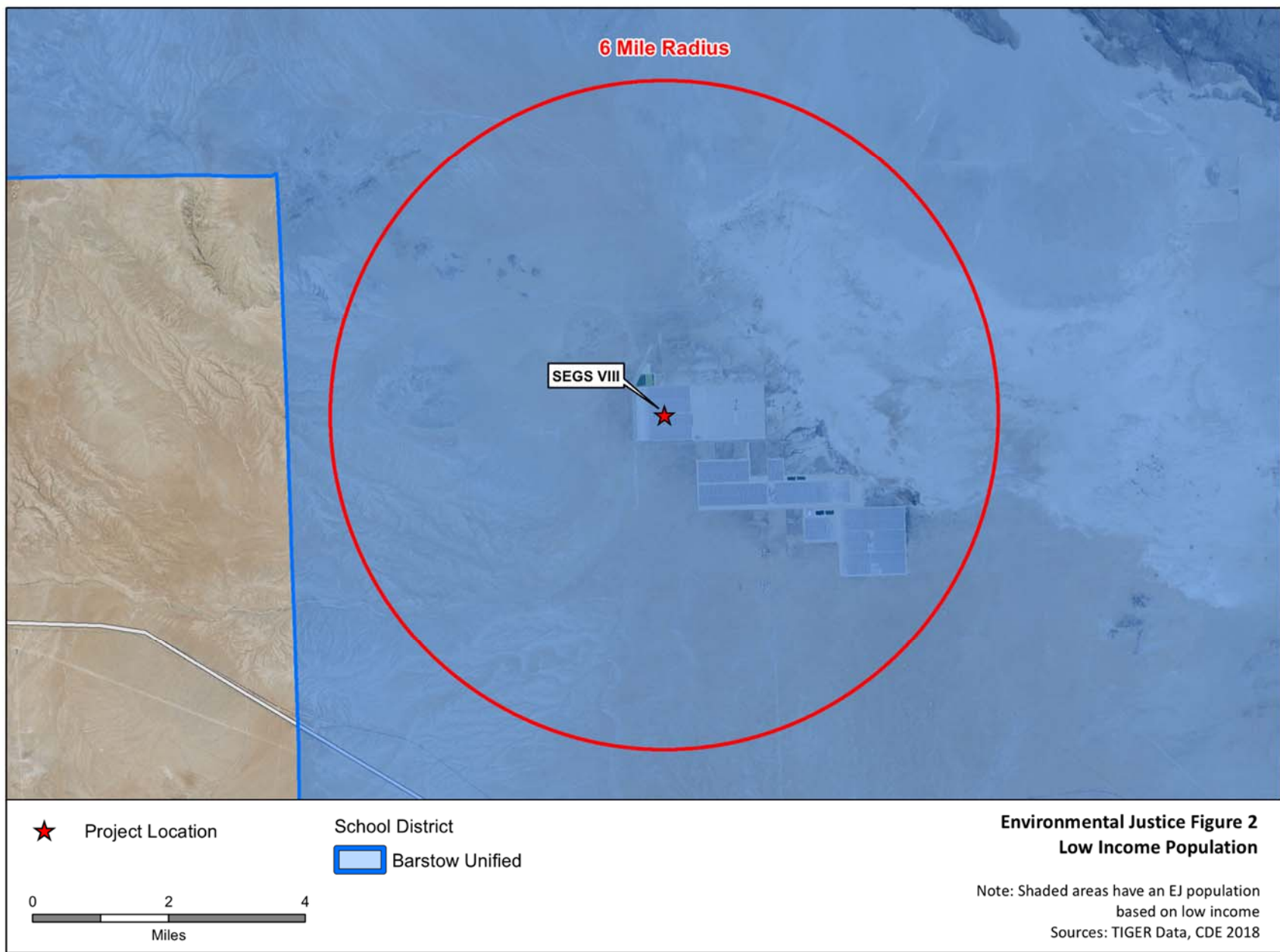
EXISTING SETTING

Staff uses a six-mile radius around the facility, conservatively based on the parameters for dispersion modeling used in staff's air quality analysis, to obtain data to gain a better understanding of the demographic makeup of the communities potentially impacted. Air quality impacts are generally the type of project impacts that extend the furthest from a facility. Beyond a six-mile radius, air emissions have either settled out of the air column or mixed with surrounding air to the extent the potential impacts are less than significant.

Environmental Justice Figure 1 shows 2010 census blocks in the six-mile radius of SEGS VIII with a minority population greater than or equal to 50 percent. The population in these census blocks represents an EJ population based on race and ethnicity as defined in the United States Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*.

Based on California Department of Education data shown in **Environmental Justice Table 1**, staff concludes that the percentage of those living in the Barstow Unified School District (in a six-mile radius of the project site) and enrolled in the free or reduced price meal program is comparatively larger than those in the reference geography, and thus are considered an EJ population based on low income as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. **Environmental Justice Figure 2** shows where the boundaries of the school district are in relation to the six-mile radius around the SEGS VIII site.





Environmental Justice – Table 1
Low Income Data within the Project Area

LAKE COUNTY SCHOOL DISTRICTS IN SIX-MILE RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Barstow Unified	6,226	4,937	79.3%
REFERENCE GEOGRAPHY			
San Bernardino County	403,196	288,979	71.7%
Source: CDE 2018. California Department of Education, DataQuest, Free or Reduced Price Meals, District level data for the year 2017-2018, < http://dq.cde.ca.gov/dataquest/ >.			

The following technical areas consider impacts to EJ populations: Air Quality, Cultural Resources (indigenous people), Hazardous Materials Management, Land Use, Noise, Public Health, Socioeconomics, Soil and Water Resources, Traffic and Transportation, Transmission Line Safety and Nuisance, Visual Resources, Waste Management, and Worker Safety and Fire Protection.

For Cultural Resources (indigenous people), staff reviewed the ethnographic and historic literature to determine whether any EJ populations use or reside in the project area. No known hunting and gathering areas would be impacted by decommissioning, therefore Native Americans are not considered members of the EJ population in the project area.

CONCLUSIONS

As summarized in **Facility Decommissioning Table 1**, staff concludes that implementation of the SEGS VIII Final Decommissioning Plan would not result in significant adverse environmental impacts, and would comply with all applicable and current LORS, with implementation of existing conditions of certification in the SEGS VIII Decision and the additional proposed COCs, and thus impacts would be less than significant on the EJ population represented in **Environmental Justice Figure 1, Figure 2, and Table 1**.

REFERENCES

CDE 2018. California Department of Education (CDE). DataQuest, Free or Reduced Price Meals, District level data for the year 2017-2018. Available online at:
<http://dq.cde.ca.gov/dataquest/>

U.S. EPA 2015 – United States Environmental Protection Agency (U.S. EPA). *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*, dated May 2015. Available online at:
<https://www.epa.gov/environmentaljustice/guidance-considering-environmental-justice-during-development-action>