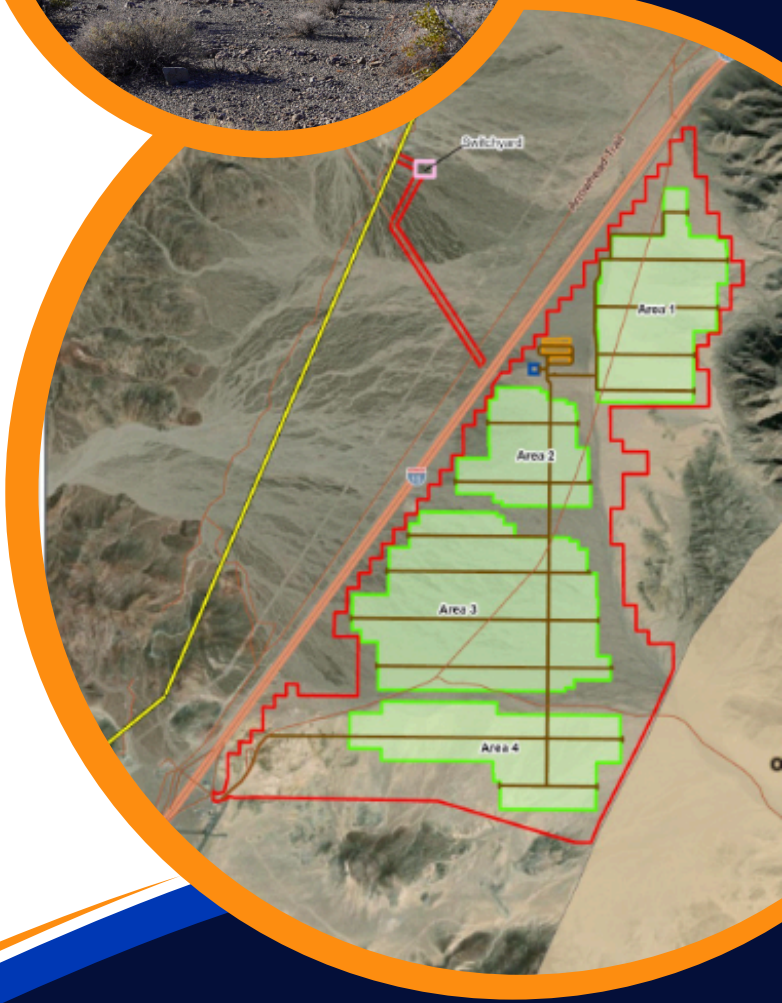
DOCKETED	
Docket Number:	24-OPT-03
Project Title:	Soda Mountain Solar
TN #:	259876
Document Title:	CEC Data Request Response Set #1
Description:	This document provides detailed information on each item included in Data Request Response Set #1.
Filer:	Hannah Arkin
Organization:	Resolution Environmental
Submitter Role:	Applicant Consultant
Submission Date:	11/4/2024 11:15:07 AM
Docketed Date:	11/4/2024

SODA MOUNTAIN SOLAR PROJECT (24-OPT-03)



CEC DATA RESPONSE SET #1

OCTOBER 2024

Table of Contents

1. Introduction

1.1 Introduction

On September 3, 2024, Soda Mountain Solar LLC received a Determination of Incomplete Application and Request for Information from the California Energy Commission (CEC) for the Soda Mountain Solar Project (24-OPT-03). This document provides Data Request Response #1. Table 1 lists all Data Requests for which a response is provided in Response Set #1.

Table 1. Data Responses Included in Response Set #1

Data Request Resource Area	Data Request Number
Mandatory Opt-in Requirements	MAND-1
Air Quality (includes Greenhouse Gases)	AQ-1 through AQ-6 and GHG-1 through GHG-7
Alternatives	--
Biological Resources	--
Cultural/Tribal Cultural Resources	--
Executive Summary	ES-1 through ES-4
Geological Hazards	GEO-1 and GEO-2
Hazardous Materials Handling	HAZ-1 through HAZ-9
Land Use	LAND-1 through LAND-5
Paleontological Resources	PALEO-1 through PALEO-4
Project Description	--
Public Health	PH-1 through PH-10
Socioeconomics	SOCIO-1 through SOCIO-10
Soils	SOILS-1 through SOILS-3
Traffic and Transportation	TRANS-1 through TRANS-12
Transmission System Safety and Nuisance	--
Transmission System Design	TSD-1 through TSD-7
Visual Resources	--
Waste Management	WASTE 1
Water Resources	--
Worker Safety	WS-1 through WS-4

The responses are grouped by individual discipline or topic area and presented in the same order and with the same numbering provided by the CEC. New or revised graphics, tables, or attachments are provided as throughout and as exhibits to this document. All associated technical reports have been fully updated to include the information presented in this document and docketed. Table 2 provides a list of all remaining Data Requests received from the CEC that have not been addressed in Response Set #1. Supplemental Data Request Response Sets will be provided to the CEC in response to the Data Requests not addressed in this document. Table 3 lists all the reports that have been updated and docketed in as part of Data Request Response Set #1.

Table 2. Data Responses Not Included in Response Set #1

Data Request Resource Area	Data Request Number
Mandatory Opt-in Requirements	--
Air Quality (includes Greenhouse Gases)	--
Alternatives	ALT-1 through ALT-3
Biological Resources	BIO-1 through BIO-20
Cultural/Tribal Cultural Resources	CUL/TRI-1 through CUL/TRI-21
Executive Summary	--
Geological Hazards	--
Hazardous Materials Handling	--
Land Use	--
Paleontological Resources	--
Project Description	PD-1 through PD-3
Public Health	--
Socioeconomics	--
Soils	--
Traffic and Transportation	--
Transmission System Safety and Nuisance	TSSN-1 through TSSN-5
Transmission System Design	--
Visual Resources	VIS-1 through VIS-12
Waste Management	--
Water Resources	WATER-1 through WATER-30
Worker Safety	--

Table 3. Documents Updated and Docketed in as part of Response Set #1.

Updated Document	Docket TN #	Updates Address Data Request Numbers
Chapter 1 Executive Summary	259693	DR ES-1 through DR ES-4
Section 3-3 Air Quality	259703	DR AQ-1 through DR AQ-6
Section 3.7 Geology and Soils	259702	DR SOILS-1 through DR SOILS-3
Section 3-8 Greenhouse Gas Emissions	259701	DR GHG-1 through DR GHG-7
Section 3-9 Hazards and Hazardous Materials	259700	DR HAZ-1 through DR HAZ-9
Section 3-11 Land Use and Planning	259699	DR LAND-1 through DR LAND-5
Section 3-17 Transportation	259698	DR TRANS-1 through DR TRANS-12
Section 3-21 Public Health	259710	DR PH-1 through DR PH-10
Section 3-22 Paleontological Resources	259709	DR PALEO-1 through DR PALEO-4
Appendix A1 Engineering Generation Facility Description, Design and Operation	259708	DR TSD-1 through DR TSD-7
Appendix C-1 Air Quality and Greenhouse Gas Technical Report	259711	DR AQ-1 through AQ-6 and DR GHG-1 through GHG-7
Appendix C-2 – Dust Control Plan	259707	DR AQ-1
Appendix I Phase I Environmental Site Assessment	259706	DR SOIL-3
Appendix M Transportation Analysis	259705	DR TRANS-1 through DR TRANS-12
Appendix N Public Notice Package	259694	DR ES-2
Appendix P Socioeconomic Impacts		DR MAND-1 DR SOCIO-1 through DR SOCIO-10
Appendix Q Worker Safety	259704	DR WS-1 through WS-4
Appendix R Waste Management Plan	259712	DR WASTE-1
Confidential Appendix O3, Interconnection Facilities Study Report	--	DR TSD-5
Confidential Appendix O4, Interconnection Facilities Study Report	--	DR TSD-5
Confidential Appendix O5, Interconnection Facilities Study Report	--	DR TSD-5
Appendix W, BLM Record of Decision	259697	DR LAND-1
Appendix X – FAA Informal Review	259696	DR LAND-4

2. MANDATORY OPT-IN REQUIREMENTS

2.1 DATA REQUEST MAND-1

2.1.1 Data Request MAND-1

DR MAND-1: Per California Code of Regulations, title 20, section 1877(f) requirement, please provide:
a. Updated preliminary information that demonstrates overall net positive economic benefit to the local region (i.e., San Bernardino County).
b. The assumptions used to run the economic model updates, including:
i. A list of specific assumptions (i.e., inputs) for the economic model (e.g., IMPLAN or additional assumptions outside of IMPLAN) that estimates net benefits (including positive and negative economic events). Note that a negative economic event is not necessarily a negative economic effect of the project. See above discussion for definition of negative event.
ii. The assumptions for all benefits identified, as well as the "negative events," including employment growth, infrastructure improvements, and property and sales tax revenues.
iii. If IMPLAN is utilized, export the IMPLAN project configuration file and provide the downloaded .JSON file

Response: Appendix P Socioeconomic Impacts has been revised to address the data request above. The updated report has been uploaded to the project docket concurrent with submittal of this response set. Appendix P provides the analysis showing a net positive economic benefit to the County of San Bernardino County (County) the authority responsible for providing public services to the unincorporated areas of San Bernardino County, and which would have had permitting authority over the site and project.

The discussion on net benefit to the County may be found in section 4.1.1, Summary of Findings, and under the heading "Net Fiscal Benefit of the Project". The net effect on the County government takes into consideration sales tax and Possessory Interest Tax (PI Tax) and subtracts the assumed cost of services provided by the County to the project. Please refer to the discussion of these potential benefits, also in Section 4.1.1. As explained, only (a) Employment Growth and (f) Property and Sales Taxes are expected to be factors in the economic benefits. Ongoing discussions with County agencies may result in benefits in the other areas.

Each of these potentially negative benefits are addressed in section 4.1.1, which explains why the project will or likely will not impose a negative benefit on the County. This information has been provided and may be found in section 4.1.3 on Table 15 "Summary of Economic Benefits". Assumptions used in the IMPLAN and JEDI models are in Table 14 "Construction Phase Project Cost". Note that the net fiscal benefits to the County are not included in the inputs as "events" in either IMPLAN or JEDI. However, the JEDI model output was used to estimate direct, indirect, and induced taxable sales from which the sales tax benefits the County, and other local governments, were derived. The requested JSON file has been provided to the CEC concurrent with the submittal of this response set.

3. AIR QUALITY (INCLUDES GREENHOUSE GAS)

3.1 DATA REQUESTS DR AQ-1 THROUGH DR AQ-6 AND DR GHG-1 THOUGH DR GHG-7

3.1.1 Data Request DR AQ-1

DR AQ-1: Please provide a completeness determination letter from the MDAQMD confirming that the application submitted to the District has been deemed complete.

Response: Exhibit 1 in this response memo provides a completeness determination letter from the MDAQMD confirming that the application submitted to the District has been deemed complete. Appendix C-2, Dust Control Plan has also been uploaded to the project docket.

3.1.2 Data Request DR AQ-2

DR AQ-2: Please provide the ambient concentrations of all criteria pollutants relevant to the project, i.e., ozone, PM10, PM2.5, carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), from the past three years, as recorded by the Air Resources Board-certified monitoring station(s) most representative of the project site.

Response: Section 3-3 Air Quality has been revised to address the data request above. The updated report has been uploaded to the project docket concurrent with submittal of this response set. This section provides the ambient concentrations of all criteria pollutants relevant to the project, i.e., ozone, PM10, PM2.5, carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), from the past three years, as recorded by the Air Resources Board-certified monitoring station(s) most representative of the project site. Specifically, detailed additional information is contained within Section 3.3.1, Existing Air Quality Conditions at the Project Site, Pages 3.3-19 – 3.3-21 (Tables 3.3-3, 3.3-4, 3.3-5, and 3.3.-6). Please see Exhibit 2 of this data request response.

The nearest stations with meteorological conditions representative of the project site are the Trona Station (Trona - Athol/Telescope #2), the Barstow Station, the Ridgecrest – Ward Station, and the Fontana Station which monitor O3, NO2, SO2, CO, PM10, and PM2.5. Data from these monitoring stations are summarized in Table 3.3-3, Table 3.3-4, Table 3.3-5, and Table 3.3-6, included in Exhibit 2 of this data request response. Table 3.3-3 and Table 3.3-4 show the Trona monitoring station and Barstow monitoring station which are the most representative of the conditions at the project site as these have similar complexity of the terrain and surrounding land use. However, data for SO2, CO, and PM2.5 are not available for these monitoring stations. As such, data for SO2, CO, and PM2.5 is provided in Table 3.3-5 and Table 3.3-6 from the Ridgecrest – Ward monitoring station and the Fontana monitoring station, which are not considered as representative as the Trona and Barstow monitoring stations.

3.1.3 Data Request DR AQ-3

DR AQ-3: Please provide the CalEEMod source modeling file and results.

Response: All CalEEMod source modeling files and results have been provided to the CEC concurrent with the submittal of this response set.

3.1.4 Data Request DR AQ-4

DR AQ-4: Please provide a screening level air quality modeling analysis, or a more detailed modeling analysis if so desired by the applicant, of all criteria pollutant concentrations including NO2, SO2, CO, PM10, and PM2.5 using a dispersion model such as AERSCREEN or AERMOD during operation of the project. Additionally, please provide the original source modeling files for both construction and operation.

Response: This information is contained within Appendix B, Baseline Environmental Consulting Air Quality Technical Report Memorandum, of the updated Appendix C-1 Air Quality and Greenhouse Gas Technical Report. Please see Exhibit 3 of this data request response set for the Baseline Environmental Consulting Air Quality Technical Report Memorandum. All AERMOD source modeling files and results have been provided to the CEC concurrent with the submittal of this response set.

3.1.5 Data Request DR AQ-5

DR AQ-5: Please provide the location of the proposed emergency generator, which shall be incorporated into the dispersion model as a point source.

Response: The proposed project has been revised to eliminate the proposed emergency generator. Section 3-3 Air Quality and Appendix C-1 Air Quality and Greenhouse Gas Technical Report have been updated and docketed to reflect the removal of the emergency generator from the proposed project. Rather than utilizing an emergency generator, the project will pursue a distribution connection from a local 12kV circuit that runs parallel to the I-15. This is the Inn 12 KV circuit which is part of the SCE Kramer 220/115 kV system. During an outage event of the 500 kV system, the proposed project's solar plant and/or BESS or this 12 KV circuit connection would serve as a backup option. This connection removes the need to have an emergency generator as part of the proposed project

3.1.6 Data Request DR AQ-6

DR AQ-6: Please provide a cumulative air quality modeling impacts analysis of the project's emergency generator in combination with other stationary emissions sources within a 6-mile radius that have received construction permits but are not yet operational or are in the permitting process. Otherwise, provide justification for why a cumulative modeling analysis is not needed, considering things such as, engine emission rates, location of maximum impacts, distance from sensitive receptors and distance from other permitted sources.

Response: Please see response to DR AQ-5 above. The proposed project has been revised to eliminate the proposed emergency generator. A cumulative air quality modeling impact analysis is not needed since the project does not have any emissive stationary sources that would be combined with other stationary emissions sources within a 6 mile radius that have received construction permits but are not yet operational or are in the permitting process. Specifically, detailed additional information is contained within Section 3.3.5 Cumulative Impacts, Pages 3.3-31 – 3.3-32.

3.1.7 Data Request DR GHG-1

DR GHG-1: Explain how the proposed installation of a backup generator at the project site is consistent with the State of California's goal of achieving carbon neutrality no later than 2045.

Response: Please see response to DR AQ-5 above. The proposed project has been revised to eliminate the proposed emergency generator.

3.1.8 Data Request DR GHG-2

DR GHG-2: What other technologies or fuel alternatives to diesel for the backup generator have you explored and why were they not pursued?

Response: Please see response to DR AQ-5 above. The proposed project has been revised to eliminate the proposed emergency generator.

3.1.9 Data Request DR GHG-3

DR GHG-3: Has the project applicant explored the procurement of renewable diesel and/or carbon offsets as a means of demonstrating consistency with the State of California's goal of carbon neutrality? If not, why not?

Response: Please see response to DR AQ-5 above. The proposed project has been revised to eliminate the proposed emergency generator.

3.1.10 Data Request DR GHG-4

DR GHG-4: Please confirm whether or not the project would use SF_6 in the circuit breakers and/or gas-insulated switchgear.

Response: The proposed project is required by LADWP to utilize 500-kV circuit breakers that contain SF_6. Appendix C-1 Air Quality and Greenhouse Gas Technical Report and Section 3-8 Greenhouse Gas Emissions has been updated and docketed to reflect this project component. Specifically, detailed additional information is contained within Section 3.8.3.2 Methodology, Pages 3.8-8 through 3.8-11.

The use of SF_6 in electric utility systems and switchgear, including circuit breakers, poses a concern because this pollutant has an extremely high GWP (one pound of SF6 is the equivalent warming potential of approximately 24,600 pounds of CO2) (IPCC 2021a). SF_6 is inert and non-toxic, and is encapsulated in circuit breaker assemblies. SF_6 is a GHG with substantial global warming potential because of its chemical nature and long residency time within the atmosphere. However, under normal conditions, it would be completely contained in the equipment and SF6 would only be released in the unlikely event of a failure, leak, or crack in the circuit breaker housing. New circuit breaker designs have been developed over the past several years to minimize the potential for leakage, compared to that of past designs. In addition, the equipment would comply with CARB's Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear regulations. CARB's current regulations require that switchgear does not exceed a maximum allowable annual SF_6 emissions rate (leakage rate) of 1 percent. The only equipment within the substations and switchyards that would have SF_6 gas would be the six 500-kV circuit breakers. The utility switchyard would require five circuit breakers and the substation would require one circuit breaker.

3.1.11 Data Request DR GHG-5

DR GHG-5: If the project is proposing to use SF6, please describe how the project would comply with the phase-out provisions.

Response: Please see response to GHG-4 above. Appendix C-1 Air Quality and Greenhouse Gas Technical Report and Section 3-8 Greenhouse Gas Emissions has been updated and docketed to reflect this project component. Specifically, detailed additional information is contained within Section 3.8.3.2 Methodology, Pages 3.8-5, 3.8-8 through 3.8-11 and 3.8-14.

In December 2021, CARB adopted amendments to the 2010 Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear, to update the phase out of SF6 in gas-insulated switchgear. The new phase out schedule begins in January 2025 with all switchgear needing to be SF6 free by January 2033. Under this resolution, CARB has developed a timeline for phasing out SF_6 equipment in California and created incentives to encourage owners to replace SF_6 equipment. The California Office of Administrative Law approved this rulemaking in December 2021 and the Resolution went into effect January 1, 2022. Approximately 63 percent of total operational emissions are associated with the emissions of SF_6, which is a component in the circuit breakers of the project. The project would include one circuit breaker to support the substation and utility switchyard (five circuit breakers with space to add one additional in the future). The use

of SF_6 in electric utility systems and switchgear, including circuit breakers, poses a concern, because this pollutant has an extremely high global warming potential (one pound of SF_6 is the equivalent warming potential of approximately 24,600 pounds of CO2). The amount of SF_6 in each circuit breaker can vary based on the manufacture. Annual leakage for a typical General Electric 500 kV circuit breaker is ≤0.5% with the total weight around five kilograms per pole. There are three poles per circuit breaker for a total of 18 poles for all six circuit breakers, and total SF_6 gas weight of approximately 90 kilograms or 198 pounds (0.09 MT). Based on the global warming potential of SF_6, the circuit breakers would result in up to 2,214 MT of CO2e emissions, annually. In compliance with CARB regulations, the applicant would be required to regularly inventory gas insulated switchgear equipment, measure quantities of SF_6 and submit an annual report to CARB. In addition, the analysis assumed that all circuit breakers would contain SF_6 as a conservative analysis. As discussed in the regulatory section, CARB has implemented phasing requirements for the elimination of SF_6 from electrical equipment, including circuit breakers. While the analysis assumes that all circuit breakers would contain SF_6, it is possible that circuit breakers in the later phases may not contain SF_6 and/or as circuit breakers are replaced they would be replaced with non- SF_6 technology. Additionally, the analysis assumed the maximum amount of SF6 per circuit breaker and depending on the circuit breaker actually used, SF_6 content may be substantially less than assumed in the analysis. Therefore, GHG emissions reported for the project are conservative.

3.1.12 Data Request DR GHG-6

DR GHG-6: Please provide the loss in round-trip efficiency for the charging/discharging cycle, and the GHG emission intensity factor during charging.

Response: Section 3-8 Greenhouse Gas Emissions has been updated and docketed to respond to this data request. Specifically, detailed additional information is contained within Section 3.8.3.2 Methodology, Page 3.8-11.

The average loss in round-trip efficiency for the life of a lithium-ion BESS is approximately 15%, although loss in round trip efficiency is dropping as the technology is getting more efficient. Assuming the 300 megawatt-hour (MWh) BESS completes 1 full cycle per day and is entirely charged from the grid, this would require approximately 3.6 hours of charging at full capacity per day and would result in approximately 45MWh of lost round-trip efficiency per day, or 16,425 MWh of lost round-trip efficiency per year. LADWP is the energy provider that would serve the project during times when solar power is unavailable. The most current available Power Content Label published by the California Energy Commission for LADWP indicates that the GHG emissions intensity factor under the base plan is 567 pounds of CO_2e per MWh (LADWP 2022). Therefore, annual indirect GHG emissions from round-trip efficiency loss would total approximately 4,224 MT CO_2e, if the BESS were charged only by the grid. This is a conservative estimate as the BESS would be charged by the project's solar arrays. This estimate also is based on the 2022 emission intensity factors for electricity provided by LADWP and does not take into account reductions in emission intensity factors over the life of the project as additional renewable energy is added to LADWP's power mix.

3.1.13 Data Request DR GHG-7

DR GHG-7: Please clarify whether GHG emissions will be associated with the BESS cooling. If emissions are expected, please provide the estimated amounts of these GHG emissions.

Response: Section 3-8 Greenhouse Gas Emissions has been updated and docketed to respond to this data request. Specifically, detailed additional information is contained within Section 3.8.3.4 Impact Assessment, Page 3.8-14. Section 3-3 Air Quality has also been revised to address the data request above, specifically Section 3.3.3.4 Operations, Page 3.3-24.

Energy use related to cooling of the BESS is anticipated to be offset by the power generated by the project's solar facilities. Indirect sources of emissions can be of different forms. The project generates electricity from solar energy, a renewable source, and as such, is an indirect source of reduction in fossil fuel-powered electricity generation. The project would provide a renewable energy resource that would displace generation from higher GHG emitting sources. The Greenhouse Gas Equivalencies Calculator was used, which uses the AVoided Emissions and geneRation Tool (AVERT) U.S. national weighted average CO2 marginal emission rate to convert reductions of kilowatt-hours into avoided units of CO2 emissions. For a 300-MW solar facility, AVERT calculates that 337,010 tons (305,730 metric tons) per year would be avoided by placing the project into operation. Energy use related to cooling of the BESS is anticipated to be offset by the power generated by the project's solar facilities.

4. EXECUTIVE SUMMARY

4.1 DATA REQUESTS ES-1 THROUGH ES-4

4.1.1 Data Request DR ES-1

DR ES-1: Update Figure 2-2 to include the existing electrical distribution line, wireless cellular telephone towers, two fiber-optic cables, and two fuel pipelines.

Response: Chapter 1 Executive Summary has been updated and docketed to respond to this data request. Specifically, Figure 1-1 has been updated to include the existing electrical distribution line, wireless cellular telephone towers, two fiber-optic cables, and two fuel pipelines. Please see Exhibit 4 of this data request response.

4.1.2 Data Request DR ES-2

DR ES-2: Please provide a full-page color photographic reproduction depicting the visual appearance of the project site prior to construction, and a full-page color simulation or artist's rendering of the site and all project components at the site, after construction. This should clearly show the project site, including all project components. It may be useful to show the photographic simulation from an angle and at a vantage point that will show the project components.

Response: Chapter 1 Executive Summary has been updated and docketed to respond to this data request. Specifically, Figure 1-1 provides a full-page color photographic reproduction depicting the visual appearance of the project site prior to construction. Figure 1-2 provides full-page color photographic reproduction depicting the visual appearance of the project site and all project components at the site, after construction. Please see Exhibit 4 of this data request response. Photographic simulations from various angles and vantage points are provided in Appendix B, Visual Resources Report. The Visual Resources Report will be updated and docketed to address the CEC data requests in Data Request Response #2.

4.1.3 Data Request DR ES-3

DR ES-3: Provide a list of the mailing address of all owners for all parcels within 500 feet of the proposed transmission line and other linear facilities and within 1,000 feet of the proposed power plant and related facilities.

Response: Appendix N, Public Notice Package, has been updated and docketed to respond to this data request. This Appendix now contains the list of the mailing address of all owners for all parcels within 500 feet of the proposed transmission line and other linear facilities and within 1,000 feet of the proposed power plant and related facilities.

4.1.4 Data Request DR ES-4

ES-4: Provide a more specific proposed date of initiation of construction than 2025 (e.g. Spring 2025, Quarter 2 of 2025). Provide the proposed dates of initial start-up and full-scale operation of the proposed facilities.

Response: Chapter 1 Executive Summary has been updated and docketed to respond to this data request. Specifically, Section 1.5 Project Schedule, Page 1-2 has been updated. Construction of the project is anticipated to begin in the second quarter of 2026, occur over an approximately 18-month period, consist of overlapping construction stages. The project would begin operation in the further quarter of 2027 and begin full-scale commercial operation by the first quarter of 2028. The project would operate 7 days a week, 365 days a year, with an approximately 40-year anticipated lifespan.

5. GEOLOGICAL HAZARDS

5.1 DATA REQUESTS DR GEO-1 AND GEO-2

5.1.1 Data Request DR GEO-1

DR GEO-1: Please list the individual applicable LORS in a table within Section 3.7.

Response: Section 3.7 Geology and Soils has been updated and docketed to respond to this data request. Specifically, Section 3.7.6 Laws, Ordinances, Regulations, and Standards, Page 3.7-25, has been updated. Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to geology and soils are discussed and summarized in Table 3.7-2. Please see Exhibit 5 of this data request response.

5.1.2 Data Request DR GEO-2

DR GEO-2: Please include discussions of why permits would not be applicable and any related agency enforcement contact information within Section 3.7.

Response: Section 3.7 Geology and Soils has been updated and docketed to respond to this data request. Specifically, Section 3.7.7 Agencies Contacted and Permits and Standards, Page 3.7-25 – 3.7-26. Federal, state, and local permits applicable to geology and soils are also summarized in Table 3.7-3. Please see Exhibit 5 of this data request response.

6.1 DATA REQUESTS DR HAZ-1 AND HAZ-9

6.1.1 Data Request DR HAZ-1

DR HAZ-1: For Table 3.9-1, please provide the quantities of hazardous materials stored on site during construction and operation of the project.

Response: Section 3-9 Hazards and Hazardous Materials has been updated and docketed to respond to this data request. Specifically, Section 3.9.3.4 Impact Assessment, Table 3.9-3. Hazardous Materials Generated during Construction and Table 3.9-4. Hazardous Materials Generated Annually during Operation, Pages 3.9-30 – 3.9-32. Table 3.9-5 presents a summary of anticipated nonhazardous waste streams created by construction activities. Table 3.9-6 presents a summary of anticipated waste streams created during project operation. Please see Exhibit 6 of this data request response.

6.1.2 Data Request DR HAZ-2

DR HAZ-2: Please provide a figure with a scale at 1:24,000.

Response: Section 3-9 Hazards and Hazardous Materials has been updated and docketed to respond to this data request. Specifically, Figures 9.2, 9.3 and 9.4 on Pages 3.9-20 -3.9-22 have been updated. Please see Please see Exhibit 6 of this data request response.

6.1.3 Data Request DR HAZ-3

DR HAZ-3: Please discuss whether a risk management plan (Health and Safety Code § 25531 et seq.) would be required, and if so, the requirements that would be incorporated into the plan.

Response: Appendix Q Worker Safety has been updated and docketed to respond to this data request. Specifically, Section 1.3.2, page 33. A Risk Management Plan is not required for the project as the project does not handle any materials listed in the following link in quantities above the threshold values: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-F/section-68.130. A subsection addressing CalARP and Risk Management Plan applicability has been added to the Worker Safety Plan, Section 1.3.2. The project is not expected to have any of the listed regulated materials on-site in quantities above the threshold values, and as such, the Worker Safety Plan concludes that a Risk Management Plan will not be required.

6.1.4 Data Request DR HAZ-4

DR HAZ-4: Please discuss actions that the project could implement to reduce the probability of lithium battery fires on I-15 and actions to reduce the impact of such fires (if they would occur) to motorists.

Response: Section 3-9 Hazards and Hazardous Materials has been updated and docketed to respond to this data request. Specifically, Section 3.9.3.4, Impact HAZ-2.

A recent lithium battery fire in July of 2024 that resulted in the closure of I-15 for several days has brought increased concern from San Bernardino County and the State of California regarding lithium battery fire prevention and response. A fire at the proposed solar facility's BESS could result in smoke that would pose a visibility and inhalation risk, and as the project site is proximal to interstate I-15, these hazards could adversely impact traffic and possibly shut down I-15. The BESS modules will each come equipped with a number of fire prevention technologies, as detailed above, that will minimize risk of fire occurrence and escalation. SBCFPD would be contacted to review the project building plans to ensure that all developments associated with the project, including the BESS yard, are built with highest priority given to fire prevention and suppression. The project will implement any and all administrative and engineering controls necessary to minimize risk of fire occurrence and escalation. SBCFPD will also be consulted with during development of the Emergency Action Plan to incorporate any and all feasible special provisions to minimize time between failure of administrative/engineering controls to prevent a fire and the emergency response by the SBCFPD and minimize the impact on the public.

Appendix Q Worker Safety has also been updated and docketed to respond to this data request. Specifically, Section 1.2.4.1.3, Section 1.2.4.2.2 and Section 1.2.4.2.4. Some minor edits were also made to the Worker Safety Plan sections 1.2.4.1.3, 1.2.4.2.2, and 1.2.4.2.4 to include mention of the project's willingness to include any and all feasible specialty provisions required to minimize risk of an interstate fire and, in the event of a fire, minimize the time between fire occurrence and emergency response by the county.

6.1.5 Data Request DR HAZ-5

DR HAZ-5: Please discuss whether a lithium battery fire at the project BESS site would result in the closure of nearby I-15. Would a fire at the BESS have smoke, visibility, or inhalation risks that could result in the closure of I-15? What actions could be implemented to reduce this risk and potential impacts to motorists?

Response: Please see response to Haz-4 above.

6.1.6 Data Request DR HAZ-6

DR HAZ-6: Please provide tables that identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of,
and conformance with each.

Response: Section 3-9 Hazards and Hazardous Materials has been updated and docketed to respond to this data request. Specifically, Section 3.9.6 Laws, Ordinances, Regulations, and Standards, 3.9-42 – 3.9-45. Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to hazards and hazardous materials are discussed and summarized in Table 3.9-7. Please see Exhibit 6 of this data request response. Appendix Q Worker Safety has also been updated and docketed to respond to this data request, specifically Table E, page 22-31. Appendix R Waste Management Plan has also been updated and docketed to respond to this data request, specifically Table E, pages 22-25.

6.1.7 Data Request DR HAZ-7

DR HAZ-7: Please identify any permits that would be required by the County of San Bernardino Fire Department as related to hazardous materials, but for the exclusive authority of the Commission to certify sites and related facilities.

Response: Section 3-9 Hazards and Hazardous Materials has been updated and docketed to respond to this data request. Specifically, Section 3.9.7 Agencies Contacted and Permits, Pages 3.9-45 – 3.9-46. Federal, state, and local permits applicable to hazards and hazardous materials are summarized in Table 3.9-8. Please see Exhibit 6 of this data request response. Appendix R Waste Management Plan has also been updated and docketed to respond to this data request, specifically Table G, page 30. Contact information for the San Bernadino County Fire Protection District is also provided in Table F of the Worker Safety Plan.

6.1.8 Data Request DR HAZ-8

DR HAZ-8: Please provide name, title, phone number, address(required), and email address (if known), of an official at the County of San Bernardino Fire Department who would serve as a contract person for Energy Commission staff.

Response: See response to HAZ-7 above. Please see Exhibit 6 of this data request response.

6.1.9 Data Request DR HAZ-9

DR HAZ-9: Please create a schedule for obtaining permits and approvals from the County of San Bernardino Fire Department and any steps the applicant has taken or plans to take to obtain such permits.

Response: See response to HAZ-7 above. Please see Exhibit 6 of this data request response. Within the updated Appendix Q, Worker Safety, Table G has been updated summarizes permits and permit schedules for a number of agencies including the SBFPD. Correspondence with the Fire Department is included on pages 40-43 of the updated Appendix Q Worker Safety Plan.

7. LAND USE

7.1 DATA REQUESTS DR LAND-1 THROUGH LAND-5

7.1.1 Data Request DR LAND-1

DR LAND-1: Please docket the full BLM ROD, including appendices, for the Soda Mountain Solar Project (March 2016).

Response: Appendix W, BLM Record of Decision, has been added to the docket and contains the full BLM ROD, including appendices for the Soda Mountain Solar Project (March 2016).

7.1.2 Data Request DR LAND-2

DR LAND-2: Please correct Figure 2-3 to reflect the land management data that is most up-to-date and to show that the project site would be located entirely on BLM managed land. Provide the associated updated Geographic Information System (GIS) shape files.

Response: Section 3-11 Land Use has been updated and docketed to respond to this data request. Specifically, Figure 3.11-1 has been updated to reflect the land management data that is most up-to-date and to show that the project site would be located entirely on BLM managed land. Please see Exhibit 7 of this data request response. Figure 2-3 will be updated and docketed with Batch 2 responses. The CEC has been provided with the associated updated Geographic Information System (GIS) shape files concurrent with this submittal.

7.1.3 Data Request DR LAND-3

DR LAND-3: Please provide the following information to support the CEQA Land Use analysis of project consistency with land use plans, policies, and regulations adopted for the purpose of mitigating an environmental effect:

a) Provide a list of applicable CMAs from the DRECP LUPA and applicable IOPs from the West-Wide Energy Corridor ROD. For each applicable CMA or IOP, explain how the project would comply with the requirements of that measure.
b) Please identify the extent to which BLM would apply the new and/or revised IOPs from the Section 368 Energy Corridor Final Report to the proposed project's ROW Grant authorization. Identify any new or revised IOPs from the Section 368 Energy Corridor Final Report that could be incorporated into the BLM's permit conditions for the project's ROW Grant authorization.

Response: Section 3-11 Land Use has been updated and docketed to respond to this data request. Specifically, Section 3.11.3.4 Impact Assessment, Impact, Impact LUP-2, Pages 3.11-11.

The project is located entirely on federally owned land within the planning boundary of the CDCA Plan and the DRECP. Given the project is on federal land, it is not subject to local land use regulations and policies. The BLM issued a Record of Decision (ROD) to approve the project and associated amendment to the CDCA Plan in March 2016 (BLM 2016). The project gen-tie falls within the Soda Mountains Expansion ACEC as designated as a part of the DRECP LUPA in September 2016, after the project ROD was issued in March 2016. The project as described is consistent with that described in the project ROD, and therefore the project would not need to conform to the CMAs outlined in the DRECP that would apply to activities within this ACEC approved after the DRECP took effect. Construction and operation of the project gen-tie would impact up to 36 acres of the Soda Mountains Expansion ACEC, approximately 0.22% of its total area. The gen-tie construction would temporarily disrupt wildlife activity in the area, and temporarily and permanently remove some habitat for plants and wildlife. The project, including the solar facility and gen-tie line would be consistent with the CDCA as amended by the DRECP LUPA, and its CMAs including for the ground disturbance within the ACEC.

The revised project configuration approved in the BLM ROD is largely consistent with the proposed project being analyzed under this EIR, including anticipated impacts and disturbance areas. However, the project approved under the 2016 ROD did not include battery energy storage systems (BESS); the project submitted an amended SF-299 application (Application for Transportation, Utility Systems, Telecommunications and Facilities on Federal Lands and Property) and Plan of Development outlining the addition of the BESS. Consultation with the BLM to add this component to the project and the extent to which further analysis of the BESS component will be required by BLM prior to issuing the ROW Grant authorization remains ongoing.

7.1.4 Data Request DR LAND-4

DR LAND-4: To appropriately notify DoD through their federal channels, please undertake and document an informal DoD Clearinghouse review prior to submission of FAA Airspace Analysis. The DoD Siting Clearinghouse – Informal Review Request Form is available at:
https://www.dodclearinghouse.osd.mil/Portals/134/DOD_Siting_Clearinghouse_Infor
mal_Request_Form_2023.pdf. In accordance with Public Resources Code, section 25519.5, file information received from DoD to the project docket upon receipt.

Response: Appendix X – FAA Informal Review Request provides the submittal to the FAA. In accordance with Public Resources Code, section 25519.5, file information received from DoD will be added to the project docket upon receipt.

7.1.5 Data Request DR LAND-5

DR LAND-5: Please provide the following information:

a) Requirements that must be met by the applicant prior to BLM's issuance of a ROW Grant authorization (e.g., an amended POD and/or additional NEPA analysis to cover project components not addressed in the March 2016 BLM approval of the project as included in its ROD).
b) A schedule for submitting any additional materials to the BLM that are required for the agency's issuance of a ROW Grant authorization for the project, and the anticipated date for receiving the BLM ROW Grant authorization.

Response:

a) The project Applicant is currently processing an amended POD, including completing the applicable NEPA analysis, with the BLM. An Amended POD and associated NEPA analysis is required to issue the ROW Grant authorization. The schedule for the Amended POD, NEPA document and ROW Grant authorization are concurrent with the CEC approval process with final BLM approvals estimated for Summer of 2025.
b) The project Applicant has submitted two draft versions of the updated POD to BLM (July 2024 and September 2024) and received additional comments in late October. The Applicant team anticipates resubmitting a revised POD to the BLM in November 2024. The goal is a concurrent approval process with BLM and CEC.

8. PALEONTOLOGICAL RESOURCES

8.1 DATA REQUESTS DR PALEO-1 THROUGH PALEO-4

8.1.1 Data Request DR PALEO-1

DR PALEO-1: Please include a discussion of impacts to, and mitigation measures for paleontological resources in Section 3.7.

Response: To address this data request, a new environmental analysis section was created and added to the project docket, Section 3-22 Paleontological Resources. Section 3.22.1, Regulatory Setting, describes the applicable regulations. Section 3.22.2, Environmental Setting, presents an overview of existing conditions. Section 3.22.3.2 lists applicant-proposed measures (APMs) that would be incorporated into the project to avoid or substantially lessen potentially significant impacts to the extent feasible. Section 3.22.3.3, Impact Assessment, evaluates the potential for impacts to known and unknown paleontological resources that may result directly or indirectly from the proposed project. Section 3.22.4 identities that no mitigation measures are required. Section 3.22.5 provides an analysis of cumulative impacts.

8.1.2 Data Request DR PALEO-2

DR PALEO-2: Since Section 3.7 includes the evaluation of paleontological resources, please include this in the title of the section.

Response: To address data requests PALEO-1 through PALEO-4, a new environmental analysis section was created and added to the project docket, Section 3-22 Paleontological Resources.

8.1.3 Data Request DR PALEO-3

DR PALEO-3: Please list the individual applicable LORS in a table within Section 3.7.

Response: Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to paleontological resources are discussed within Section 3.22.6 Laws, Ordinances, and Regulations, Page 3.22-14. Please see Exhibit 8 of this data request response.

8.1.4 Data Request DR PALEO-4

DR PALEO-4: Discuss in Subsection 3.7.2 whether permits are required for paleontological resources, and if so, describe what steps have been taken and the timing of permits. If permits would not be applicable to paleontological resources, include a statement to that effect. Provide any related agency enforcement contact information.

Response: A list of agencies that were contacted during preparation of this application is provided within Section 3.22.7, Agencies Contacted and Permits, Page 3.22-15. Please see Exhibit 8 of this data request response. The paleontological consultant that is contracted to implement the paleontological APMs for the project will be required to hold a Paleontological Resource Use Permit issued by the BLM California state office, as well as a project specific Notice to Proceed permit from the BLM Barstow Field Office, for conducting paleontological monitoring and collecting paleontological resources encountered during development of the project. All permits need to be valid and current through the duration of the paleontological mitigation program, and all paleontological personnel involved will need to be permitted or otherwise authorized by the BLM. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable local statute, ordinance, or regulation.

9. PUBLIC HEALTH

9.1 DATA REQUESTS DR PH-1 THROUGH PH-10

9.1.1 Data Request DR PH-1

DR PH-1: Please provide a separate public health section that includes descriptions of all significant assumptions, methodologies, and computational methods used in arriving at conclusions in the document.

Response: Section 3-21 Public Health has been created and docketed to meet this data request. This section includes descriptions of all significant assumptions, methodologies, and computational methods used in arriving at conclusions in the document. The section evaluates the public health impacts that may result directly or indirectly from the project. The analysis in this section describes the applicable regulations, presents an overview of existing conditions that influence public health, identifies the criteria used for determining the significance of environmental impacts, lists applicant-proposed measures (APMs) that would be incorporated into the project to avoid or substantially lessen potentially significant impacts to the extent feasible, and describes the potential public health impacts of the proposed project.

9.1.2 Data Request DR PH-2

DR PH-2: Please provide descriptions, including methodologies and findings, of all major studies or research efforts undertaken and relied upon to provide information for the document; and a description of ongoing research of significance to the project (including expected completion dates) in the public health section requested in DR PH-1.

Response: Section 3-21 Public Health has been created and docketed to meet this data request. The analysis contained in Section 3-21, Public Health, is based on a review of existing resources, technical data, and applicable laws, regulations, plans, and policies, as well as relevant technical reports, including the project specific Air Quality and Greenhouse Gas Technical Report. Section 3.21.2.3, Public Health Data in the Project Vicinity, on pages 3.21-11 and 3.21-12 includes the methodologies and findings, of all major studies or research efforts undertaken and relied upon to provide information for the document; and a description of ongoing research of significance to the project (including expected completion dates) in the public health section requested in DR PH-1. According to the San Bernardino County Department of Public Health website, no public health studies related to respiratory illnesses, cancers, or related diseases within a 6-mile radius of the project site were identified in the last 5 years. However, other online tools were explored including CalEnviroScreen, Analytical Tools Interface for Landscape Assessments (ATtILA), and California Emission Inventory Development and Reporting System (CEIDARS), as discussed in detail within Section 3.21.2.3.

9.1.3 Data Request DR PH-3

DR PH-3: Please provide a list of all literature relied upon or referenced in the documents, along with brief discussions of the relevance of each such reference in the public health section requested in DR PH-1.

Response: See response to DR PH-2 above. Section 3.21.2.3, Public Health Data in the Project Vicinity on pages 3.21-11 and 3.21-12 provides a list of all literature relied upon or referenced in the documents, along with brief discussions of the relevance of each such reference in the public health section. Section 3.21.8, References Cited, provides additional information to support the analysis and conclusions presented in Section 3.21, Public Health. Potential impacts to public health related to Valley Fever are addressed in detail within Section 3-9 Hazards and Hazardous Materials, Section 3.9.2.6, Valley Fever, Page 3.9-24.

9.1.4 Data Request DR PH-4

DR PH-4: Please provide a map showing sensitive receptor locations for MEIR, MEIW, including the distance from the project boundary

Response: Figure 3.21-1. Sensitive Receptor Location, provides a map showing sensitive receptor locations for MEIR, MEIW, including the distance from the project boundary. This figure is included in Section 3-21 Public Health, Section 3.21.2.1, Sensitive Receptors, Page 3.21-9. Please see Exhibit 9 of this data request response.

9.1.5 Data Request DR PH-5

DR PH-5: Please provide available health studies through the local public health department concerning the potentially affected population(s) within a six-mile radius of the proposed power plant site related to respiratory illnesses, cancers or related diseases.

Response: Section 3-21 Public Health has been created and docketed to meet this data request. Specifically, information is provided in Section 3.21.2.3, Public Health Data in the Project Vicinity, Pages 3.21-11 – 3.21-12 to address this data request. According to the San Bernardino County Department of Public Health website, no public health studies related to respiratory illnesses, cancers, or related diseases within a 6-mile radius of the Project site were identified in the last 5 years. Potential impacts to public health related to Valley Fever is addressed in detail within Section 3-9 Hazards and Hazardous Materials, Section 3.9.2.6, Valley Fever, Page 3.9-24.

9.1.6 Data Request DR PH-6

DR PH-6: Please provide justification regarding whether a cumulative air quality impact modeling analysis is needed with updated modeling results. If yes, please submit a modeling protocol for assessing the cumulative air quality impacts of the project during its standard operational phase in combination with other stationary emissions sources within a 6-mile radius that have received construction permits but are not yet operational or are in the permitting process

Response: This information is contained in Appendix B - Baseline Environmental Consulting Air Quality Technical Report Memorandum, Page 2, of Appendix C-1 Air Quality and Greenhouse Gas Technical Report. Please see Exhibit 3 of this data request response. AFC section (g)(8)(I)(iii) requires a protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six-mile radius which have received construction permits but are not yet operational or are in the permitting process. The following two projects are located within the six-miles radius of the project:

- I-15 Mojave Wildlife Crossings Restoration project
- Brightline West - Las Vegas to Victor Valley

MDAQMD's CEQA and Federal Conformity Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the project site. MDAQMD's air quality thresholds of significance are designed to achieve or maintain attainment designations associated with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Individual projects that do not exceed the MDAQMD's thresholds of significance would not result in a cumulatively considerable contribution to a nonattainment status or the health effects associated with criteria air pollutants. Since the project's construction and operational emissions are below the MDAQMD's applicable thresholds of significance, the project's cumulative contribution of criteria air pollutant emissions would not cause or contribute to a violation of any ambient air quality standard.

9.1.7 Data Request DR PH-7

DR PH-7: Please provide a Health Risk Assessment of the project during both construction and operation to demonstrate the project impacts to sensitive receptors. The Health Risk Assessment should show risks of cancer, non-cancer chronic exposure, and noncancer acute exposure, whereby the chronic exposure is one that is greater than twelve (12) percent of a lifetime of seventy (70) years.

Response: This information is contained in Appendix B - Baseline Environmental Consulting Air Quality Technical Report Memorandum, Page 2, of Appendix C-1 Air Quality and Greenhouse Gas Technical Report. Please see Exhibit 3 of this data request response. The results of the Health Risk Assessment are also detailed in Section 3-21 Public Health, Section 3.21.3.4, Impact Analysis, Pages 3.21-14 – 3.21-16.

Project construction would generate diesel particulate matter (DPM) emissions from the exhaust of off-road diesel construction equipment. section (g)(9)(A), an assessment of the potential risk to human health from the project's hazardous air emissions during construction was performed using CARB's Hotspots Analysis and Reporting Program (HARP). The potential cancer risks and chronic hazard index (HI) to sensitive receptors exposed to DPM emissions during project construction were evaluated using HARP, which includes cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA). The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA.

9.1.8 Data Request DR PH-8

DR PH-8: Please provide a listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment

Response: A listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment has been provided to the CEC concurrent with this response memo. This information is also included in Attachment D and C of the Appendix B - Baseline Environmental Consulting Air Quality Technical Report Memorandum. Please see Exhibit 3 of this data request response.

9.1.9 Data Request DR PH-9

DR PH-9: Please provide tables that identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of,
and conformance with each.

Response: Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to public health are discussed and summarized in Table 3.21-3, Page 3.21-18. Please see Exhibit 9 of this data request response.

9.1.10 Data Request DR PH-10

DR PH-10: Please provide tables that identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies that would have permit approval or enforcement authority, but for the exclusive authority of the CEC to certify sites and related facilities.

Response: Federal, state, and local permits applicable to public health are summarized in Table 3.21-4 within Section 3.21.7, Agencies Contacted and Permits, Page 3.21-18. Please see Exhibit 9 of this data request response.

10. SOCIOECONOMICS

10.1 DATA REQUESTS DR SOCIO-1 THROUGH SOCIO-10

10.1.1 Data Request DR SOCIO-1

DR SOCIO-1: Please provide data to address the most recent and projected revenues of each local agency with taxing power and their most recent and projected revenues.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, this information may be found in Appendix C "Fiscal Data: The most recently available financing sources and expenditures for the San Bernardino Fire Protection District, along with SBFPD statistic and service calls; and the County's General Fund funding requirements.

10.1.2 Data Request DR SOCIO-2

DR SOCIO-2: Please provide a table showing the number of skilled workers by occupation/trade required for construction and operation of the project and their availability within the County. This table can be combined with the table requested in DR SOCIO-5.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, the worker information may be found in Section 3.2 Project Labor demand and Supply and in Table 8 and Figure 2. Table 9 shows regional labor data and unemployment rates. Industry employment data from IMPLAN may be found in Appendix C, Table C-5:"Selected Employment by Sector in San Bernardino County".

10.1.3 Data Request DR SOCIO-3

DR SOCIO-3: Page 3 of Appendix P says that "The economy [of Baker] is based primarily on tourism." If that is the case, there are likely temporary housing such as motels and RV parks in the project vicinity. Please provide information as to the number of rooms that are available in temporary housing such as motels and spaces in trailer/RV parks and their average occupancy rates.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, this information is provided in section 3.4.3 in Table 11: "Temporary Housing in Baker"

10.1.4 Data Request DR SOCIO-4

DR SOCIO-4: Table A-5, in Appendix P, provides school enrollment for one, unspecified year. Please provide enrollment by grade level for the most recent year available and expected enrollment for the duration of the project schedule.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, the school enrollment data is for the 2023-24 school year and is noted on Table A-5, the most recent data available from the California Department of Education. The enrollments are not expected to change significantly during the project's construction phase.

10.1.5 Data Request DR SOCIO-5

DR SOCIO-5: Please provide a table showing breakdown of the construction workers by occupation/trade for each month throughout the project's construction period and during operations.

Response: Please see response to DR-SOCIO 2 above.

10.1.6 Data Request DR SOCIO-6

DR SOCIO-6: Please revise Appendix P and recalculate the capital cost (plant and equipment) of the project. Please also revise any other tables and analysis that is affected by that change.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, the project's capital expenditures have been revised to reflect a 300MW facility, please see Table 14 and all subsequent tables that derive from the project expenditures (i.e. sales taxes). Note that construction direct labor cost did not change and is still considered accurate as stated in Table 14.

10.1.7 Data Request DR SOCIO-7

DR SOCIO-7: Please revise your prior work and make an estimate of sales taxes generated during construction and separately during an operational year of the 300 MW project.

Response: Please refer to the response to DR-SOCIO 6 above.

10.1.8 Data Request DR SOCIO-8

DR SOCIO-8: Please revise your prior work and provide the expected direct, indirect, and induced income and employment effects due to construction and operation of the 300 MW project.

Response: Please refer to the response to DR-SOCIO 6 above.

10.1.9 Data Request DR SOCIO-9

DR SOCIO-9: Please provide a discussion of potential Environmental Justice impacts by technical area within a six-mile radius of the project site and make a determination whether any impacts would disproportionately affect the environmental justice populations as required by Appendix B (g) (7) (B) (xiii). It is insufficient to make a conclusory statement such as "The project would not cause the percentiles of any of these components [of the CalEnviroScreen tool] to increase to any significant degree" (p. 15) without analysis to support that conclusion.

Response: Appendix P, Socioeconomic Impacts, has been updated and docketed to respond to this data request. Specifically, Section 3.6 "Environmental Justice Assessment" has been added.

10.1.11 Data Request DR SOCIO-10

DR SOCIO-10: Please provide a table(s) with references to where the applicability and conformance with LORS, plans, leases and permits are discussed.

Response: Please see Exhibit 10 of this data request response.

11. SOILS

11.1 DATA REQUESTS DR SOILS-1 THROUGH SOILS-3

11.1.1 Data Request DR SOILS-1

DR SOILS-1: Identify the location(s) of proposed disposal facilities willing to accept excess soil generated during project construction.

Response: Appendix R Waste Management Plan has been updated and docketed to respond to this data request. Specifically, Table C on page 10 of Appendix R has been updated to identify the locations of the proposed disposal facilities willing to accept excess soil generated during project construction. Please see Exhibit 11 of this data request response.

Table C summarizes the 3 active permitted class III solid waste disposal facilities within a 100-mile radius of the project site that accept construction/demolition solid waste and/or soil waste. The table includes data on daily throughput, permit capacity, remaining capacity, and total number of enforcement actions from state or local agencies on record. The Barstow Landfill accepts Construction and Waste Debris but does not accept soil. The Victorville Landfill and Mid-Valley Landfill accept both Construction and Waste Debris and Soil. Information for landfills was pulled directly from the California Department of Resources Recycling and Recovery Solid Waste Information System (SWIS) database, including capacities, daily throughput limits, and categories of waste accepted.

11.1.2 Data Request DR SOILS-2

DR SOILS-2: Provide copies of any preliminary correspondence along with contemporaneous meeting notes regarding discussions with soil disposal facilities and include the name of officials contacted.

Response: Appendix R Waste Management Plan has been updated and docketed to respond to this data request. Specifically, pages 35 through 40 of Appendix R, Waste Management Plan, provide copies of all preliminary correspondence regarding soil disposal facilities for the proposed project. Information from this correspondence has been incorporated into Waste Management Plan Section 1.1.3.1 Solid Waste Disposal. The name of the officials contacted include:
Veronica Rodriguez
Scale Operations Supervisor II
County of San Bernardino
Department of Public Works
909-386-8778
Veronica.Rodriguez@dpw.sdcounty.gov

11.1.3 Data Request DR SOILS-3

DR SOILS-3: Provide a revised ESA which considers the entire project site, as described in the application.

Response: Appendix I Phase I Environmental Site Assessment has been updated and docketed to respond to this data request. Specifically, the previously provided Phase I Environmental Site Assessment had an error in the text which has been corrected. The Phase I ESA considers the entire 2,670 acres of the project site.

12. TRAFFIC AND TRANSPORTATION

12.1 DATA REQUESTS DR TRANS-1 THROUGH TRANS-12

12.1.1 Data Request DR TRANS-1

DR TRANS-1: There is reference in Appendix M (p. 17) to an access road to the Opah Ditch pit mine. Please provide a map that shows the location and extent of the road to be used. Please also provide a description of its nature (surface, width, etc.) and any planned improvements associated with the project.

Response: Section 3.17, Transportation, has been updated and docketed to respond to this data request. Specifically, Section 3.17.2.1 Regional and Local Roadway Facilities, Page 3.17-12 contains descriptions of the local access roads and any planned improvements. Figure 1-1 has been updated to show the relevant dirt roads onsite that will be utilized by the project. These dirt roads don't have actual names and were not included within the Section 3.17 figures due to the scale requested for those figures. Please see Exhibit 4 of this data request response.

12.1.2 Data Request DR TRANS-2

DR TRANS-2: The vehicle miles traveled (VMT) discussion dismisses construction related VMT. Given the site would experience over 800 trips per day during construction, including 200 heavy-vehicle trips, and many of those trips would be long-distance (due to the remote location), what is the basis for concluding it is not relevant? The question of relevance also relates to the duration of the construction phase, which isn't identified in the transportation section. Please identify CEQA guidelines that support any conclusion regarding the relevance of construction related VMT.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, please refer to the Vehicle Miles Traveled Assessment on pages 21-22.

SB743 was enacted with the goals of "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." The technical guidance to date largely focuses on VMT impacts related to long term operation of land use and transportation projects. No requirements or guidance has been given at the state or local level in San Bernardino County to analyze and mitigate VMT during project construction. VMT screening criteria and thresholds discussed throughout the document are oriented towards permanent land uses and on-going operations. Moreover, VMT per capita and VMT per employee metrics are also applicable to long-term project operations rather than short-term temporary activities such as construction. Therefore, applicable methodologies and thresholds in this analysis are related to project operations.

12.1.3 Data Request DR TRANS-3

DR TRANS-3: The section of Interstate 15 (I-15) near the project site is primarily a long-distance and recreational route, not a commute route. Much of this flow is from Southern California to Las Vegas on weekends. As such, the peak times are not during the typical weekday morning and evening commute. This is illustrated in the following graphics, which show the traffic volumes over a week in June 2024. The peak hour in the southbound direction was Friday at 2:00 p.m., and the peak hour in the northbound direction was Sunday at 11:00 a.m. For all days, the peaks were highest during the middle of the day, rather than the times analyzed in the application document. CEQA requires a disclosure of impacts and is not specific as to what time frame; therefore, the analysis should cover the local peak periods. Please provide information regarding the traffic volumes (existing and with construction traffic) during the local peak periods. If construction activities would be prohibited during these periods, please indicate as such.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, the Data Collection Section on pages 13 through 18 has been updated to provide information regarding the traffic volumes (existing and with construction traffic) during the local peak periods. PeMS graphical data is provided in Appendix C Traffic Counts and the corresponding analysis volumes in the Vistro reports in Appendix D Vistro Reports. Both are appendices of Appendix M.

12.1.4 Data Request DR TRANS-4

DR TRANS-4: From the information collected for DR TRANS-3, please provide the level of service (LOS) values for both existing conditions and with the project (during the construction phase).

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, Data Collection on Pages 15-18. Existing LOS results for the study intersections are shown in Table 4 and Table 5. Existing LOS results for the study highway mainline segments are shown in Table 6 and Table 7. Project LOS results for the study intersections are shown in Table 8 and Table 9. Project LOS results for the study highway mainline segments are shown in Table 10 and Table 11. Detailed results can be found in Appendix D Please see Exhibit 12 of this data request response.

12.1.5 Data Request DR TRANS-5

DR TRANS-5: Please provide truck flows (percent of total traffic) during the peak periods identified in DR TRANS-3.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, under Data Collection on page 13. On a daily basis, approximately 20% of vehicle traffic were trucks with at least two axles.

12.1.6 Data Request DR TRANS-6

DR TRANS-6: Given the speed of traffic flows on this section of I-15 (signed at 70 miles per hour, with actual being higher), how would construction trucks safely enter and exit from the Rasor Interchange during times of heavy volume on I-15? Please indicate whether Caltrans has been consulted on this matter and their response.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, the Off-Ramp Queuing Analysis on pages 18-19 provides this information.

While Caltrans was not consulted on the matter, we conducted operational analyses using HCM methodologies which are consistent with Caltrans methodologies. Additionally, the project would not impact access to Caltrans facilities. Intersection queuing analysis results for the off-ramp interchanges are shown in Table 12 and Table 13 (See Exhibit 12 of this data request response). In all peak hours analyzed, queues at the study interchanges do not exceed the allocated storage capacity. Intersection queuing analysis results for the off-ramp interchanges are shown in Table 14 and Table 15. Compared to existing conditions, queues increase in length during all peak hours, especially at the I-15 Northbound Off-Ramp during the AM and PM peak hours. However, the queues at the study interchanges still do not exceed the allocated storage capacity during project construction and are minimal compared to the storage capacity at the freeway off-ramps. Detailed results can be found in Appendix D to the Transportation Analysis.

12.1.7 Data Request DR TRANS-7

DR TRANS-7: As Rasor Road is unimproved (dirt) beyond the interchange, please indicate how dust from construction vehicles would be controlled so as not to impair visibility on the nearby section of I-15.

Response: Section 3-3 Air Quality has been updated and docketed to respond to this data request. Specifically, Section 3.3.3.5 Applicant-Proposed Measures on pages 3.3-26 – 3.3-27. The project proposes improvement of a portion of Rasor Road, which would include grading to widen or level the existing road and importing and compacting materials, such as soil and gravel. The Rasor Road improvements may also expand the roadway width up to approximately 26 feet wide. In combination with the dust control measures, the improvements would control dust from construction vehicles. Appendix C-2, Dust Control Plan has also been uploaded to the project docket. Exhibit 1 of this data request response provides a completeness determination letter from the MDAQMD confirming that the application submitted to the District has been deemed complete.

12.1.8 Data Request DR TRANS-8

DR TRANS-8: As the solar field would be immediately adjacent to I-15, please provide an analysis of the potential impacts of glare (reflection from the panels) on motorists of I-15. If there is a potential impact, identify how it would be mitigated.

Response: This information is contained within Chapter 3.1 Aesthetics, Section 3.1.3.3 Impact Assessment, Impact AES-4, Pages 3.1-31 – 3.1-34. Additional information can be found within Appendix E ForgeSolar Glare Analysis Report of Appendix B, Visual Resources Report.

12.1.9 Data Request DR TRANS-9

DR TRANS-9: Please estimate the direction (percentage of east vs west) that construction trucks would use for their activities and the average length of their haul. Similar for workers, please identify the likely sources of workers (geographically) and their corresponding trip length.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, Section 3.17.3.3 Impact Assessment, Impact TR-1, Page 3.17-15. Construction workers would be sourced from San Bernardino County at-large, although it is approximated that 80 percent of the workforce would commute daily to the jobsite from communities south of the project site, including Barstow (50 miles away), Victorville (80 miles away), and other major residential neighborhoods. The remaining 20 percent were assumed to commute from communities north of the project site, including Baker, approximately 7 miles away.

12.1.10 Data Request DR TRANS-10

DR TRANS-10: On page 3.17-24 in Section 3.17 Transportation, there is a reference to eliminating Rasor Road access to the Rasor OHV during construction. Would there be an alternative route for access to OHV during this period or would it be inaccessible? What is the expected duration of the closure?

Response: This information is provided in Chapter 3-16 Recreation, Section 3.16.3.4 Impact Assessment on pages 3.16-10 – 3.16-11. The project would close Rasor Road during the approximately 18 months of project construction for site security. During that time, public access to the Rasor OHV recreation area would be maintained from the Basin Road exit on I-15.

12.1.11 Data Request DR TRANS-11

DR TRANS-11: Please provide a table that summarizes the applicable transportation-related laws, ordinances, regulations, and standards, and where project conformance is identified in Section 3.17. If project conformance is not included in this section, please provide this assessment.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to transportation are discussed and summarized in Table 3.17-5. Within Section 3.17.6 Laws, Ordinances, Regulations, and Standards on Page 3.17-23. Please see Exhibit 12 of this data request response.

12.1.12 Data Request DR TRANS-12

DR TRANS-12: Please indicate the schedule and steps taken related to permit or approval for all transportation-related entities with permit or approval authority, including local and state agencies whose jurisdiction may be subsumed by CEC certification of the project.

Response: Appendix M, Transportation Analysis, has been updated and docketed to respond to this data request. Specifically, a list of agencies that were contacted during preparation of this application and federal, state, and local permits applicable to transportation are also provided in Table 3.17-6. Please see Exhibit 12 to of this data request response.

13. TRANSMISSION SYSTEM DESIGN

13.1 DATA REQUESTS DR TSD-1 THROUGH TSD-7

13.1.1 Data Request DR TSD-1

DR TSD-1: Please provide one-line diagrams for the project substation. Show all equipment ratings including the bay arrangement of the circuit breaker, disconnection switches, buses, transformers, and other equipment that would be required for the project interconnection to the proposed switchyard.

Response: Appendix A1 Engineering Generation Facility Description, Design and Operation, has been updated and docketed to respond to this data request. Specifically, Figure 1, Substation One-Line Diagram, provides a one-line diagram for the proposed project substation. Please see Exhibit 13 of this data request response.

13.1.2 Data Request DR TSD-2

DR TSD-2: Please provide one-line diagrams for the proposed switchyard. Show all equipment ratings including bay arrangement of the breakers, disconnect switches, buses, and other equipment. Show the interconnection to the LADWP 500k transmission system and the project substation.

Response: Appendix A1 Engineering Generation Facility Description, Design and Operation, has been updated and docketed to respond to this data request. Specifically, Figure 2 provides a one-line diagram for the proposed switchyard. Please see Exhibit 13 of this data request response.

13.1.3 Data Request DR TSD-3

DR TSD-3: Please provide the gen-tie structure configuration. Indicate the number of structures required to support the overhead generator tie-line and the 500 kV loop-in transmission lines of the LADWP.

Response: Appendix A1 Engineering Generation Facility Description, Design and Operation, has been updated and docketed to respond to this data request. Specifically, Section 1.1.4, Facility Description, Overhead Generator Tie-Line on pages 3 and 4. Figure 3 provides the gen-tie structure configuration. Please see Exhibit 13 of this data request response.

The gen-tie is approximately 1 mile in length. The gen-tie will utilize tubular steel poles (TSP) support structures. The height of these TSP's shall be in accordance with GO 95 to meet all electrical clearance requirements. There will be 10 to 11 support structures, two of which will be riser poles to enable use of insulated cables to go beneath I-15 via an existing Caltrans culvert. The loop-in will include 6 new towers which will be VRDX1 lattice structures as specified by LADWP design standards (Figure 4). Two of the new loop-in towers are expected to replace two of the existing structures on the Mead Adelanto line to allow for 90 deg turning into the new Soda Mountain switching station. The gen-tie will be designed in accordance with LADWP design standards and within the required Granted BLM Right of Way (ROW). The gen-tie ROW is 200' and will include a single 500 kV circuit utilizing 397.5 kcmil ACSR conductor with a maximum ampacity of 570 Amps. There will be a small segment, approximately 450 feet, of the gen-tie that is underground. This is the section that will go under US Interstate 15 in an existing Caltrans culvert. On either end of this section there will be a "riser" tower. The underground section as well as the riser poles shall be in accordance with GO 128.

The data below is for the overhead section of the gen-tie. The underground segment must be engineered to support a normal operating current of 390 Amps. The anticipated cable will be a 500 kV XLPE Insulated conductor with a nominal cross section no more than 800 MM.

2. Interconnection Transmission Line Description

Interconnection Line	R1 p.u. on 100 MVA base	X1 p.u on 100 MVA base	B p.u on 100 MVA base	R0 p.u on 100 MVA base	X0 p.u. on 10 MVA base
	0.0000105	0.000238	0.0175	0.0000735	0.00045

Interconnection Line	Length (mi.)	Conductor Type & Size	Normal Rating (MVA)	Emergency Ratin (MVA)
	1	397kCM ACSR	440	520

13.1.4 Data Request DR TSD-4

DR TSD-4: Please provide the gen-tie conductor type, size, and current carrying capacity.

Response: Please see response to TSD-3 above

13.1.5 Data Request DR TSD-5

DR TSD-5: Please provide the most recent Generator Interconnection LADWP Reassessment Study Report if it is available.

Response: The requested information has been docketed as: Confidential Appendix O3, Interconnection Facilities Study Report; Confidential Appendix O4, Interconnection Facilities Study Report; and Confidential Appendix O5, Interconnection Facilities Study Report.

13.1.6 Data Request DR TSD-6

DR TSD-6: Please discuss the CPUC GO 98 and 128 standards in reference to the project's overhead and underground construction facilities, such as grounding, duct banks, derated ampacity, overhead conductor clearances, and soil resistivity analysis.

Response: Appendix A1 Engineering Generation Facility Description, Design and Operation, has been updated and docketed to respond to this data request. Specifically, Section 1.1.2, Improvement Measures, page 2 and Section 1.1.4, Facility Description, Overhead Generator Tie-Line on pages 3 and 4. The project includes both overhead and underground facilities which will conform to both CPUC General Order (GO) 98 and 128. CPUC GO 128 is applicable to the 34.5 kV elements of the project which are largely underground and a short segment of the 500 kV Overhead Generator Tie-Line (gen-tie) between the project substation and switching station. CPUC GO 98 is applicable to the overhead electrical facilities, primarily segments of the 500 kV gen-tie that are not underground. The project will be designed in accordance with the required GO's both with respect to grounding, duct banks, derates, clearances, and soil resistivity and general conditions. Please also see response TSD-3 above.

13.1.7 Data Request DR TSD-7

DR TSD-7: The applicant has not discussed any TSE downstream impacts caused by the project in the Opt-in application. If any transmission upgrades are necessary, please provide information to support a CEQA analysis for all downstream upgrades needed for the Soda Mountain Solar Project.

Response: Appendix A1 Engineering Generation Facility Description, Design and Operation, has been updated and docketed to respond to this data request. Specifically, Section 1.1.4, Facility Description, page 3. There are no offsite transmission upgrades required due to downstream impacts. The only items that are required in terms of upgrades are related to protection settings at the Mead and Adelanto substations, which do not involve physical improvements or environmental impacts. No other upgrades are required.

14. WASTE MANAGEMENT

14.1 DATA REQUEST DR WASTE-1

14.1.1 Data Request DR WASTE-1

DR WASTE-1: Please list the individual applicable LORS in a table within Appendix R Waste Management.

Response: Appendix R, Waste Management, has been updated and docketed to respond to this data request. Specifically, Table E, LORS Applicable to Waste Management, on pages 22-25. Please see Exhibit 11 of this data request response.

15. WORKER SAFETY

15.1 DATA REQUESTS DR WS-1 THROUGH WS-4

15.1.1 Data Request DR WS-1

DR WS-1: Please include a discussion of the implementation of California Code of Regulations, Title 8, section 3395 Heat Illness Prevention in Outside Places of Employment.

Response: Appendix Q, Worker Safety, has been updated and docketed to respond to this data request. Specifically, Section 1.2.4.1.2, Construction Heat Illness Prevention Plan, page 9, includes a discussion of this requested information.

15.1.2 Data Request DR WS-2

DR WS-2: Please provide more details related to the BESS fire suppression systems to be installed and whether the optional "dry pipe fire suppression system" would be installed. Provide details on how the interior of a BESS system enclosure would be cooled after a fire event if the "dry pipe fire suppression system" would not be installed. Provide information on the leak detection equipment for the BESS. Provide more information related to fire suppression systems for the overall facility including when traditional water fire suppression would be used and water supply details including the location of hydrants. Also, add setback distances and road width dimensions for the BESS Yard (on Sheets C-101 and C-103 in Appendix A2).

Response: Appendix Q, Worker Safety, has been updated and docketed to respond to this data request. Specifically, Section 1.2.4.5.2, BESS Hazard Mitigation Analysis and Fire Suppression on pages 18-20. Please see Exhibit 14 of this data request response. Also see response to HAZ-4 and HAZ-5 above.

15.1.3 Data Request DR WS-3

DR WS-3: As required by NFPA 855, please add a discussion of the BESS hazard mitigation analysis to be prepared in compliance with UL 9540A. The hazard mitigation analysis shall include consideration of potential thermal runaway fault conditions occurring within a single battery storage rack, cell module or cell array (i.e., cell level, module level, unit level and installation level). The analysis shall include mitigations to prevent flammable gases released during fire, battery overcharging, and other abnormal operating conditions within the BESS from creating an explosion hazard that could injure workers or emergency first responders.

Response: Please see response to DR WS-2 above.

15.1.4 Data Request DR WS-4

DR WS-4: Please provide the missing names, titles, and addresses of contacts found in Table F.

Response: Appendix Q Worker Safety, has been updated and docketed to respond to this data request. Specifically, Section 1.4, Table F, page 35. Please see Exhibit 14 of this data request response.

Exhibit 1

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

DUST CONTROL PLAN AUTHORIZATION

DCP000164

This Dust Control Plan is authorized in response to District Rule 302(J)(2). This authorization is designed to enforce the provisions of Division 26 of the California Health & Safety Code and applicable District Rules and Regulations. Operations covered by this authorization must be conducted in compliance with all information included with the initial submission and requirements specified below. Equipment referenced by this authorization must be maintained and kept in good operating condition at all times. This authorization shall be maintained on site at the location referenced below at all times.

EXPIRES LAST DAY OF: OCTOBER 2025

OWNER OR OPERATOR (Co.#3071)

Soda Mountain Solar, LLC
110 Edison Place, Ste 312
Newark, NJ 07102

EQUIPMENT LOCATION (Fac.#4512)

Soda Mountain Solar
I-15 and Rasor Road
Baker, CA 92309

Descriptions:
DUST CONTROL PLAN (RULE 403(C)(6)(a) CONSTRUCTION/DEMOLITION) consisting of: a 2059 acre disturbance (2670 acre project) solar photovoltaic construction project connecting the Desert Quartzite solar project near I-15 at Rasor Road, south of Baker, expected to begin April 2026 and be completed in October 2027. Project and twenty-four hour contact is Kyle Nauman (201) 275-4780. This Dust Control Plan and project/facility/site was inspected by District staff as required by Rule 403(D)(7) on [date tbd].

EQUIPMENT

Capacity	Equipment Description
0	Water Application Equipment - six 5000 gallon water trucks operating Mon-Fri 6 am to 6 pm
0	Water Supply - one 260 gpm well (Eagle Well Drilling Majed Fradi 760-257-3553)
0	Dust Suppressant Products - water, vegetation
0	Other Dust Control Methods - gated fencing, posted 15 mph speed limit
0	Treatment For Preventing Carryout and Trackout - haul truck freeboard and cargo compartment load covering, grizzly, stabilized paved road interface with coarse aggregate, manual sweeping and picking up

REQUIREMENTS

1. The owner/operator (o/o) shall comply with the dust control plan application submitted in response to Rule 403, as approved by

Fee Schedule: 12 () | Rating: 1 plan | NAICS: 541618 | SCC: 2311000100 | Location/Coordinates: +35.13370, -116.20740

This plan does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This plan cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This plan must be renewed by the expiration date above. If billing for renewal fee required by Rule 302 is not received by expiration date above, please contact the District.

Soda Mountain Solar, LLC
110 Edison Place, Ste 312
Newark, NJ 07102

By:
Brad Poiriez
Air Pollution Control Officer

the Air Pollution Control Officer (APCO) and incorporated into this Dust Control Plan (DCP) by reference, including those specific elements regarding watering for short-term stabilization, trackout prevention and cleanup, haul vehicle freeboard and covers, graded surface stabilization, high wind condition actions, natural topography, and project scheduling.
[Rule 403(C)(6) and (D)(1)]

2. The o/o shall install signage in accordance with Rule 403 Attachment B and as approved by the Air Pollution Control Officer (APCO) prior to the start of any Active Operations as defined by Rule 403, and such signage shall be maintained for the duration of Active Operations.
[Rule 403(D)(3)]

3. This DCP indicates that the dust control plan application submitted in response to Rule 403 has been conditionally approved by the APCO. Full approval of this DCP is contingent upon satisfying condition 4 below. This DCP remains valid until the termination of all Active Operations as defined in Rule 403, unless disapproved by the APCO or not recertified in accordance with Rule 403.
[Rule 403(D)(5)]

4. The o/o notify the APCO not less than ten days prior to the commencement of Active Operations as defined by 403 (by mail, facsimile or email to DCP@mdaqmd.ca.gov). The o/o shall consequently meet with District staff on-site to review dust control requirements and commitments and to confirm compliance with this DCP and Rule 403 prior to the start of Active Operations.
[Rule 403(D)(7)]

5. The o/o must notify the Mojave Desert Air Quality Management District (District) within ten days if a significant change occurs to the project or operations covered by this DCP (by mail, facsimile or email to DCP@mdaqmd.ca.gov). An appropriately modified dust control plan application must be submitted to the District within thirty days of the change.
[Rule 403(D)(8)]

6. The o/o shall recertify this DCP annually through response to the renewal invoice. The response may consist of a statement of 'no change' if there has been no change to sources, control measures or special circumstances as detailed in the approved dust control plan application (in which case resubmittal/renewal fees shall be waived), or 'no longer active' as specified below.
[Rule 403(D)(9)]

7. The o/o shall notify the APCO in writing (by mail, facsimile or email to DCP@mdaqmd.ca.gov) within thirty days after the project/facility/site no longer qualifies as an Active Operation as defined by Rule 403.
[Rule 403(D)(10)]

8. The o/o shall pay submittal, resubmittal/recertification, site inspection, and site stability inspection fees as specified in Rule 302, Rule 403 and as specified above, or this DCP shall be deemed disapproved by the APCO.
[Rule 403(D)(11)]

9. The o/o shall maintain a copy of the dust control plan application, and records demonstrating compliance with the requirements of this DCP and Rule 403. Compliance demonstration records are required only for those days that a control measure was implemented. Records shall be maintained for at least two years (or through the completion of the project), and shall be provided to District personnel upon request.
[Rule 403(F)(1)]

10. If demolitions are planned or required as a part of this project/facility/site, the o/o shall submit asbestos demolition/renovation notification and related fees prior to demolition as required by the asbestos NESHAP (National Emissions Standard for Hazardous Air Pollutants Subpart M) and District policy.
[40 CFR 61, Subpart M]

11. The o/o shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the fugitive dust is visible in the atmosphere beyond the property line of the emissions source.
[Rule 403(C)(1)]

12. The o/o shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land, and solid waste disposal operations.
[Rule 403(C)(2)]

Exhibit 2

Table 3.3-2. Federal and State Ambient Air Quality Attainment Status

Pollutant	Federal	State
O3	Nonattainment	Nonattainment
NO2	Unclassified/Attainment	Attainment
CO	Attainment	Attainment
SO2	Unclassified/Attainment	Attainment
PM10	Nonattainment	Nonattainment
PM2.5	Unclassified/Attainment	Nonattainment

Source: Appendix C.

EXISTING CRITERIA POLLUTANT LEVELS AT NEARBY MONITORING STATIONS

Air pollutant emissions are generated in the local vicinity by mobile sources primarily consisting of automobile traffic. Area-wide sources are the primary source of pollutants in the local vicinity. Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site have been documented and measured at six air quality monitoring stations throughout the MDAQMD area. MDAQMD and CARB monitors and collects information 24 hours per day, 7 days per week on ambient levels of pollutants. The nearest stations with meteorological conditions representative of the project site are the Trona Station (Trona - Athol/Telescope #2), the Barstow Station, the Ridgecrest – Ward Station, and the Fontana Station which monitor O_3, NO_2, SO_2, CO, PM_{10}, and $PM_{2.5}$. Data from these monitoring stations are summarized in Table 3.3-3, Table 3.3-4, Table 3.3-5, and Table 3.3-6, below. The data show violations of the state PM_{10} standard and federal and state O_3.

The high desert's proximity to South Coast Air Basin and the prevailing southwest winds that transport pollutants from more congested urban areas south of the Cajon Pass into the region causes concern over ground-level O_3 impacting ambient air. Violations of the federal O_3 standard occur several times each summer, as do violations of the state standard for particulate matter (PM_{10}), usually in the fall and winter. The air quality data collected by CARB in Table 3.3-3, Table 3.3-4, Table 3.3-5, and Table 3.3-6 include exceptional events, including wind and wildfires. The national and state criteria pollutants and the applicable ambient air quality standards are listed above in Table 3.3-1.

Table 3.3-3 and Table 3.3-4 show the Trona monitoring station and Barstow monitoring station which are the most representative of the conditions at the project site as these have similar complexity of the terrain and surrounding land use. However, data for SO_2, CO, and $PM_{2.5}$ are not available for these monitoring stations. As such, data for SO_2, CO, and $PM_{2.5}$ is provided in Table 3.3-5 and Table 3.3-6 from the Ridgecrest – Ward monitoring station and the Fontana monitoring station, which are not considered as representative as the Trona and Barstow monitoring stations.

Table 3.3-3. Summary of Ambient Air Quality Monitoring for the Trona Monitoring Station

Criteria Pollutant		Year		
		2021	2022	2023
O_3	Maximum 1-hour concentration (ppm)	0.094	0.099	0.075
	Days exceeding CAAQS (0.09 ppm)	0	1	0
	Maximum 8-hour concentration (ppm)	0.078	0.084	0.070
	Days exceeding NAAQS (0.07 ppm)	5	1	0
	Days exceeding CAAQS (0.07 ppm)	5	1	0

Criteria Pollutant		Year		
		2021	2022	2023
PM10	Maximum 24-hour concentration (µg/m^3)	184.1	357.6	97.3
	Days exceeding NAAQS (150 µg/m^3)	2	2	0
	Days exceeding CAAQS (50 µg/m^3)	*	*	*
NOx	Maximum 1-hour concentration (ppb)	43.6	41.1	43.0
	Days exceeding NAAQS (100 ppb)	0	0	0
	Days exceeding CAAQS (180 ppb)	0	0	0
	Maximum Annual concentration (ppb)	3	3	3
	Days exceeding NAAQS (53 ppb)	0	0	0
	Days exceeding CAAQS (30 ppb)	0	0	0

Source: CARB (2023a).
Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter.
*Insufficient data
Data for O_3, NO_2, and PM_{10} were obtained from the CARB Trona - Athol/Telescope #2 Monitoring Station.

Table 3.3-4. Summary of Ambient Air Quality Monitoring for the Barstow Monitoring Station

Criteria Pollutant		Year		
		2021	2022	2023
O_3	Maximum 1-hour concentration (ppm)	0.099	0.095	0.085
	Days exceeding CAAQS (0.09 ppm)	2	1	0
	Maximum 8-hour concentration (ppm)	0.087	0.084	0.077
	Days exceeding NAAQS (0.07 ppm)	20	13	16
	Days exceeding CAAQS (0.07 ppm)	20	13	16
PM10	Maximum 24-hour concentration (µg/m^3)	372.7	225.1	318.7
	Days exceeding NAAQS (150 µg/m^3)	1	6	3
	Days exceeding CAAQS (50 µg/m^3)	*	*	*
NOx	Maximum 1-hour concentration (ppb)	62.4	59.8	60.3
	Days exceeding NAAQS (100 ppb)	0	0	0
	Days exceeding CAAQS (180 ppb)	0	0	0
	Maximum Annual concentration (ppb)	14	14	13
	Days exceeding NAAQS (53 ppb)	0	0	0
	Days exceeding CAAQS (30 ppb)	0	0	0

Source: CARB (2023a).
Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter.
*Insufficient data
Data for O_3, NO_2, and PM_{10} were obtained from the CARB Barstow Monitoring Station.

Table 3.3-5. Summary of Ambient Air Quality Monitoring for the Ridgecrest–Ward Monitoring Station

Criteria Pollutant		Year		
		2021	2022	2023
PM10	Maximum 24-hour concentration (µg/m^3)	285.6	416.8	176.5
	Days exceeding NAAQS (150 µg/m^3)	3	2	1

Criteria Pollutant		Year		
		2021	2022	2023
	Days exceeding CAAQS (50 µg/m^3)	25	11	4
PM2.5	Maximum 24-hour concentration (µg/m^3)	178.0	32.3	13.3
	Days exceeding NAAQS (35 µg/m^3)	12	0	0
	Maximum Annual concentration (µg/m^3)	8.3	4.0	4.5
	Days exceeding NAAQS (9 µg/m^3)	0	0	0

Source: CARB (2023a).
Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter.
Data for PM_{10} and $PM_{2.5}$ were obtained from the CARB Ridgecrest – Ward Monitoring Station.

Table 3.3-6. Summary of Ambient Air Quality Monitoring for the Fontana Monitoring Station

Criteria Pollutant		Year		
		2021	2022	2023
SO2	Maximum 1-hour concentration (ppb)	5.0	2.7	3.3
	Days exceeding NAAQS (75 ppb)	0	0	0
	Maximum 24-hour concentration (ppb)	0.24	0.46	0.22
	Days exceeding NAAQS (140 µg/m^3)	0	0	0
CO	Maximum 1-hour concentration (ppm)	1.9	1.6	1.5
	Days exceeding NAAQS (35 ppm)	0	0	0
	Maximum 8-hour concentration ppm)	1.4	1.0	1.0
	Days exceeding NAAQS (9 ppm)	0	0	0

Source: CARB (2023a).
Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter.
Data for SO_2 and CO were obtained from the CARB Fontana Monitoring Station.

3.3.3 Impact Assessment

3.3.3.1 Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by the CEQA Guidelines, Appendix G. The project would be considered to have a significant effect on air quality resources if the effects exceed the significance criteria described below:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Each of these thresholds is discussed under Section 3.3.3.4, Impact Analysis, below.

Exhibit 3

MEMORANDUM

Date: October 24, 2024 **Job No.:**24208-00

To: Kara Laurenson-Wright, SWCA Environmental Consultants

From: Yilin Tian, Baseline Environmental Consulting

Subject: Air Quality Technical Report, Soda Mountain Solar Project, San Bernardino County, California

Baseline Environmental Consulting (Baseline) has prepared this technical study to evaluate potential air quality impacts associated with implementation of the Soda Mountain Solar Project (project) proposed by Soda Mountain Solar, LLC. The 2,670-acre project site is located in unincorporated San Bernardino County, California, approximately 50 miles northeast of Barstow. SWCA has completed a project-level analysis of potential air quality impacts for CEQA review. To utilize the California Energy Commission's (CEC) Opt-in Certification Program, additional air quality analysis has been prepared in this technical study to support an Application for Certification (AFC) (20 CCR, Div. 2, Ch. 5 App. B), focusing on the CEC requirements in Appendix B of the AFC Program Guidance under sections (g)(8)(H) through (g)(8)(I) and sections (g)(9)(A) through (g)(9)(D).

Meteorological Conditions

In accordance with AFC section (g)(8)(H), AERMOD-ready meteorological data process by the California Air Resources Board (CARB)[1] from the Barstow-Daggett Airport Meteorological Station (KDAG) were selected to represent the meteorological conditions of the project area. The Barstow-Daggett Airport Meteorological Station is representative due to its proximity to the project site, similar complexity of the terrain and surrounding land use, and the time period of available data. The Barstow-Daggett Airport Meteorological Station is the nearest meteorological station located about 38 miles southwest of the project site. The project site is located in a valley dividing the northern and southern portions of the Soda Mountains, and similarly the Barstow-Daggett Airport Meteorological Station is located in a valley with the Calico Mountains to the north and Newberry Mountains to the south. In addition, the surrounding land uses of the Barstow-Daggett Airport Meteorological Station are similar to the project site, which is composed of mostly undeveloped desert. CARB has process five recent years of data from 2015 to 2020 for the Barstow-Daggett Airport Meteorological Station.

[1] California Air Resources Board (CARB), 2024. HARP AERMOD Meteorological Files. Available at: https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files

Therefore, the Barstow-Daggett Airport Meteorological Station is the most representative station meteorologically for dispersion modeling and health risk assessments at the project site.

The AERMOD-ready meteorological data processed for this station include surface and profile files for the estimation of atmospheric boundary layer parameters used in air dispersion modeling. The surface and profile files were developed based on surface meteorological data, upper air meteorological data, and land use data. The quarterly wind tables, wind roses, ambient temperatures, and relative humidity for year 2020 are summarized in **Attachment A**. The prevailing wind direction is from the west, with the quarterly average wind speed ranging from 9.5 miles per hour to 14.5 miles per hour through the year. The electronic version of the meteorology data is provided in **Attachment B**.

Criteria Air Pollutant Air Quality Impacts

Construction and operation of the project would generate criteria pollutant emissions that could potentially impact regional air quality. The project's construction and operational emissions of criteria air pollutants and precursors were estimated using the most recent version of the California Emissions Estimator Model (CalEEMod version 2022.1), as reported in the Air Quality and Greenhouse Gas Technical Report for the project prepared by SWCA in March 2024 (Air Quality Report).[2]

Project construction is expected to last for approximately 18 months from March 2025 through the end of August 2026. The first full year of project operation is expected in 2027. As stated in the Air Quality Report, the estimated unmitigated construction and operational emissions for all pollutants are below Mojave Desert Air Quality Management District's (MDAQMD) daily and annual significance thresholds; therefore, the project would not violate or contribute substantially to an existing or projected air quality violation. The analysis included in the Air Quality Report satisfies the requirements under AFC sections (g)(8)(I)(i) and (g)(8)(I)(ii).

AFC section (g)(8)(I)(iii) requires a protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six-mile radius which have received construction permits but are not yet operational or are in the permitting process. The following two projects are located within the six-miles radius of the project:

- I-15 Mojave Wildlife Crossings Restoration Project
- Brightline West - Las Vegas to Victor Valley

[2] SWCA, 2024. Air Quality and Greenhouse Gas Technical Report for the Soda Mountain Solar Project, San Bernardino County, California. March,

MDAQMD's CEQA and Federal Conformity Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the project site.[3] MDAQMD's air quality thresholds of significance are designed to achieve or maintain attainment designations associated with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Individual projects that do not exceed the MDAQMD's thresholds of significance would not result in a cumulatively considerable contribution to a nonattainment status or the health effects associated with criteria air pollutants. Since the project's construction and operational emissions are below the MDAQMD's applicable thresholds of significance, the project's cumulative contribution of criteria air pollutant emissions would not cause or contribute to a violation of any ambient air quality standard.

AFC section (g)(8)(I)(iv) requires an air dispersion modeling analysis of the impacts associated with the project's initial commissioning phase emissions on state and federal ambient air quality standards for NO_x, SO_2, CO, PM_{10}, and $PM_{2.5}$. Operation of the project will be limited to panel washing and maintenance. Criteria air pollutant emission sources during project operations would include mobile sources, water use, and maintenance. According to the Air Quality Report, the project's daily and annual operational emissions of criteria air pollutants would be substantially less than the construction emissions. Therefore, an air dispersion modeling analysis of the impacts associated with project construction emissions on state and federal ambient air quality standards, instead of the project's initial commissioning phase, was performed to evaluate the worst-case scenario since the project's operational emissions are relatively marginal.

The nearest sensitive receptor that could be exposed to criteria air pollutants generated by the project is located next to the Rasor Road service station, roughly 260 feet southwest of the project boundary. This stand-alone house is used as accommodation for four workers. There are no other sensitive receptors within 1,500 feet of the project site and actual construction occurs more than 3,500 feet from this stand-alone home.

A screening-level modeling analysis of criteria air pollutants generated during project construction was conducted using the U.S. Environmental Protection Agency's AERMOD air dispersion model. For modeling purposes, daily emissions from construction were assumed to occur 10 hours per day between 7 a.m. and 5 p.m., Monday through Friday. The criteria air pollutant emissions from project construction were represented in the AERMOD model as one area sources encompassing the solar array footprint on the project site. It was conservatively assumed that all criteria air pollutant emissions, including on-road and off-road emissions, would occur on site to represent the worst-case scenario. Construction of the project is

[3] Mojave Desert Air Quality Management District (MDAQMD). 2020. California Environmental Quality Act (CEQA) And Federal Conformity Guidelines. Available at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000.

expected to last 18 months. The emission rate for each criteria air pollutant of interest was based on the actual hours of work per day and the highest peak daily emissions during construction (2025 peak daily emissions).

A uniform grid of receptors spaced 500 meters apart was created for ground level receptors at heights of 1.5 meters to develop isopleths (i.e., concentration contours) around the project site that illustrate the general air dispersion pattern from the emissions sources. In addition, a discrete receptor was created for ground level receptors at heights of 1.5 meters to calculate concentrations at the nearest sensitive receptor. The AERMOD model input parameters included 1 year of CARB-processed meteorological data from the Barstow-Daggett Airport Meteorological Station mentioned above. The input parameters and assumptions used for estimating the dispersion of criteria air pollutants are included in **Attachment C**.

As shown in **Table 1**, the estimated concentrations of PM_{10}, $PM_{2.5}$, NO_2, CO, and SO_2, at the nearest sensitive receptor during project construction would be below the CAAQS and NAAQS.

Table 1. Estimated Criteria Air Pollutant Concentrations at the Nearest Receptor

Pollutant	Averaging Time	Unit	Ambient Air Quality Standards[1]		Concentrations at the Nearest Receptor
			CAAQS	NAAQS	Construction
PM_{10}	24-Hour	µg/m^3	50	150	0.17
	Annual	µg/m^3	20	---	0.007
$PM_{2.5}$	24-Hour	µg/m^3	---	35	0.07
	Annual	µg/m^3	12	12	0.003
NO_2	1-Hour	ppm	0.18	0.100	0.006
	Annual	ppm	0.030	0.053	<0.001
CO	1-Hour	ppm	20	35	0.015
	8-Hour	ppm	9.0	9	<0.001
SO_2	1-Hour	ppm	0.25	0.075	<0.001
	24-Hour	ppm	0.04	0.14	<0.001
	Annual	ppm	---	0.030	<0.001

Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter; --- = not applicable
[1] Bay Area Air Quality Management District (BAAQMD), 2017b. Air Quality Standards and Attainment Status. Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status, accessed May 30, 2019. Last updated January 5, 2017.
Source: Attachment C

Health Risk Assessment

Project construction would generate diesel particulate matter (DPM) emissions from the exhaust of off-road diesel construction equipment. section (g)(9)(A), an assessment of the potential risk to human health from the project's hazardous air emissions during construction

was performed using CARB's Hotspots Analysis and Reporting Program (HARP). The potential cancer risks and chronic hazard index (HI) to sensitive receptors exposed to DPM emissions during project construction were evaluated using HARP, which includes cancer potency values and noncancer reference exposure levels approved by the Office of Environmental Health Hazard Assessment (OEHHA).[4] The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA.

For this analysis, total PM_{10} emission rates were used as a surrogate for DPM, which is a conservative assumption because more than 90 percent of DPM is less than 1 micron in diameter. The ground level PM_{10} concentrations at the nearest sensitive receptor were estimated using the AERMOD air dispersion model and the same modeling parameters described above, except for the PM_{10} emission rate. For this analysis, the PM_{10} emission rate was based on the actual hours of work and total PM_{10} mass emission averaged over the entire duration of construction.

Potential cancer health risk and chronic HI were evaluated for the maximally exposed individual resident (MEIR) on the ground floor of the nearest residence located about 260 feet southwest of the project boundary. Because this residence is used to accommodate workers, the starting age of exposure was assumed to be 16 years old. Project construction is expected to last for approximately 18 months. It was conservatively assumed that an adult worker would work in the same location during the entire construction duration (rounded up to 2 years). As required by AFC section (g)(9)(B), a listing of the input data and output results, in both electronic and print formats, used to prepare the HARP health risk assessment are provided in **Attachment D**. As required by AFC section (g)(9)(D), the MEIR location is shown in **Figure 1**.

Estimates of the health risks at the MEIR from exposure to DPM during project construction are summarized and compared to the MDAQMD's thresholds of significance in **Table 2**. The estimated excess cancer risk, chronic and acute HI for DPM from construction emissions were below the thresholds of significance. Therefore, construction of the project would not expose existing sensitive receptors to substantial concentrations of hazardous air pollutants from project construction.

Table 2: Health Risks during Project Construction

Emissions Scenario	Receptor	Diesel Particulate Matter		
		Cancer Risk (per million)	Chronic Hazard Index	Acute Hazard Index
Construction	MEIR	0.038	0.001	0

[4] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, May.

MDAQMD Thresholds of Significance	10	1.0	1.0
Exceed Threshold?	No	No	No

Notes: µg/m^3 = micrograms per cubic meter

AFC section (g)(9)(C) requires the identification of available health studies through the local public health department concerning the potentially affected population within a six-mile radius of the proposed power plant site related to respiratory illnesses, cancers or related diseases. The San Bernardino County Public Health Department is the local public health department. Based on a review of the Department's available data and report,[5] no health studies concerning the potentially affected population within a six-mile radius of the proposed power plant site related to respiratory illnesses, cancers or related diseases have been identified.

As part of the National Air Toxics Assessment, local DPM concentrations, cancer risk, and non-cancer respiratory risk associated with cumulative exposure to air toxics were obtained via the Environmental Protection Agency's (EPA) Analytical Tools Interface for Landscape Assessments (ATtILA) Interactive Map.[6] The DPM concentrations in the project vicinity are less than 0.251 µg/m^3. The cancer risk due to cumulative air toxics is less than 28.5 in a million and the non-cancer respiratory risk (HI) is less than 0.362. In addition, the California Emission Inventory Development and Reporting System (CEIDARS),[7] a database management system developed by California Air Resources Board to track statewide criteria pollutant and air toxic emissions, identified one stationary source, California State University Desert Studies Center (Facility ID: 3238), within the six-mile radius of the proposed power plant. However, the associated health risks were not reported in CEIDARS.

[5] San Bernardino County Public Health, Data and Report. Available at: https://dph.sbcounty.gov/data/
[6] EPA Analytical Tools Interface for Landscape Assessments (ATtILA) Interactive Map, 2024. Available at: https://enviroatlas.epa.gov/enviroatlas/interactivemap/
[7] California Air Resources Board (CARB), 2024. California Emission Inventory Development and Reporting System. Accessed via: https://ww2.arb.ca.gov/applications/facility-search-engine

FIGURE

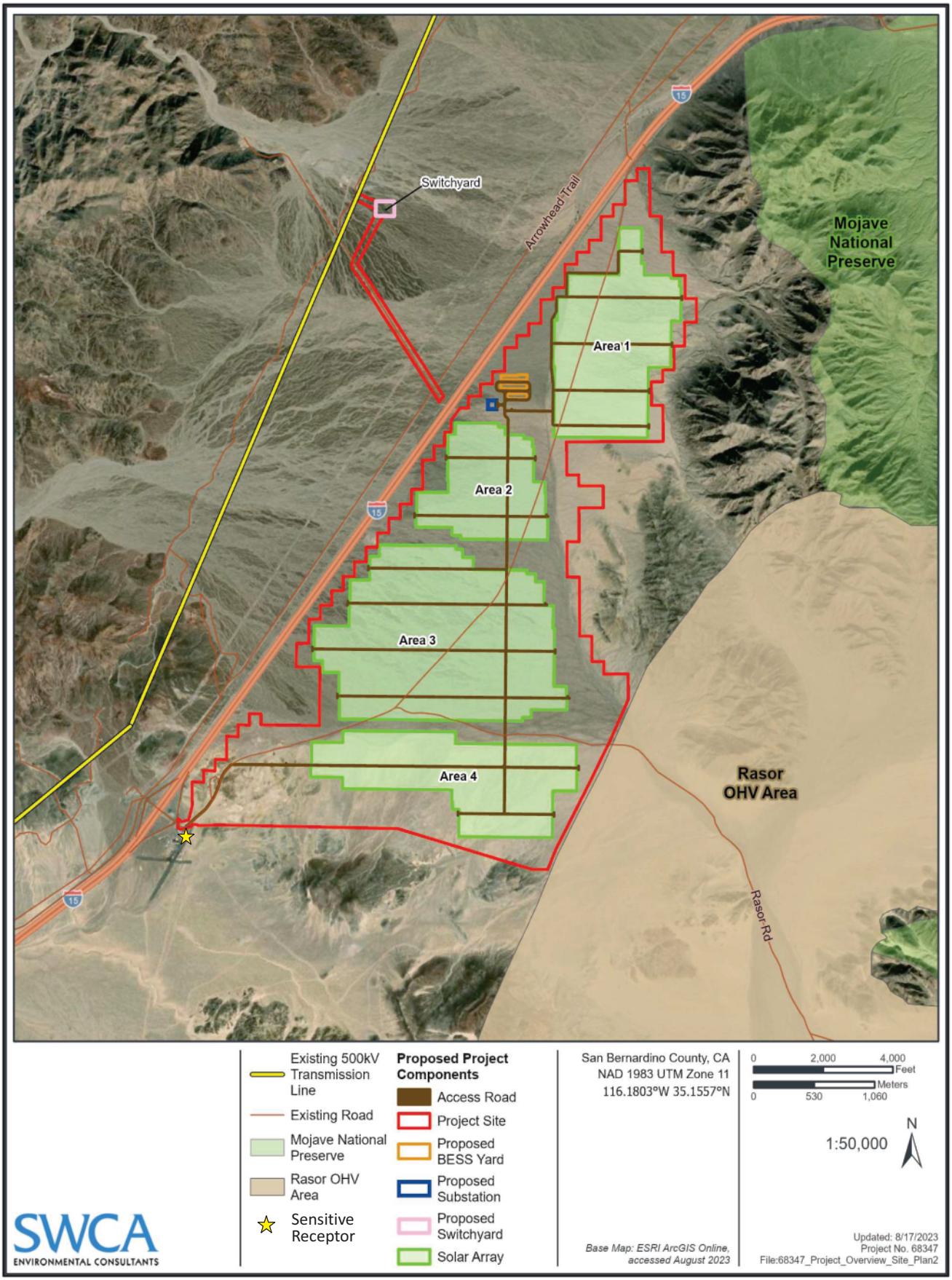


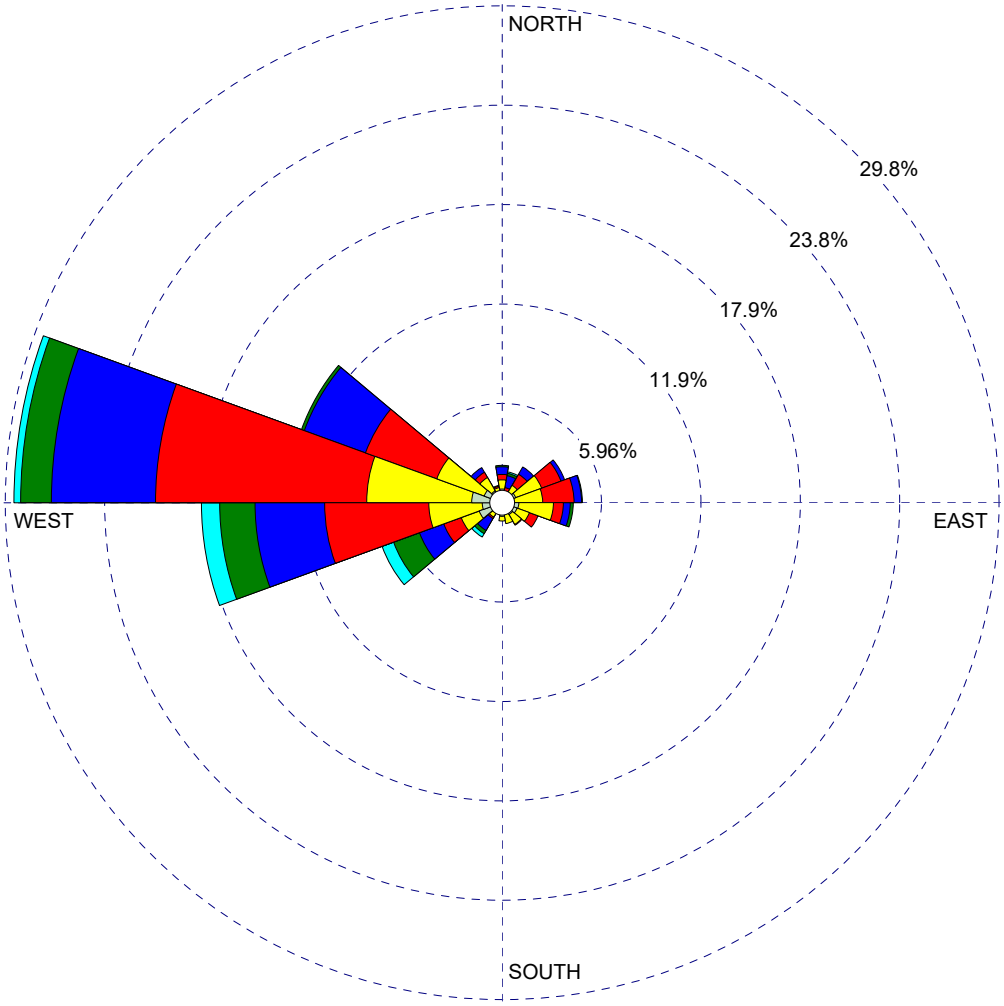
Figure 1. Sensitive Receptor Location

ATTACHMENT A
SUMMARY OF METEOROLOGICAL CONDITIONS

WIND ROSE PLOT: Soda Mountain Solar Project

Station #23161 - DAGGETT/FAA AIRPORT, CA

DISPLAY:
Wind Speed
Direction (blowing from)

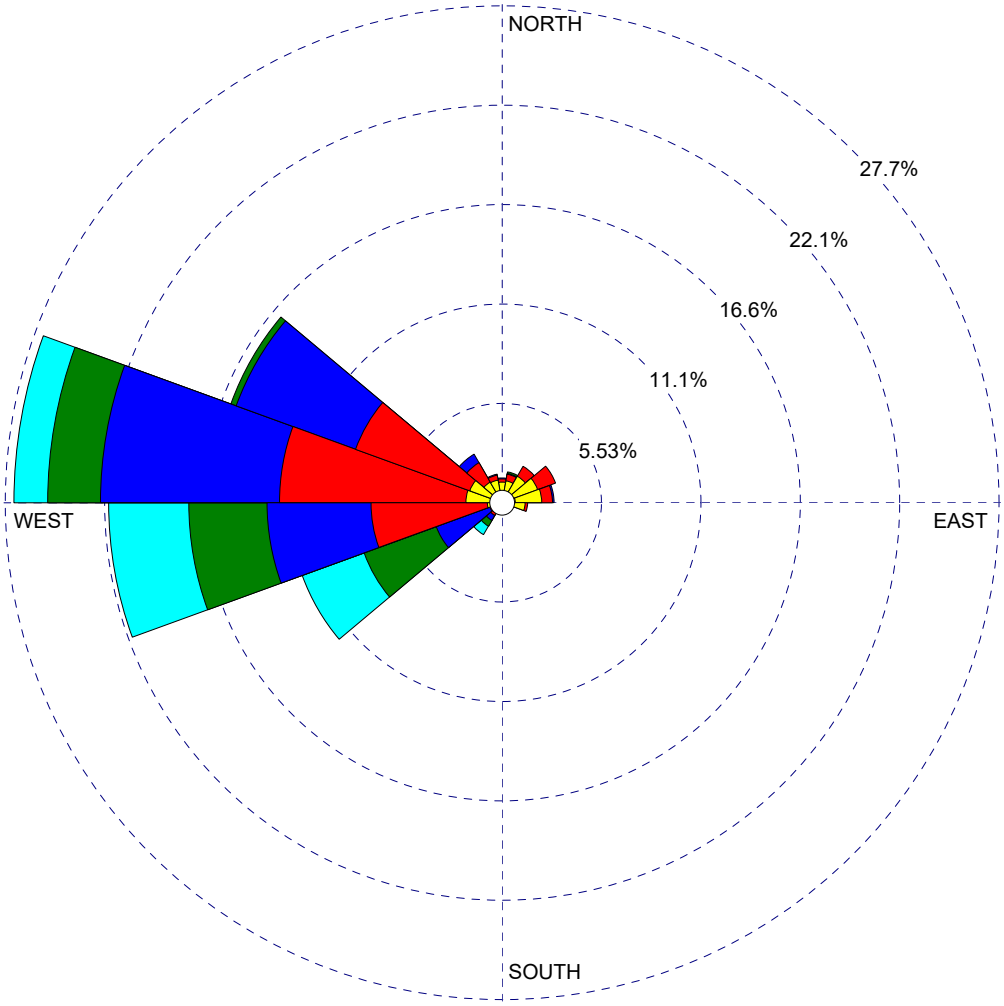


COMMENTS: 2020 First Quarter	DATA PERIOD: **Start Date: 1/1/2020 - 00:00** **End Date: 3/31/2020 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.09%**	TOTAL COUNT: **4368 hrs.**	
	AVG. WIND SPEED: **4.72 m/s**	DATE: **6/5/2024**	PROJECT NO.: **24208-00**

WIND ROSE PLOT: Soda Mountain Solar Project

Station #23161 - DAGGETT/FAA AIRPORT, CA

DISPLAY:
Wind Speed
Direction (blowing from)

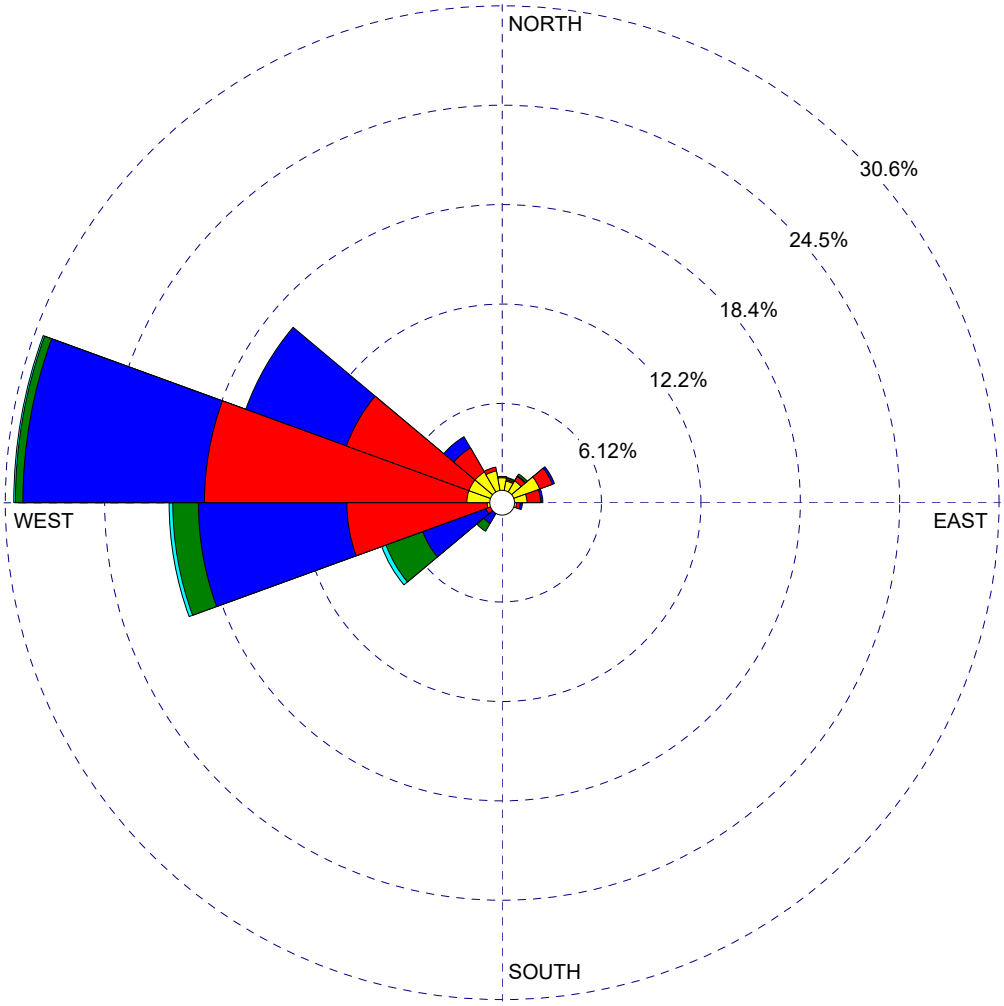


COMMENTS: 2020 Second Quarter	DATA PERIOD: **Start Date: 4/1/2020 - 00:00** **End Date: 6/30/2020 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.09%**	TOTAL COUNT: **4290 hrs.**	
	AVG. WIND SPEED: **6.46 m/s**	DATE: **6/5/2024**	PROJECT NO.: **24208-00**

WIND ROSE PLOT: Soda Mountain Solar Project

Station #23161 - DAGGETT/FAA AIRPORT, CA

DISPLAY:
Wind Speed
Direction (blowing from)



WIND SPEED
(m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

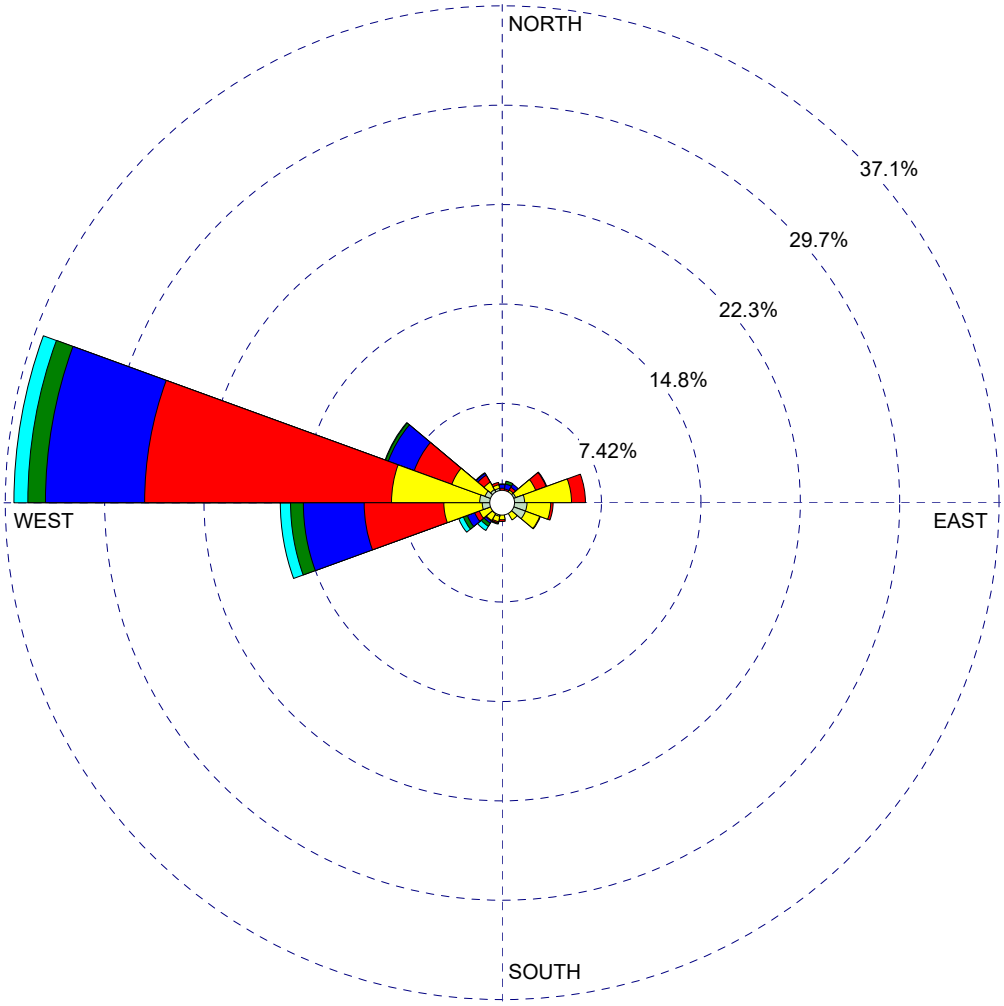
Calms: 0.46%

COMMENTS: 2020 Third Quarter	DATA PERIOD: **Start Date: 7/1/2020 - 00:00** **End Date: 9/30/2020 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.46%**	TOTAL COUNT: **4284 hrs.**	
	AVG. WIND SPEED: **5.28 m/s**	DATE: **6/5/2024**	PROJECT NO.: **24208-00**

WIND ROSE PLOT: Soda Mountain Solar Project

Station #23161 - DAGGETT/FAA AIRPORT, CA

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS: 2020 Fourth Quarter	DATA PERIOD: **Start Date: 10/1/2020 - 00:00** **End Date: 12/31/2020 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.91%**	TOTAL COUNT: **4400 hrs.**	
	AVG. WIND SPEED: **4.27 m/s**	DATE: **6/5/2024**	PROJECT NO.: **24208-00**

2020 First Quarter - Wind Speeds (m/s)

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
350 - 10	36	24	14	20	4	0	98
10 - 30	14	14	12	32	6	4	82
30 - 50	30	22	34	22	0	0	108
50 - 70	38	72	54	10	0	0	174
70 - 90	32	74	82	20	2	0	210
90 - 110	44	90	26	18	8	0	186
110 - 130	42	34	24	0	0	0	100
130 - 150	36	30	2	0	0	0	68
150 - 170	32	24	0	0	0	0	56
170 - 190	36	12	0	0	0	0	48
190 - 210	16	6	0	0	2	0	24
210 - 230	24	20	4	36	10	10	104
230 - 250	64	50	48	68	72	32	334
250 - 270	52	140	272	182	92	48	786
270 - 290	80	274	552	272	80	18	1276
290 - 310	50	132	198	170	8	0	558
310 - 330	36	40	16	14	0	0	106
330 - 350	24	16	4	0	2	0	46
Sub-Total	686	1074	1342	864	286	112	4364
Calms							4
Missing/Incomplete							0
Total							4368

2020 Second Quarter - Wind Speeds (m/s)

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
350 - 10	10	15	4	1	0	0	30
10 - 30	7	20	8	1	2	0	38
30 - 50	2	35	14	0	0	0	51
50 - 70	3	43	23	0	0	0	69
70 - 90	16	32	13	2	0	0	63
90 - 110	7	21	3	0	0	0	31
110 - 130	2	8	1	2	0	0	13
130 - 150	5	2	0	2	0	0	9
150 - 170	3	1	1	0	0	0	5
170 - 190	1	3	0	0	0	0	4
190 - 210	3	1	1	0	0	0	5
210 - 230	6	6	6	7	8	12	45
230 - 250	1	2	13	69	93	80	258
250 - 270	3	15	141	126	95	97	477
270 - 290	4	40	226	217	64	41	592
290 - 310	5	37	147	154	7	0	350
310 - 330	7	22	27	12	0	0	68
330 - 350	8	20	6	1	0	0	35
Sub-Total	93	323	634	594	269	230	2143
Calms							2
Missing/Incomplete							39
Total							2184

2020 Third Quarter - Wind Speeds (m/s)

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
350 - 10	14	56	4	0	0	0	74
10 - 30	12	46	4	0	4	2	68
30 - 50	10	58	14	2	6	0	90
50 - 70	16	90	36	6	0	0	148
70 - 90	6	62	36	6	0	0	110
90 - 110	6	32	10	6	0	0	54
110 - 130	4	6	10	2	0	0	22
130 - 150	8	10	8	2	0	0	28
150 - 170	6	4	2	6	0	0	18
170 - 190	4	0	2	4	0	0	10
190 - 210	8	6	4	0	0	2	20
210 - 230	16	2	12	36	24	0	90
230 - 250	8	10	32	190	104	12	356
250 - 270	2	38	380	404	68	10	902
270 - 290	14	84	700	500	20	4	1322
290 - 310	16	78	350	290	0	0	734
310 - 330	16	82	82	36	0	0	216
330 - 350	24	62	12	0	0	0	98
Sub-Total	190	726	1698	1490	226	30	4360
Calms							20
Missing/Incomplete							36
Total							4416

2020 Fourth Quarter - Wind Speeds (m/s)

Directions / Wind Classes (m/s)	0.50 - 2.10	2.10 - 3.60	3.60 - 5.70	5.70 - 8.80	8.80 - 11.10	>= 11.10	Total
350 - 10	20	14	14	12	2	0	62
10 - 30	22	10	14	16	10	0	72
30 - 50	24	24	10	12	0	0	70
50 - 70	48	70	36	2	0	0	156
70 - 90	74	154	46	0	0	0	274
90 - 110	82	78	8	0	0	0	168
110 - 130	82	50	2	0	0	0	134
130 - 150	40	26	0	0	0	0	66
150 - 170	22	14	2	0	0	0	38
170 - 190	36	20	6	0	0	0	62
190 - 210	46	18	4	0	2	2	72
210 - 230	42	26	2	8	12	16	106
230 - 250	40	40	16	26	14	16	152
250 - 270	66	126	262	200	42	34	730
270 - 290	74	290	812	326	58	46	1606
290 - 310	60	116	132	90	10	2	410
310 - 330	50	28	26	8	2	0	114
330 - 350	48	12	8	0	0	0	68
Sub-Total	876	1116	1400	700	152	116	4360
Calms							40
Missing/Incomplete							16
Total							4416

Summary Table for Temperature and Relative Humidity

Season	Average Temperature (F)	Average Relative Humidity (%)
2020 - First Quarter	53.7	41
2020 - Second Quarter	89.7	42
2020 - Third Quarter	94.7	23
2020 - Fourth Quarter	58.6	26

ATTACHMENT B
AERMOD-READY METEOROLOGICAL DATA
(ELECTRONIC VERSION PROVIDED SEPARATELY)

ATTACHMENT C
AERMOD INPUT PARAMETERS AND ASSUMPTIONS

Summary of AERMOD Model Parameters, Assumptions, and Results for Emissions from Construction

AERMOD Model Parameters and Assumptions				
Source Type	**Units**	**Value**	**Notes**	
Area Source: Construction				
Average Hours/Work Day	hours/day	7.14	10 hours per day, 5 days per week	
Release Height	meters	5.0	SMAQMD, 2015	
Initial Vertical Dimension	meters	1.4	USEPA, 2022	
PM_{10} Emission Rate	gram/second	0.55615	Estimated based on peak daily emissions	
$PM_{2.5}$ Emission Rate	gram/second	0.21540	Estimated based on peak daily emissions	
NO_2 Emission Rate	gram/second	2.39409	Estimated based on peak daily emissions	
CO Emission Rate	gram/second	3.48697	Estimated based on peak daily emissions	
SO_2 Emission Rate	gram/second	0.00653	Estimated based on peak daily emissions	
DPM Emission Rate	gram/second	0.44071	Estimated based on total PM_{10} mass emissions and 18 months of construction (391 work days)	
AERMOD Model Results				
Pollutant	**Unit**	**Averaging Time**	**Concentration**	**Note**
PM_{10} Concentration	$\mu g/m^3$	24-hour	0.17	
	$\mu g/m^3$	Annual	0.007	
$PM_{2.5}$ Concentration	$\mu g/m^3$	24-hour	0.07	
	$\mu g/m^3$	Annual	0.003	
NO_2 Concentration	ppm	1-Hour	0.0062	Conversion factor: 1 $\mu g/m^3$ NO_2 = 0.000532 ppm
	ppm	Annual	0.00002	
CO Concentration	ppm	1-Hour	0.01488	Conversion factor: 1 $\mu g/m^3$ CO = 0.000873 ppm
	ppm	8-Hour	0.00003	
SO_2 Concentration	ppm	1-Hour	1.15E-05	Conversion factor: 1 $\mu g/m^3$ SO_2 = 0.000382 ppm
	ppm	24-Hour	7.64E-07	
	ppm	Annual	3.82E-08	
DPM Concentration	$\mu g/m^3$	Annual	0.0052	

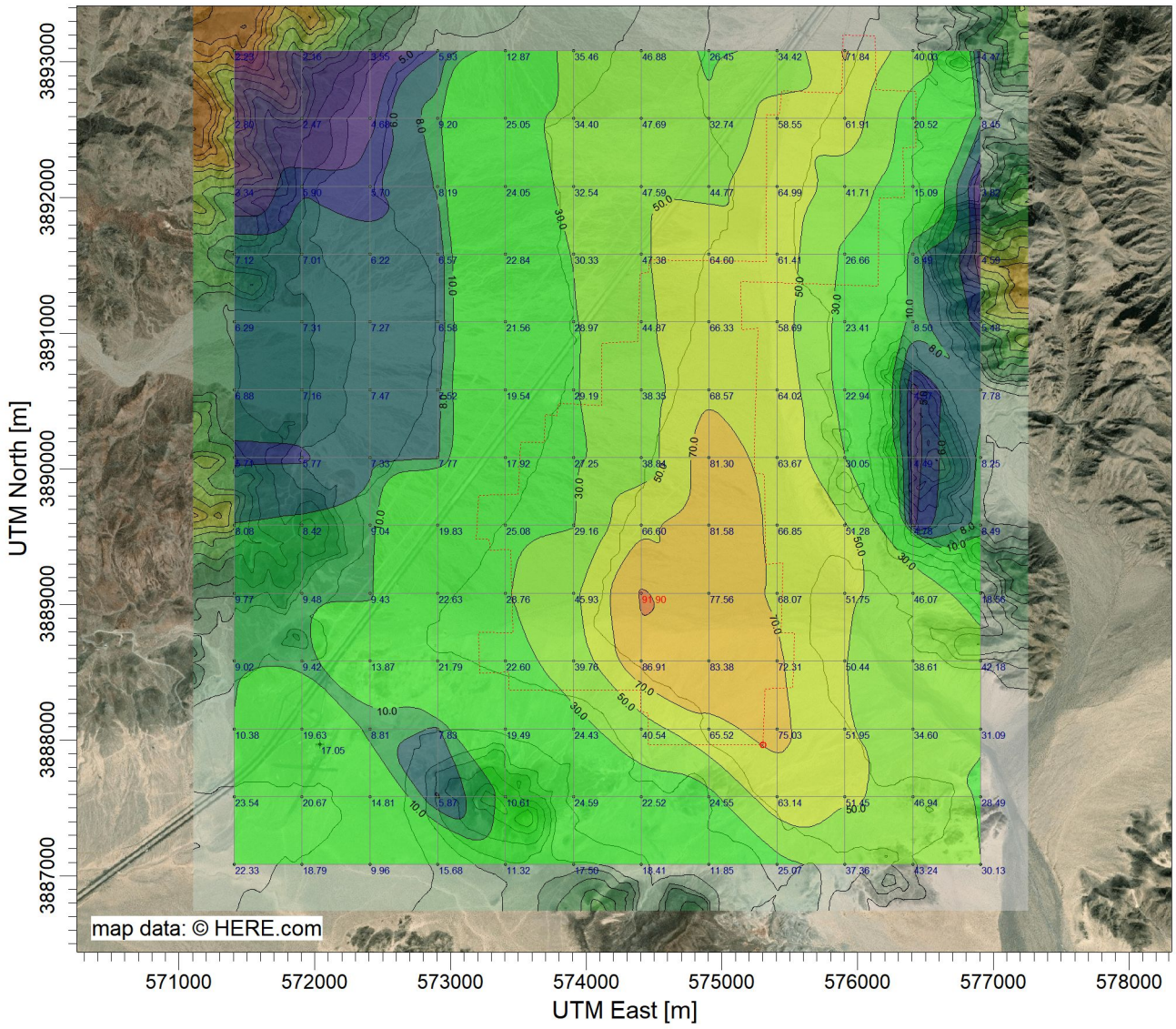
All NOx emissions assumed to be NO_2.

U.S. Environmental Protection Agency (USEPA), 2022. *User's Guide for the AMS/EPA Regulatory Model* (AERMOD).

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County* . June.

PROJECT TITLE:

Soda Mountain Solar Project
Construction - CO



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

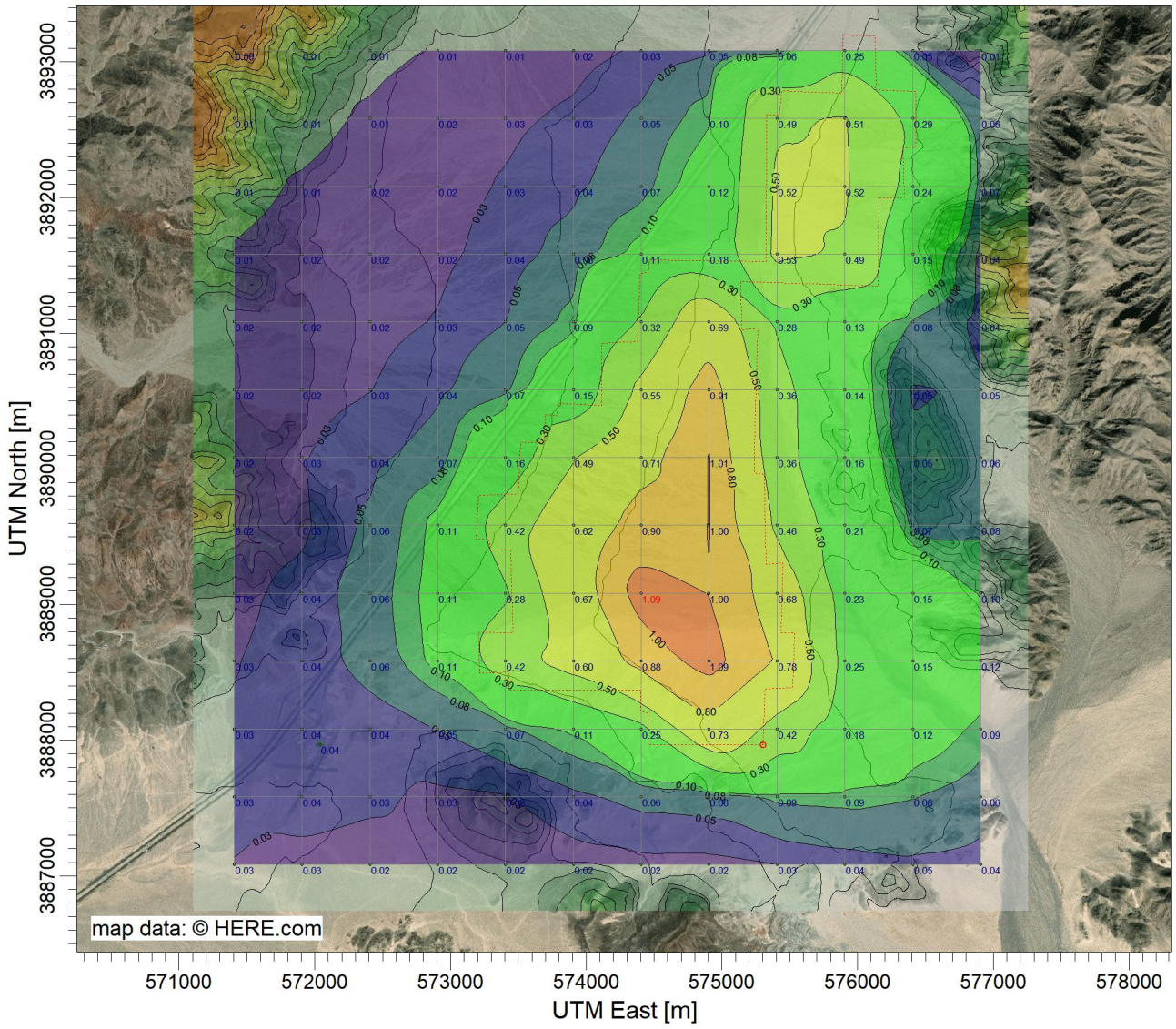
Max: 91.9 [ug/m^3] at (574405.52, 3889083.87)

2.2 5.0 6.0 8.0 10.0 30.0 50.0 70.0 90.0 91.9

COMMENTS: 1-hour CO	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,701 0 2 km	
	MAX: **91.9 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - CO



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

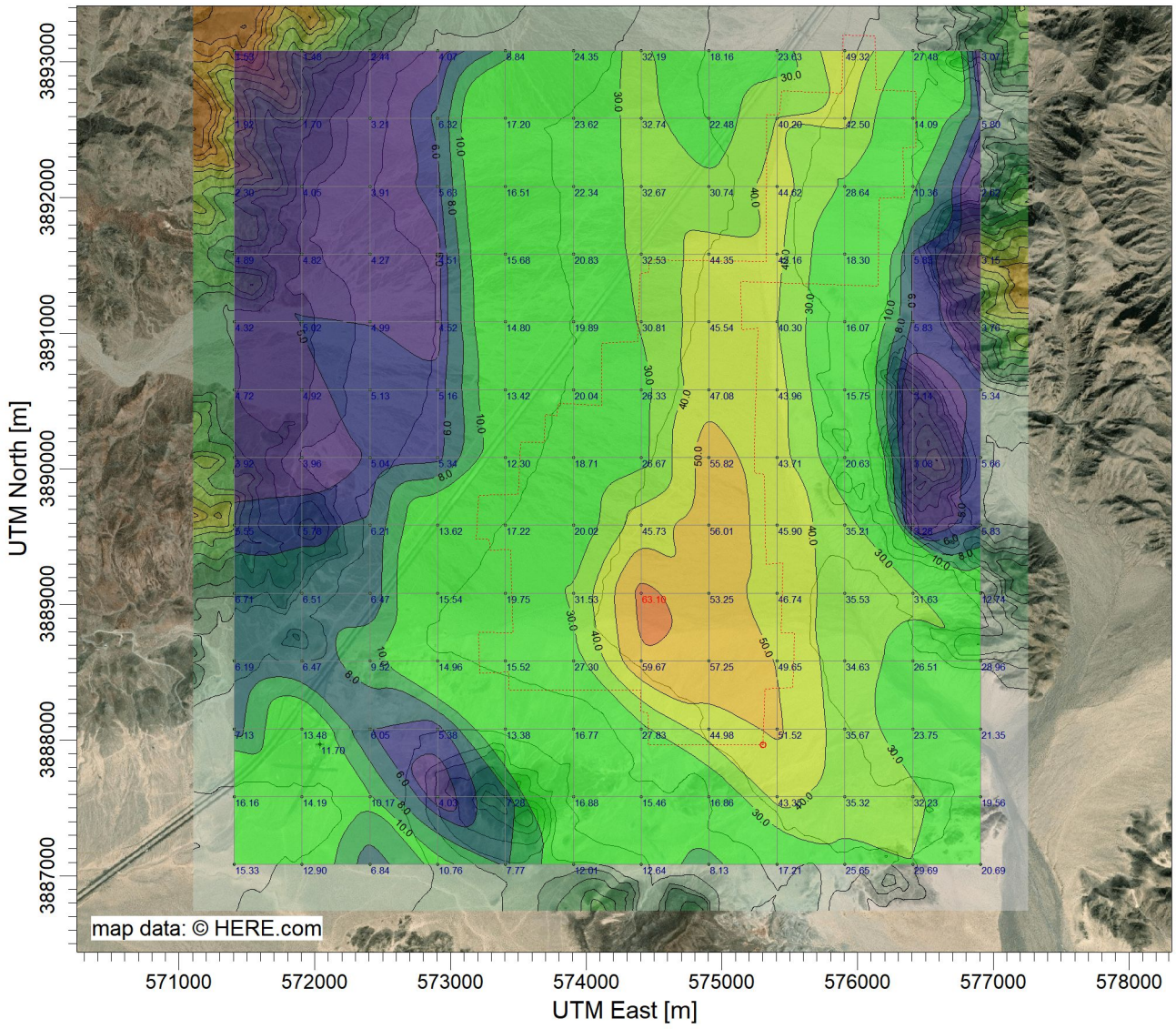
Max: 1.09 [ug/m^3] at (574405.52, 3889083.87)

0.01 0.03 0.05 0.08 0.10 0.30 0.50 0.80 1.00 1.09

COMMENTS: Annual CO	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,701 0 2 km	
	MAX: **1.09 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - NO2



PLOT FILE OF 1ST-HIGHEST MAX DAILY 1-HR VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

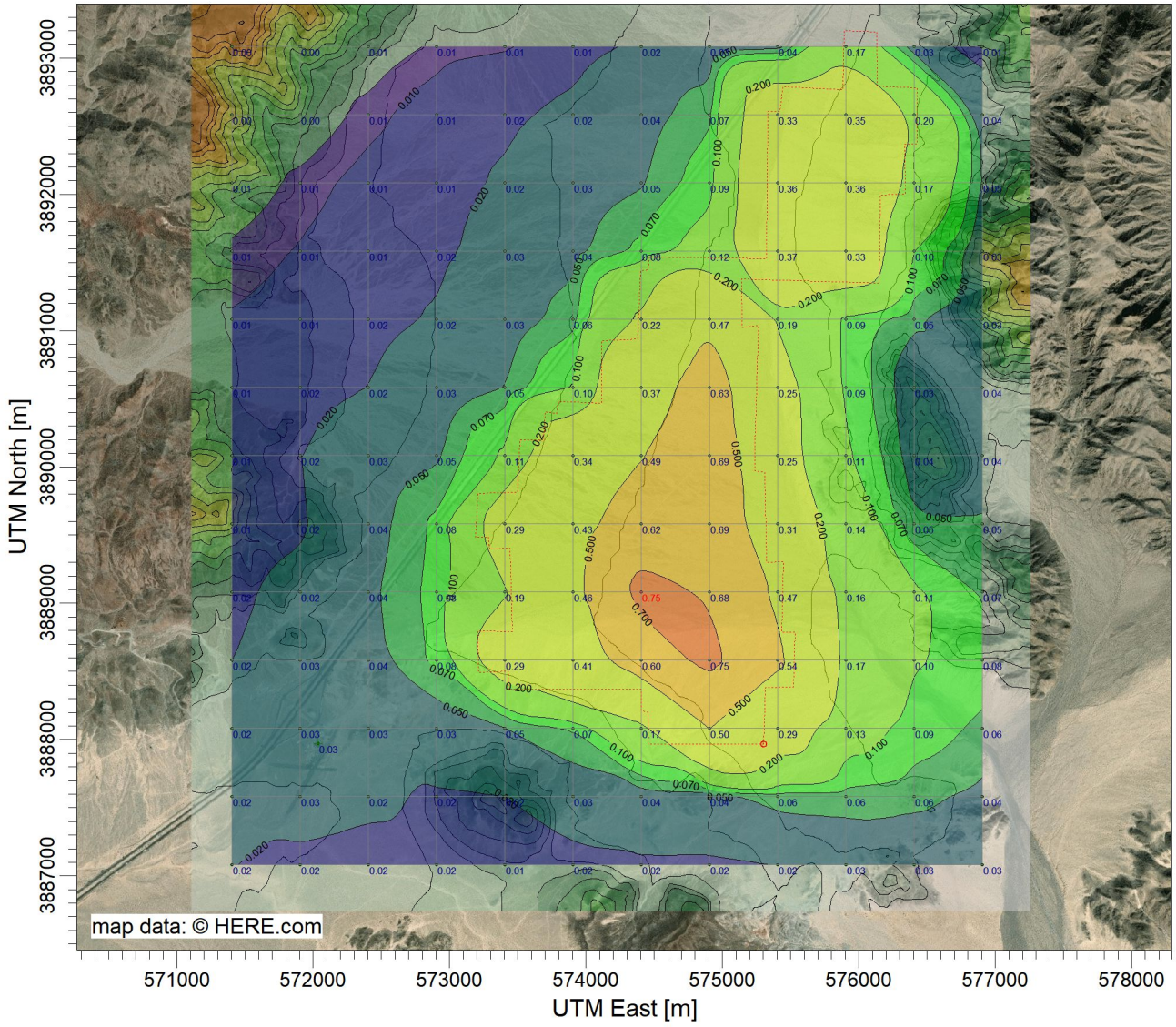
Max: 63.1 [ug/m^3] at (574405.52, 3889083.87)

1.5 5.0 6.0 8.0 10.0 30.0 40.0 50.0 60.0 63.1

COMMENTS: 1-hour NO2	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**
	RECEPTORS: **157**	
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,701 0 2 km
	MAX: **63.1 ug/m^3**	PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - NO2



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

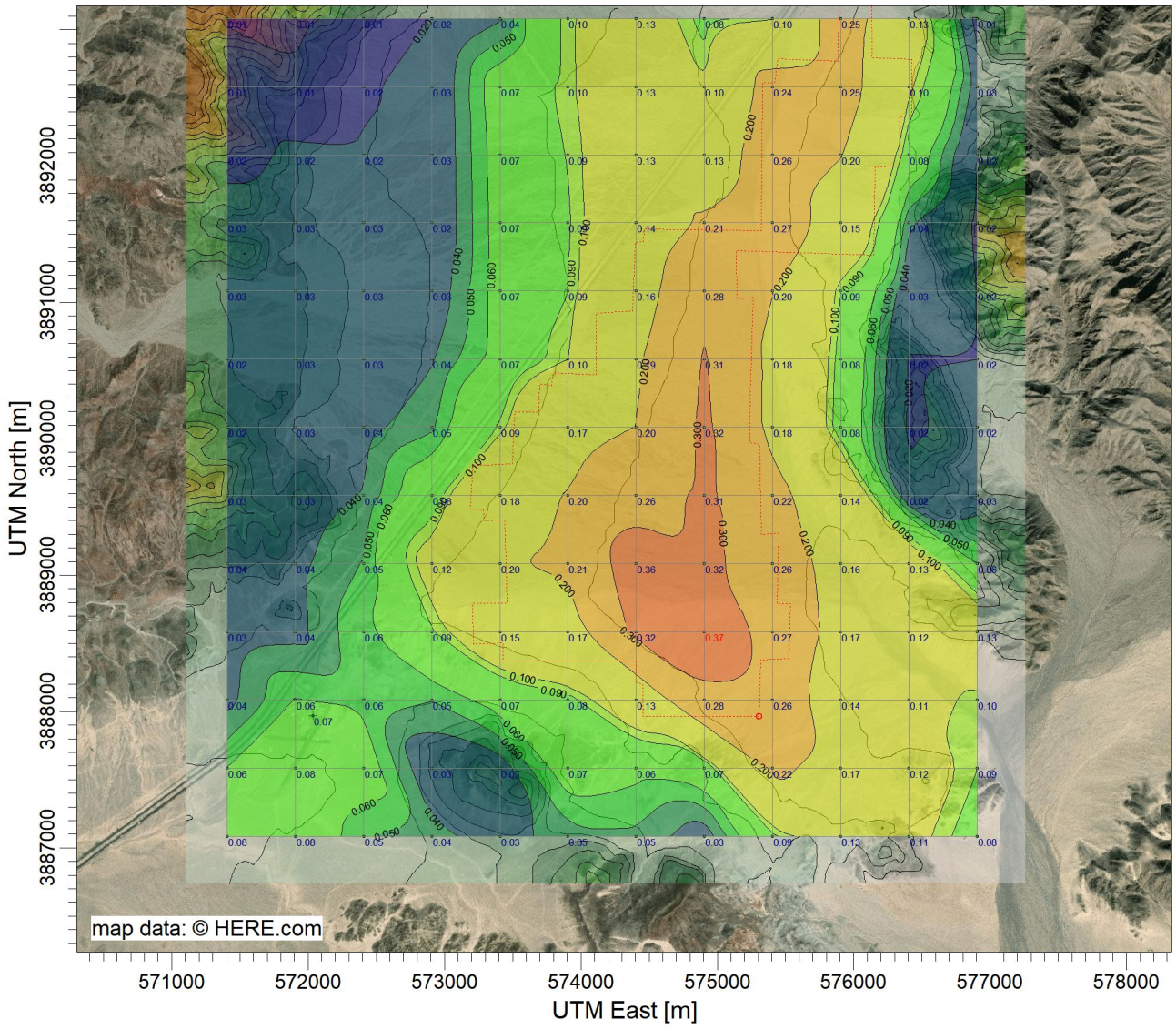
Max: 0.751 [ug/m^3] at (574405.52, 3889083.87)

0.008 0.010 0.020 0.050 0.070 0.100 0.200 0.500 0.700 0.751

COMMENTS: Annual NO2	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,442 — 0 — 2 km	
	MAX: **0.751 ug/m^3**		PROJECT NO.: **24208-00**

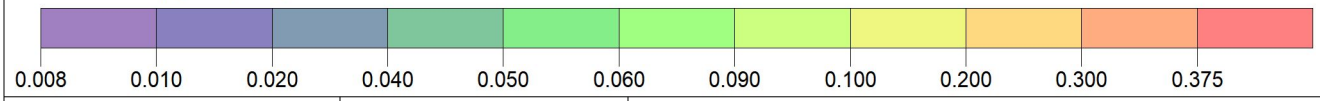
PROJECT TITLE:

Soda Mountain Solar Project
Construction - PM2.5



PLOT FILE OF 1ST-HIGHEST MAX DAILY 24-HR VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

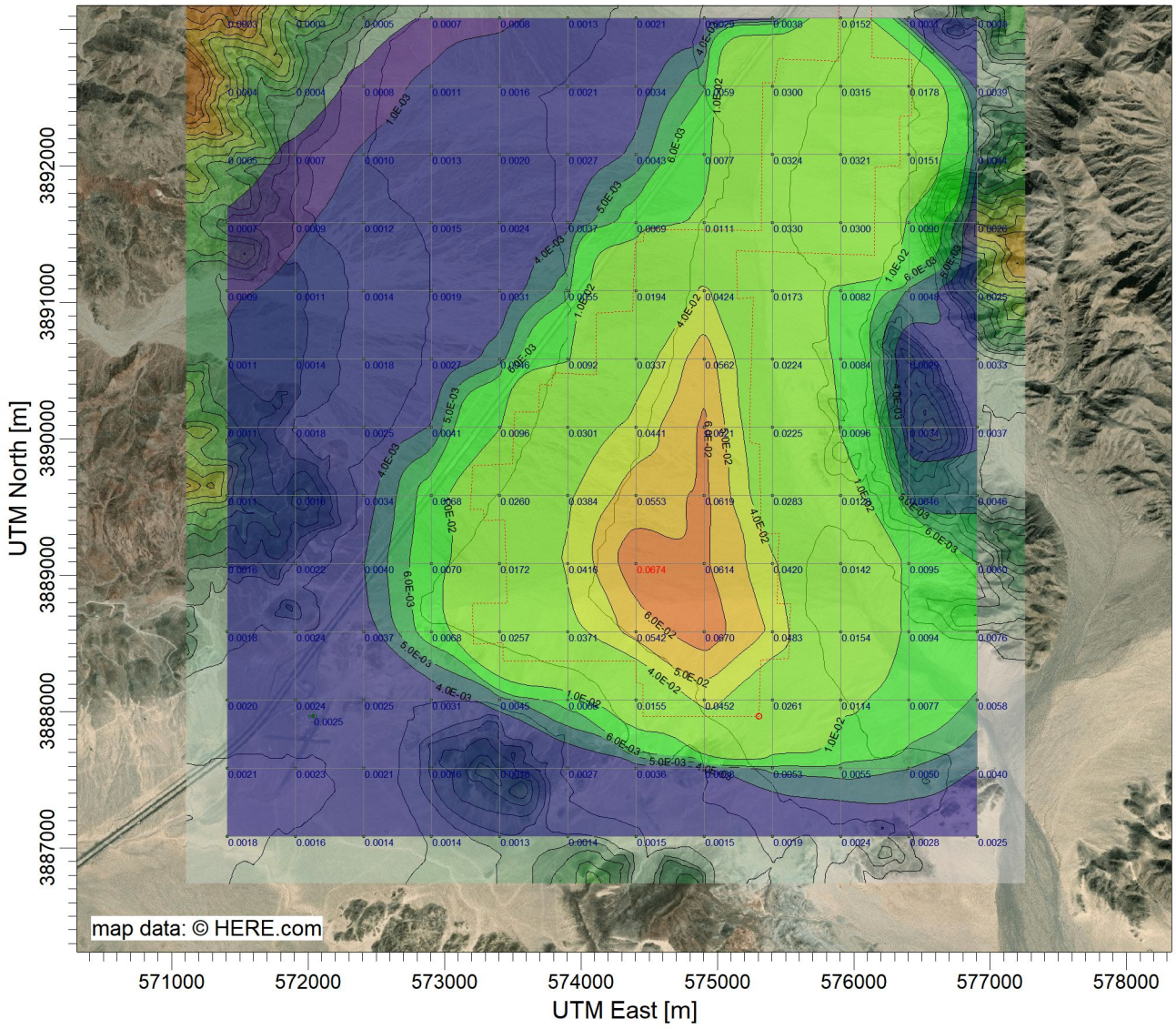
Max: 0.375 [ug/m^3] at (574905.52, 3888583.87)



COMMENTS: 24-hour PM2.5	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,440 0 2 km	
	MAX: **0.375 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - PM2.5



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

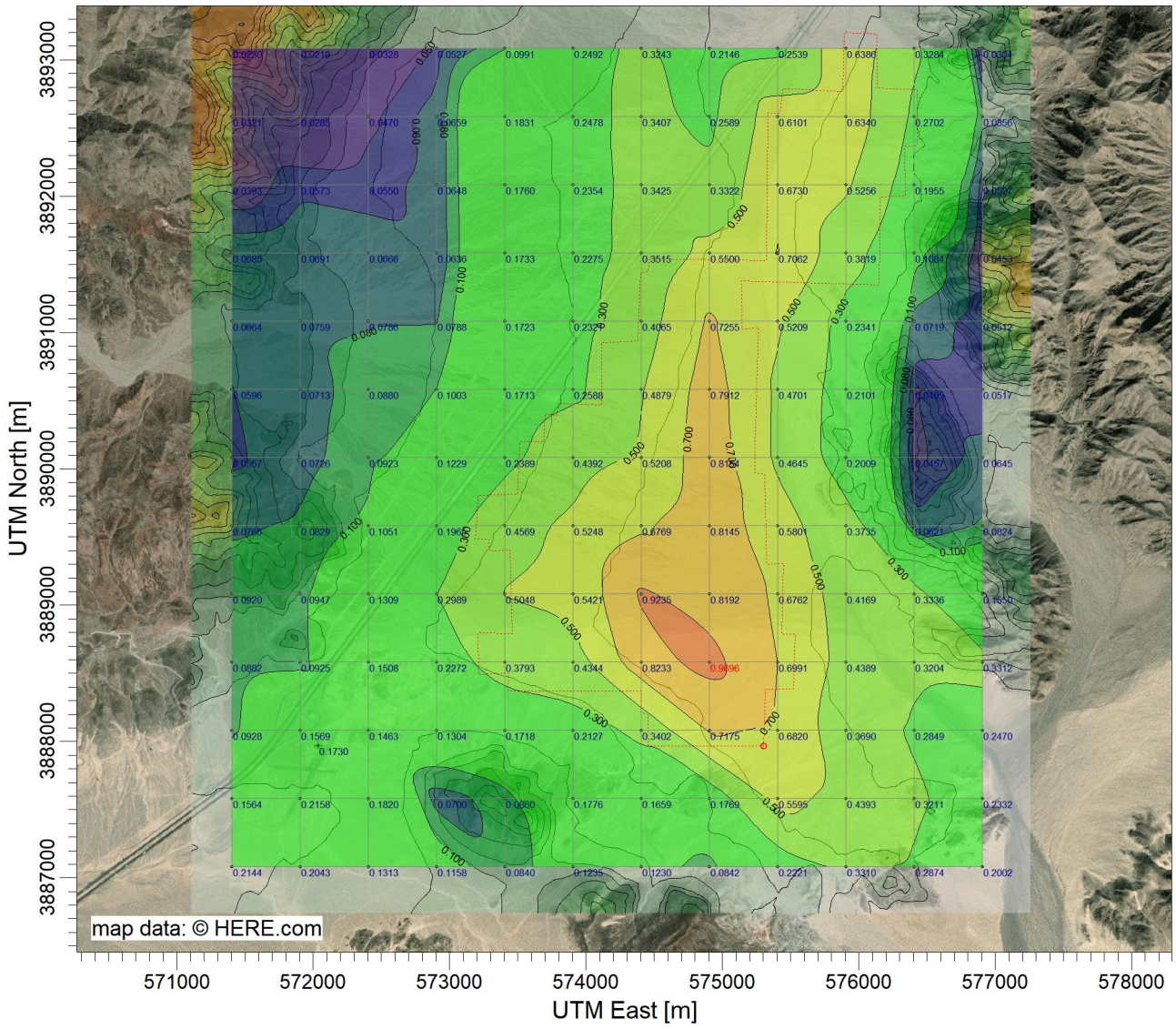
Max: 6.7E-02 [ug/m^3] at (574405.52, 3889083.87)

6.7E-04 1.0E-03 4.0E-03 5.0E-03 6.0E-03 1.0E-02 4.0E-02 5.0E-02 6.0E-02 6.7E-02

COMMENTS: Annual PM2.5	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,433 (0 — 2 km)	
	MAX: **6.7E-02 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - PM10



PLOT FILE OF HIGH 1ST HIGH 24-HR VALUES FOR SOURCE GROUP: ALL

ug/m^3

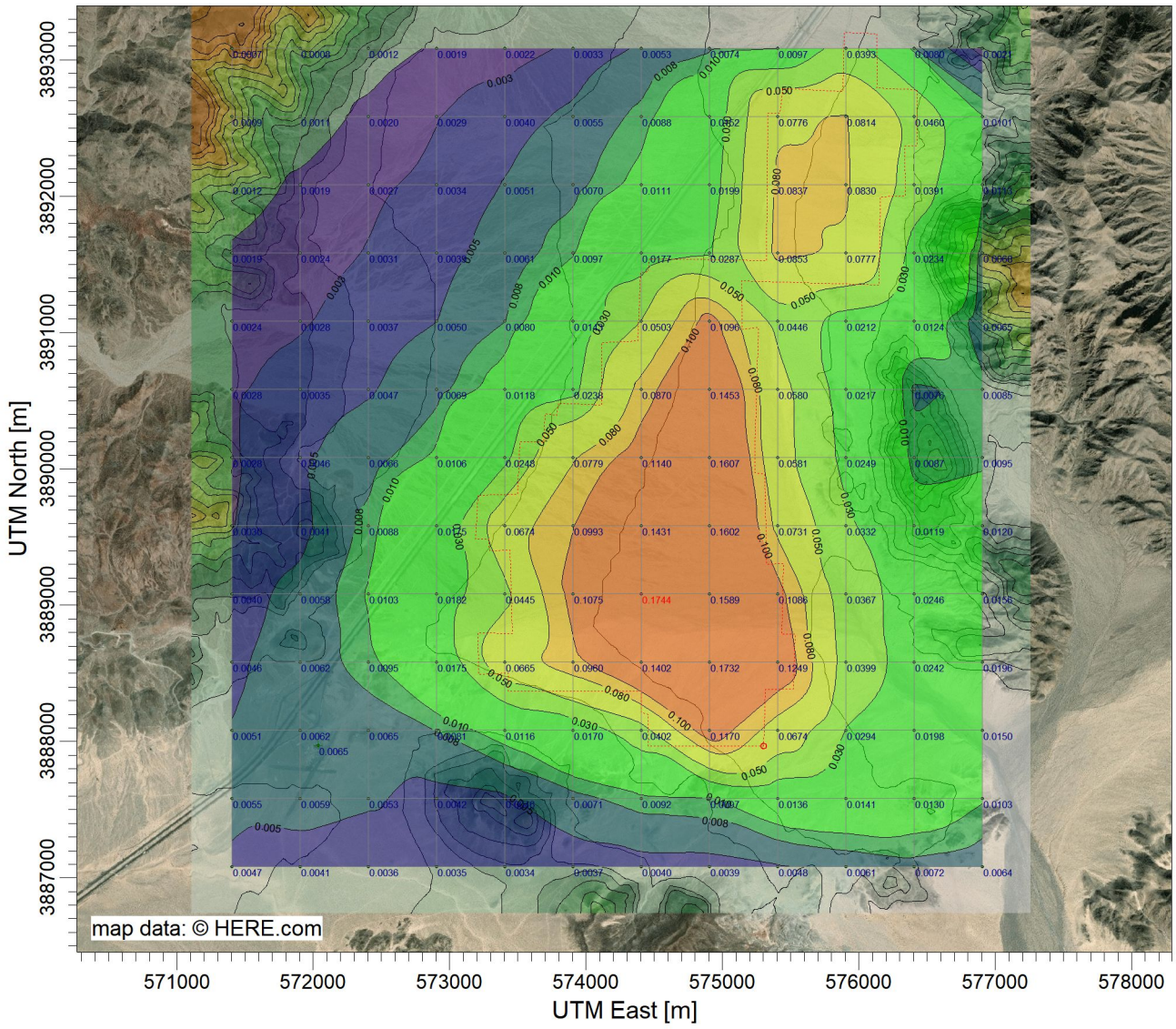
Max: 0.970 [ug/m^3] at (574905.52, 3888583.87)

0.022 0.050 0.060 0.080 0.100 0.300 0.500 0.700 0.900 0.970

COMMENTS: 24-hour PM10	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,442 0 2 km	
	MAX: **0.970 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - PM10



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

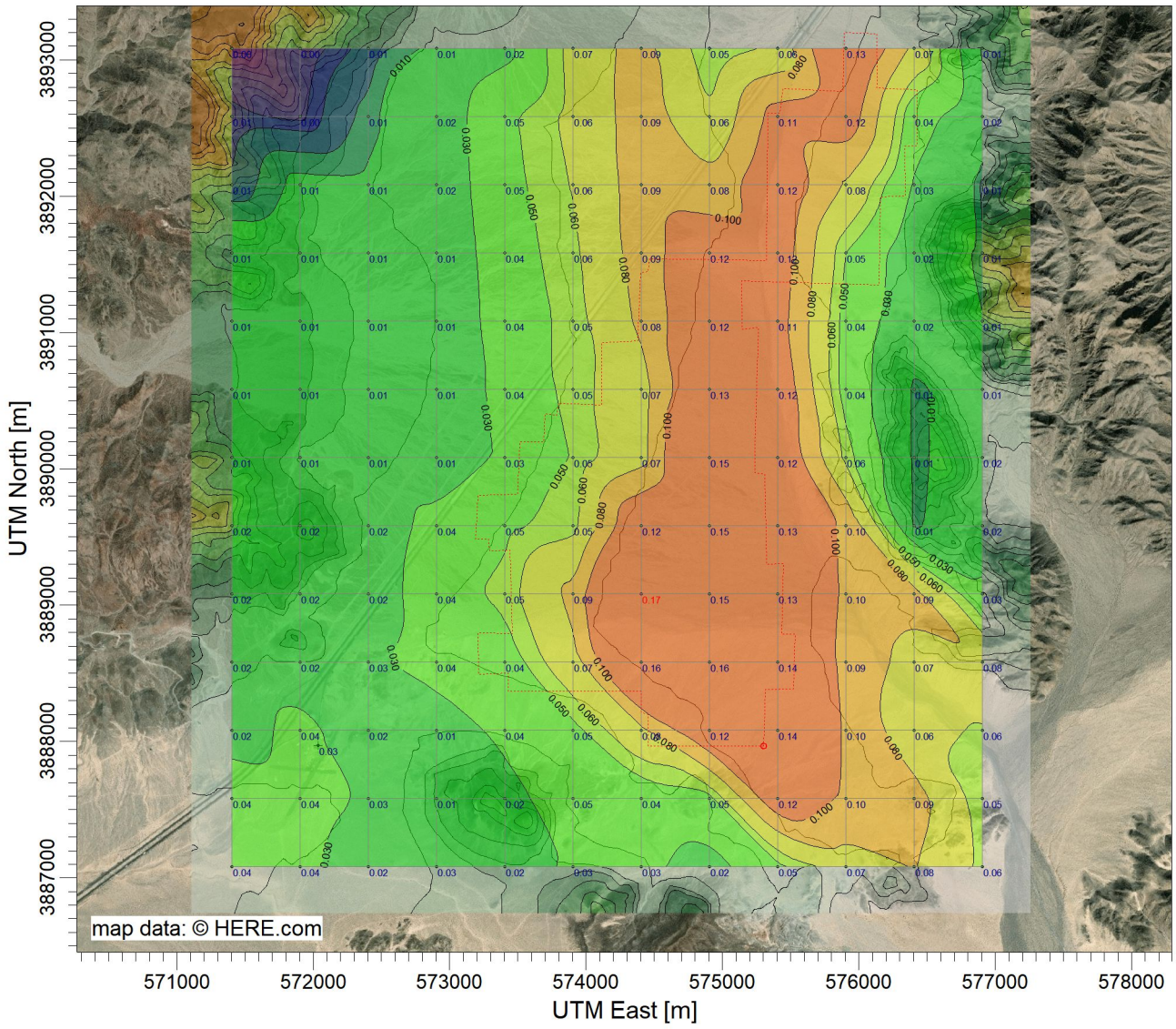
Max: 0.174 [ug/m^3] at (574405.52, 3889083.87)

0.002 0.003 0.005 0.008 0.010 0.030 0.050 0.080 0.100 0.174

COMMENTS: Annual PM10	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,442 (0 — 2 km)	
	MAX: **0.174 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - SO2



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

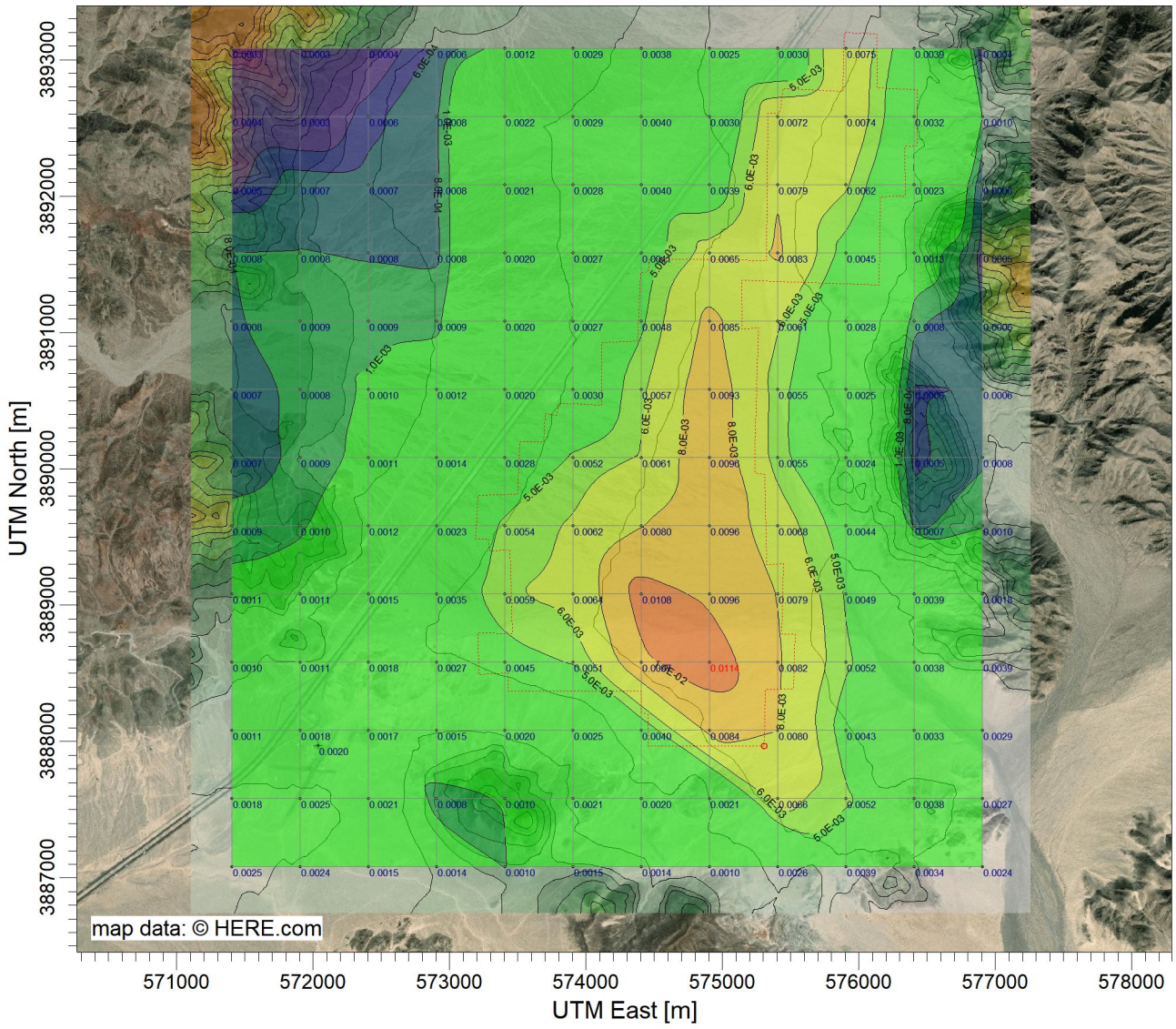
Max: 0.172 [ug/m^3] at (574405.52, 3889083.87)

0.004 0.005 0.006 0.008 0.010 0.030 0.050 0.060 0.080 0.100 0.172

COMMENTS: 1-hour SO2	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,442 0 2 km	
	MAX: **0.172 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - SO2



PLOT FILE OF HIGH 1ST HIGH 24-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

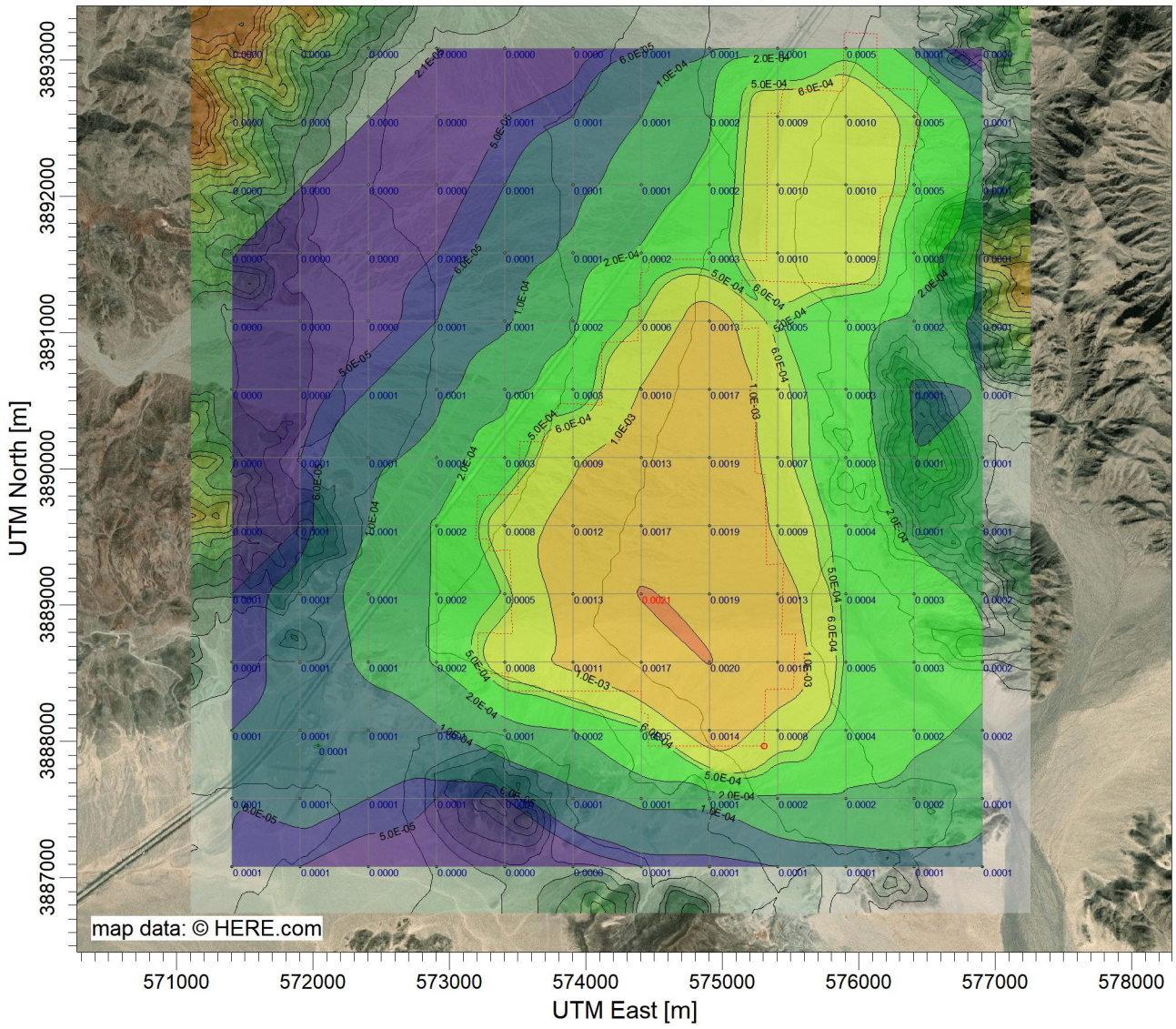
Max: 1.1E-02 [ug/m^3] at (574905.52, 3888583.87)

2.6E-04 5.0E-04 6.0E-04 8.0E-04 1.0E-03 5.0E-03 6.0E-03 8.0E-03 1.0E-02 1.1E-02

COMMENTS: 24-hour SO2	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,435 0 2 km	
	MAX: **1.1E-02 ug/m^3**		PROJECT NO.: **24208-00**

PROJECT TITLE:

Soda Mountain Solar Project
Construction - SO2



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 1 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 2.1E-03 [ug/m^3] at (574405.52, 3889083.87)

2.1E-05 5.0E-05 6.0E-05 1.0E-04 2.0E-04 5.0E-04 6.0E-04 1.0E-03 2.0E-03 2.1E-03

COMMENTS: Annual SO2	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **157**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:50,435 0 2 km	
	MAX: **2.1E-03 ug/m^3**		PROJECT NO.: **24208-00**

ATTACHMENT D
HARP INPUT DATA AND OUTPUT RESULTS
(ELECTRONIC VERSION PROVIDED SEPARATELY)

HARP Project Summary Report 10/24/2024 10:33:24 AM

PROJECT INFORMATION
HARP Version: 22118
Project Name: SODA MOUNTAIN SOLAR PROJECT_0612
Project Output Directory: C:\Users\Yilin\Baseline Environmental Consulting\BEC - 24208-00 SWCA Soda Mountain Solar\06 HARP\SODA MOUNTAIN SOLAR PROJECT_0612
HARP Database: NA

FACILITY INFORMATION
Origin
X (m):574295.49
Y (m):3889557.48
Zone:11
No. of Sources:0
No. of Buildings:0

EMISSION INVENTORY
No. of Pollutants:0
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF

Ground level concentration files (\glc\)

POLLUTANT HEALTH INFORMATION
Health Database: C:\HARP2\Tables\HEALTH17320.mdb
Health Table Version: HEALTH22013
Official: True

PolID	PolAbbrev	InhCancer	OralCancer	AcuteREL	InhChronicREL	OralChronicREL	InhChronic8HRREL
9901	DieselExhPM	1.1			5		

AIR DISPERSION MODELING INFORMATION
Versions used in HARP. All executables were obtained from USEPA's Support Center for Regulatory Atmospheric Modeling website (http://www.epa.gov/scram001/)
AERMOD: 18081
AERMAP: 18081
BPIPPRM: 04274
AERPLOT: 13329

METEOROLOGICAL INFORMATION
Version:
Surface File:
Profile File:
Surface Station:
Upper Station:
On-Site Station:

LIST OF AIR DISPERSION FILES
AERMOD Input File:
AERMOD Output File:
AERMOD Error File:
Plotfile list

Used AERMOD Lakeview output files (included in Attachment D)

LIST OF RISK ASSESSMENT FILES
Health risk analysis files (\hra\)

AcuteNonCanerGLCList.csv
AcuteNonCanerHRAInput.hra
AcuteNonCanerNCAcuteRisk.csv
AcuteNonCanerNCAcuteRiskSumByRec.csv
AcuteNonCanerOutput.txt
AcuteNonCanerPathwayRec.csv
AcuteNonCanerPolDB.csv
CancerCancerRisk.csv
CancerCancerRisk.pdf
CancerCancerRiskSumByRec.csv
CancerGLCList.csv
CancerHRAInput.hra
CancerOutput.txt
CancerPathwayRec.csv
CancerPolDB.csv
ChronicGLCList.csv
ChronicHRAInput.hra
ChronicNCChronicRisk.csv
ChronicNCChronicRisk.pdf
ChronicNCChronicRiskSumByRec.csv
ChronicOutput.txt
ChronicPathwayRec.csv
ChronicPolDB.csv

Spatial averaging files (\sa\)

---

*HARP - HRACalc v22118 6/12/2024 12:26:41 PM - Cancer Risk - Input File: C:\Users\Yilin\Desktop\HARP2\Soda M\SODA MOUNTAIN SOLAR PROJECT_(

REC	GRP	NETID	X	Y	CONC	POLID	POLABBREV	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK
157	ALL		572037.5	3887971	0.00515	9901	DieselExhPM	3.80E-08	2YrCancerDerived_Inh_FAH16to70	*	3.80E-08	0.00E+00

)612\hra\CancerHRAInput.hra

DERMAL_RISK	MMILK_RISK	WATER_RISK	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_RISK	EGG_RISK	1ST_DRIVER	2ND_DRIVER
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATION	

*HARP - HRACalc v22118 6/12/2024 12:27:05 PM - Chronic Risk - Input File: C:\Users\Yilin\Desktop\HARP2\Soda M\SODA MOUNTAIN SOLAR PROJECT_0612

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV
157	ALL		572037.5	3887971	0.00515	9901	DieselExhP	erChronicD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

\hra\ChronicHRAInput.hra

EPRO/DEVE	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	DETAILS	INH_CONC	SOIL_DOSE	ERMAL_DOS	MILK_DOS
0.00E+00	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.15E-03	0.00E+00	0.00E+00	0.00E+00

VATER_DOS	FISH_DOSE	CROP_DOS	BEEF_DOSE	DAIRY_DOS	PIG_DOSE	HICKEN_DO	EGG_DOSE	ST_DRIVER	ND_DRIVE	3RD_DRIVER
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NHALATION		

*HARP - HRACalc v22118 10/24/2024 10:29:44 AM - Acute Risk - Input File: C:\Users\Yilin\Baseline Environmental Consulting\BEC - 24208-00 SWCA Sc

REC	GRP	NETID	X	Y	CONC	POLID	POLABBREV	SCENARIO	CV	CNS	IMMUN
157	ALL		572037.5	3887971	2.15432	9901	DieselExhPM	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00

ɔda Mountain Solar\06 HARP\SODA MOUNTAIN SOLAR PROJECT_0612\hra\AcuteNonCanerHRAInput.hra

KIDNEY	GILV	EPRO/DEVE	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Exhibit 4

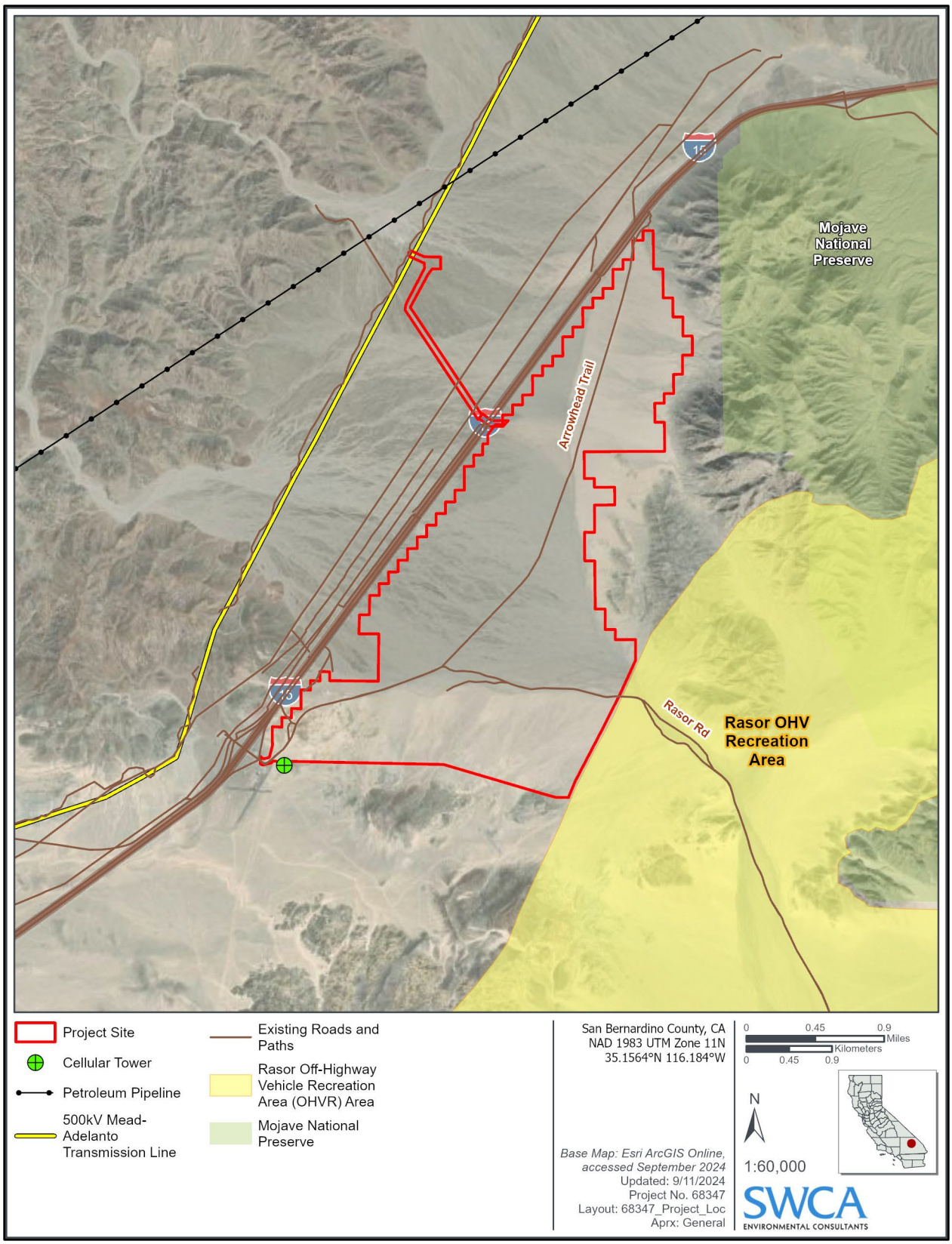


Figure 1-1. Project site location and existing conditions pre-construction.

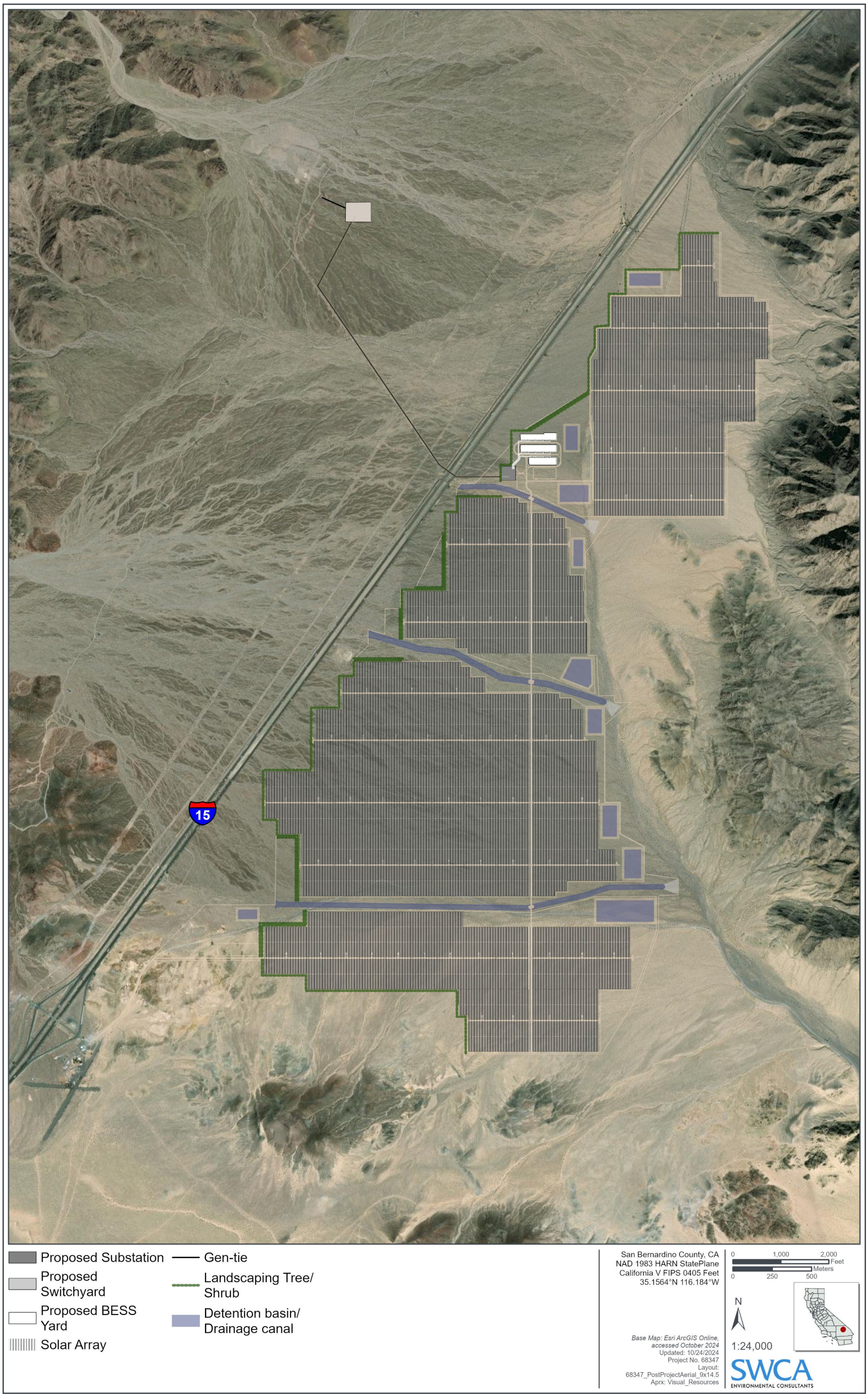


Figure 1-2. Project simulation post-construction.

Exhibit 5

3.7.6 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to geology, soils, and paleontological resources are discussed and summarized in Table 3.7-2.

Table 3.7-2. Laws, Ordinances, Regulations, and Standards

LORS	Administering Agency	Applicability	Compliance
NRCS (1983), National Engineering Handbook, Sections 2 and 3	NRCS	Standards for soil conservation (estimating runoff volume/peak discharge and sedimentation)	Section 3.7.3.2, 3.7.3.3, 3.10.3.2, 3.10.3.3
Clean Water Act	Lahontan Regional Water Quality Control Board	Regulates stormwater and non-stormwater discharges from construction and industrial activities	Section 3.7.3.2, 3.7.3.3, 3.10.3.2, 3.10.3.3
Porter-Cologne Water Quality Control Act	Lahontan Regional Water Quality Control Board	Regulates discharges of waste to state waters and land	Section 3.7.3.2, 3.7.3.3, 3.10.3.2, 3.10.3.3
Table 18-1-B of the Uniform Building Code (International Code Council, 1994)	California Building Standards Commission	Sets standards for defining expansive soils	Section 3.7.3.2, 3.7.3.3
California Building Code, 2022	California Building Standards Commission, State of California	Acceptable design criteria for structures with respect to seismic design and load-bearing capacity	Section 3.7.3.2, 3.7.3.3
Alquist-Priolo Earthquake Fault Zone Act (Title 14, Division 2, Chapter 8, Subchapter 1, Article 3, CCR)	California Building Standards Commission, State of California	Identifies areas subject to surface rupture from surface faults.	Section 3.7.3.2, 3.7.3.3, 3.9.3.2, 3.9.3.3
The Seismic Hazards Mapping Act (Title 14, Division 2, Chapter 8, Subchapter 1, Article 10, CCR)	California Building Standards Commission, State of California	Identifies secondary seismic hazards (liquefaction and seismically induced landslides)	Section 3.7.3.2, 3.7.3.3, 3.9.3.2, 3.9.3.3
County of San Bernardino General Plan	County of San Bernardino Planning Division	Identifies geological hazards and resource areas in the County and provides related goals and policies for development	Section 3.7.3.2, 3.9.3.2
County of San Bernardino Municipal Code	County of San Bernardino Building Division	Standards for grading and water quality, including permit requirements	Section 3.7.3.2, 3.9.3.2

3.7.7 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix V, Table 2-1. Permits Required for Soda Mountain Solar Project. Federal, state, and local permits applicable to geology and soils are also summarized in Appendix V, Table 2-1 and below in Table 3.7-3.

Table 3.7-3. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
Lahontan Regional Water Quality Control Board	Construction General Permit Waste Discharge Requirements	Tiffany Steinert, Engineering Geologist 15095 Amargosa Road, Building 2, Suite 210, Victorville, CA 92394 760-241-7305 tiffany.steinert@waterboards.ca.gov	Concurrent with CEC Opt-In Application

Lahontan Regional Water Quality Control Board	Clean Water Act Section 401 Permit	Lisa Horowitz McCann, Environmental Program Manager 1515 Clay Street, Suite 1400, Oakland, CA 94612 916-323-0884 lisa.mccann@waterboards.ca.gov	Concurrent with CEC Opt-In Application

Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable local statute, ordinance, or regulation. However, the Applicant and CEC would collaborate with the County of San Bernardino on review of this Opt-in Application to ensure compliance with County rules and regulations.

C

Exhibit 6

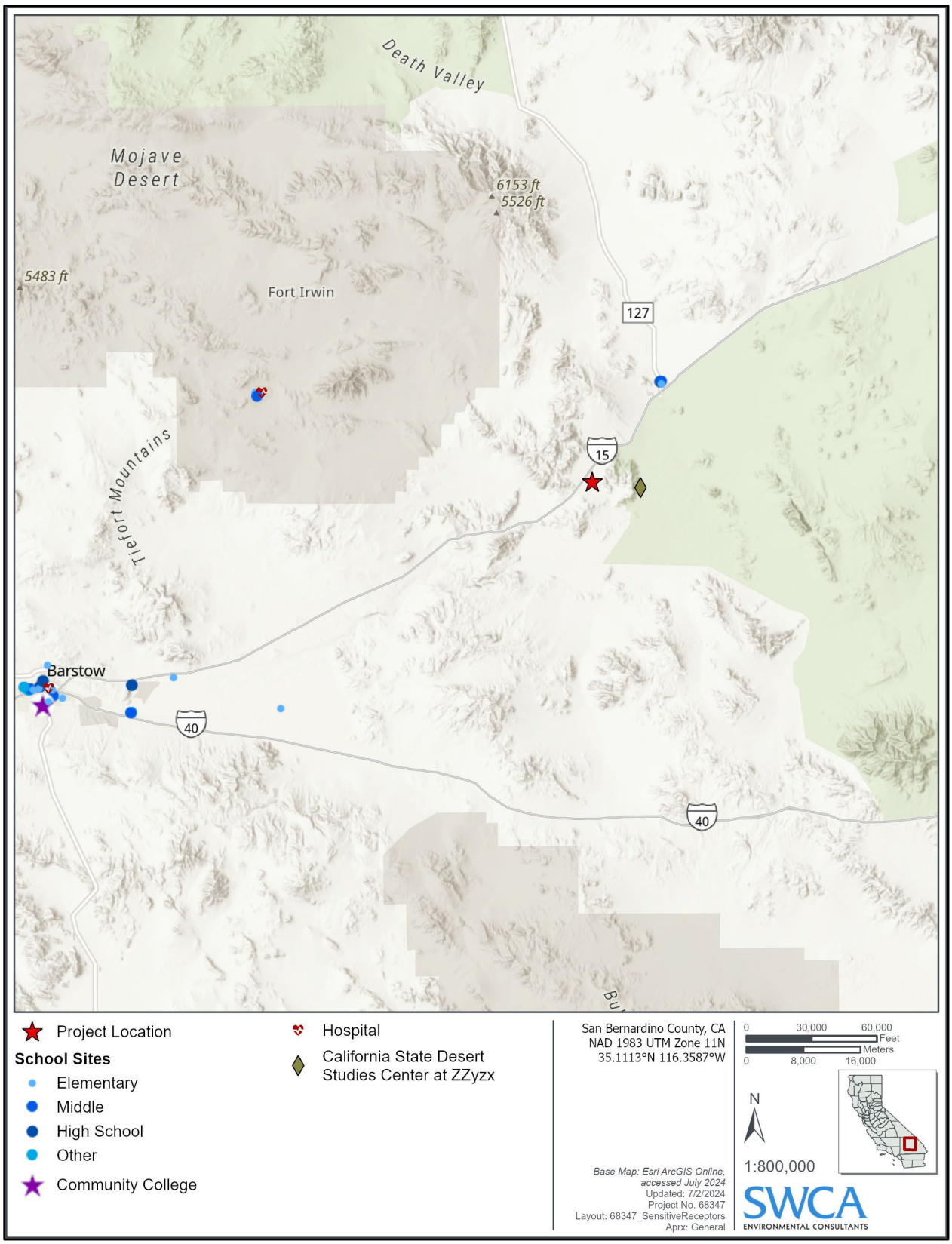


Figure 3.9-1. Schools and sensitive receptors (1:800,000 scale).

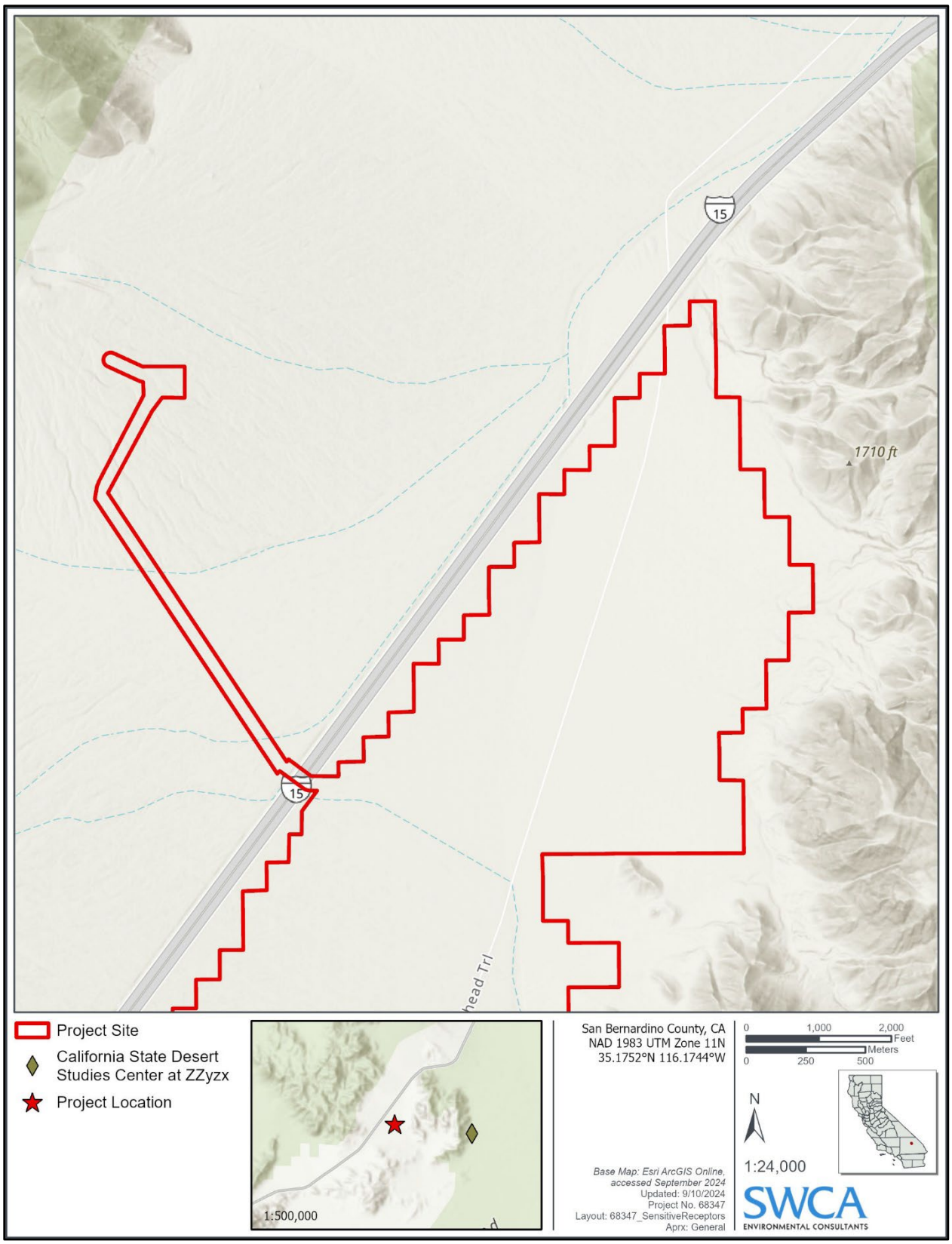


Figure 3.9-2. Schools and sensitive receptors (1:24,000 scale, north).

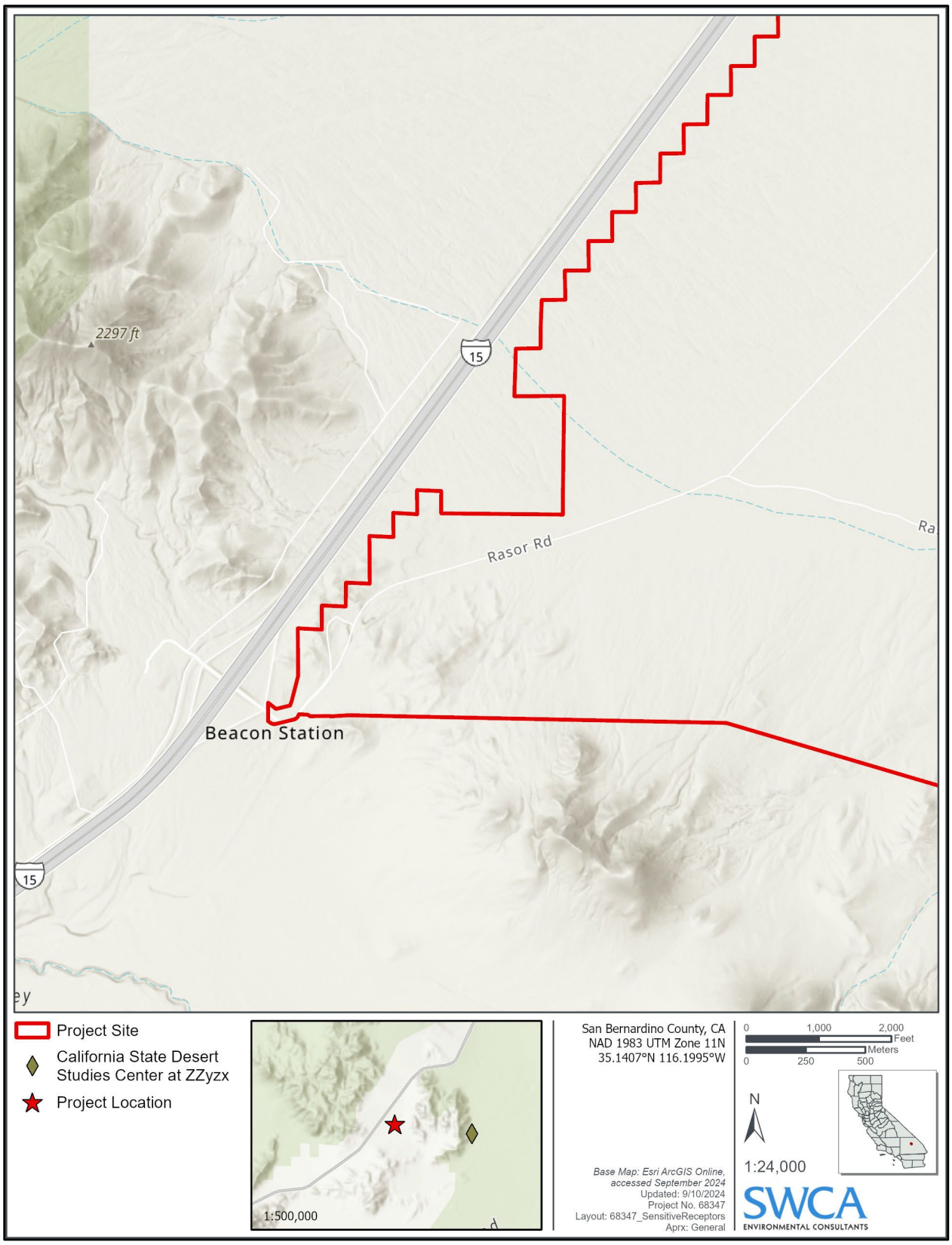


Figure 3.9-3. Schools and sensitive receptors (1:24,000 scale, west).

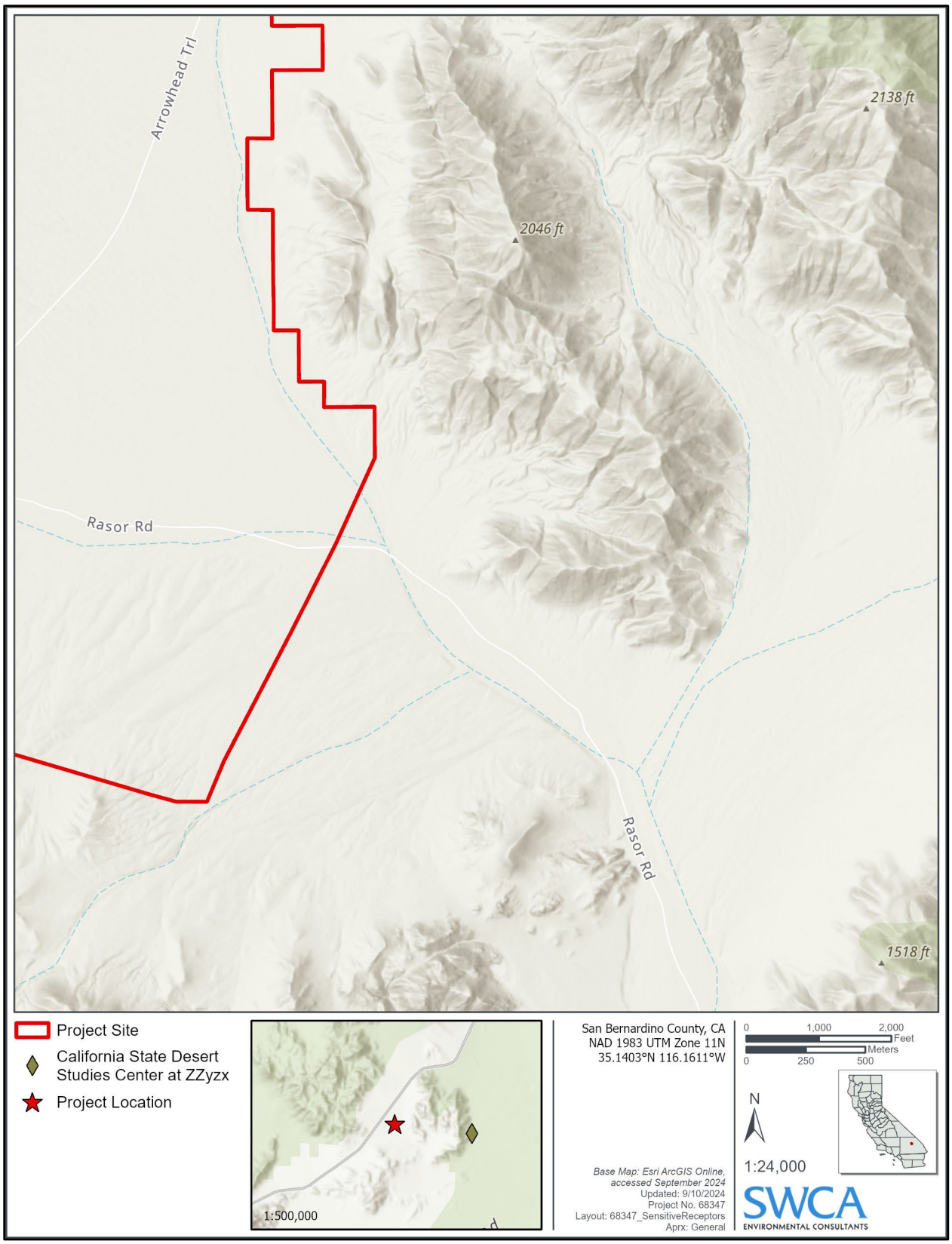


Figure 3.9-4. Schools and sensitive receptors (1:24,000 scale, east).

minimum, the WRP must identify the materials (e.g., solar panels, cardboard, concrete, asphalt, wood) that will be generated by construction and development; the projected amounts of each; the applicable state and local laws and regulations governing waste disposal and recycling (e.g., Department of Toxic Substances Control regulations regarding photovoltaic modules); the measures/methods that will be taken to recycle, reuse, and/or reduce the amount of materials; the facilities and/or haulers that will be utilized; and the targeted project-specific recycling or reduction rate. During construction, the project site shall have, at a minimum, two bins: one for waste disposal and the other for the recycling of Construction and Demolition (C&D) materials. Additional bins are encouraged to be used for further source separation of C&D recyclable materials and shall be provided if required by applicable state and local laws. The project applicant shall maintain accurate records (receipts or other types of verification) for recycling of C&D recyclable materials and solid waste disposal; arrangements for such receipts can be made through the franchise hauler. These receipts will be retained to demonstrate compliance with the approved WRP if requested by the agencies and must clearly identify the amount of waste disposal and C&D materials recycled.

3.9.3.4 Impact Assessment

Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less than Significant)

The project would carry out the use, storage, transport, and disposal of hazardous materials used in the construction and operation of the project in accordance with federal, state, and county regulations. No extremely hazardous substances (i.e., those governed pursuant to 40 CFR 335) are anticipated to be produced, used, stored, transported, or disposed of as a result of the project's construction or operation. Hazardous materials that may be used and stored during construction are outlined in Table 3.9-3. To fuel construction equipment, mobile fueling and maintenance vehicles would be brought daily as needed. A limited amount of No. 2 diesel and gasoline petroleum fuels (approximately 500 gallons each) would be stored in the staging areas in above-grade steel tanks with secondary containment. Table 3.9-4 identifies the possible hazardous materials present on-site during project operation. Material Safety Data Sheets (MSDSs) for all applicable materials present on-site would be made readily available to on-site personnel, in accordance with APM HAZ-2. In addition, a site-specific EPA identification number and hazardous waste generator classification would be obtained for the project. Hazardous waste generated at the project site would be stored on-site for less than 90 days in accordance with accumulation time limits detailed in 22 CCR 66262.34. They would be stored and transported by a licensed hazardous waste transporter. Hazardous waste is anticipated to be accepted by Waste Management, Inc., Kettleman Hills Facility, and/or Clean Harbors Buttonwillow Landfill.

Table 3.9-3. Hazardous Materials Generated during Construction

Waste Stream	Origin	Composition	Total Quantity Generated During Construction	Maximum Quantity Stored On-Site	Disposal Method
Solar panel waste[1] (Qcell or equivalent)	Construction of solar arrays	Glass, plastic, metal, lead	< 2 tons	< 0.2 tons	Recycle or disposal by certified contractor

[1] Solar cell designation as a hazard material determined by Qcell (current anticipated solar panel to be installed) SDS which states product has a 1% lead content, which is equivalent to 10,000 PPM. According to DTSC, total threshold limit for lead is 1,000 PPM. The exact model solar cell to be installed could change as needed to a panel of equivalent construction and function.

Waste Stream	Origin	Composition	Total Quantity Generated During Construction	Maximum Quantity Stored On-Site	Disposal Method
Battery Energy Storage System Waste	Faulty or damaged lithium batteries	Metal, plastic, lithium	< 2 tons	< 0.2 tons	Recycle or disposal by certified contractor
Waste oil	Heavy equipment maintenance	Hydrocarbon	< 500 gal	< 28 gal	Recycle/disposal by certified contractor
Miscellaneous solvents (paint, adhesives)	Equipment maintenance	Hazardous	< 100 lbs	< 6 lbs	Recycle or disposal by certified contractor
Fuels	Vehicles, generators, heavy equipment	Hydrocarbon	< 50 gal	< 3 gal	Recycle
Oil filters	Vehicles, generators, heavy equipment	Hydrocarbons, cellulose, glass, polyester	< 800 lbs	< 50 lbs	Recycle or disposal by certified contractor
Oily rags/sorbents	Spill cleanup	Hydrocarbons, peat, clay, cotton	< 1000 lbs	< 60 lbs	Recycle or disposal by certified contractor
Spent lead acid batteries	Battery operated equipment	Heavy metal	< 1000 lbs	< 60 lbs	Recycle or disposal by certified contractor
Spent alkaline batteries	Battery operated equipment	Metals	< 300 lbs	< 20 lbs	Recycle or disposal at universal waste facility
Aerosol cans	Equipment maintenance	Hydrocarbons	< 500 lbs	< 30 lbs	Recycle or disposal by certified contractor

Table 3.9-4. Hazardous Materials Generated Annually during Operation

Waste Stream	Origin	Composition	Quantity Generated Annually	Maximum Quantity Stored On-Site	Disposal Method
Solar panel waste (Qcell or equivalent)	Solar array operation and maintenance	Glass, plastic, metal, lead	< 500 lbs (< 6 solar panel failures)	< 30 lbs	Recycle or disposal by certified contractor
Substation waste	Transformer maintenance	Metal, oil	< 500 lbs	< 30 lbs	Recycle or disposal by certified contractor
Switchyard waste	Switchyard maintenance	Metals	< 500 lbs	< 30 lbs	Recycle or disposal by certified contractor
Waste oil	Heavy equipment maintenance	Hydrocarbon	< 100 gal	< 6 gal	Recycle or disposal by certified contractor

Waste Stream	Origin	Composition	Quantity Generated Annually	Maximum Quantity Stored On-Site	Disposal Method
Miscellaneous solvents (paint, adhesives)	Equipment maintenance	Water, organics, inorganics	< 25 gallons	< 2 gal	Recycle or disposal by certified contractor
Welding materials	Infrastructure maintenance	Metal	< 250 lbs	< 20 lbs	Recycle or disposed of in class I landfill
Oil filters	Vehicles, equipment	Hydrocarbons, cellulose, glass, polyester	< 50 lbs	< 3 lbs	Recycle or disposal by certified contractor
Oily rags/sorbents	Spill cleanup	Hydrocarbons, peat, clay, cotton	< 100 lbs	< 6 lbs	Recycle or disposal by certified contractor
Spent lead acid batteries	Battery operated equipment	Heavy metal	< 200 lbs	< 12 lbs	Recycle or disposal by certified contractor
Spent alkaline batteries	Battery operated equipment	Metals	< 25 lbs	< 2 lbs	Recycle or disposal at universal waste facility
Aerosol cans	Equipment maintenance	Hydrocarbons	< 10 lbs	< 1 lb	Recycle or disposal by certified contractor

According to AB 1130 (2007), if the owner or operator of a tank facility has an aggregate storage capacity greater than 1,320 gallons of petroleum, they must file an inventory statement with the local CUPA and prepare an SPCC plan. If quantities exceed regulatory thresholds, an SPCC plan would be developed prior to project construction in accordance with applicable regulations and would include a facility diagram that would identify the location and contents of hazardous materials containers; potential equipment failures; containment and diversionary structures; facility drainage; personnel, training, and spill prevention procedures; and emergency contact information. Diversionary structures meeting the requirements of the SPCC plan would be provided for oil-containing equipment, including transformers, at the project site. Transformers would be inspected regularly to detect and respond to any leakage in accordance with APM HAZ-1. All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste (APM USS-1 requires preparation of a WRP). In accordance with APM HAZ-1, the applicant would develop an Environmental Inspection and Compliance Monitoring program and plan for construction and operation of the project and designate a Project Environmental Manager to oversee the plan. Additionally, the site would be supplied with adequate spill containment kits and personal protective equipment in case of a release.

The project may use a variety of photovoltaic (PV) technologies including, but not limited to, cadmium telluride panels, crystalline silicon panels, and copper indium gallium diselenide panels. None of the panels being considered contain materials that are classified as hazardous wastes because the chemicals within PV modules are highly stable and would not be available for release to and interaction with the environment. During O&M, some PV panels would require replacement due to breakage or other damage or to take advantage of new technologies. Removed PV panels would be recycled or disposed of in accordance with applicable local, state, and federal standards and regulations. During future decommissioning, the solar panels would be removed, placed in secure transport containers for storage, and transported to another facility for reuse, material recycling, or disposal in accordance with regulations in effect at the time of closure.

county regulations and would be coordinated with the San Bernardino County Fire Department. Additionally, APM FIRE-1 specifies information and training required by the Fire Management and Prevention Plan.

Overall, the construction, O&M, and future decommissioning of the proposed project would result in a minimal increased risk of wildfires in the area. The proposed project would comply with all applicable wildland fire management plans and policies established by CAL FIRE and the San Bernardino County Fire Department, as specified in APM FIRE-1. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations would be implemented for the proposed project and would minimize the occurrences of fire due to project activities during construction and for the life of the project. Accordingly, the proposed project is not expected to expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Therefore, with APM FIRE-1 and the implementation of fire suppression technology and adherence with applicable industry best practices and regulatory fire standards, the proposed project would result in **less than significant impacts.**

Impact HAZ-8: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less Than Significant)

Construction

Construction of the project would generate solid waste. All waste generated during construction would be stored in wind-proof and wildlife-proof containers that would be periodically sorted and transported to an off-site disposal facility authorized to accept the waste. As outlined in APM USS-1, the project would prepare a WRP that identify construction waste, the projected amounts of each; the applicable state and local laws and regulations governing waste disposal and recycling; the measures/methods that will be taken to recycle, reuse, and/or reduce the amount of materials; the facilities and/or haulers that will be utilized; and the targeted project-specific recycling or reduction rate. Table 3.9-5 presents a summary of anticipated nonhazardous waste streams created by construction activities. The quantities listed in Table 3.19-5 are estimates and are subject to change based on design modifications or market conditions.

Table 3.9-5. Potential Nonhazardous Waste Generated during Construction

Waste	Origin	Composition	Maximum Quantity Stored On-site	Disposal	Estimated Total Quantity Generated During Construction
Concrete	General Construction	Concrete	< 1 ton	Recycle or Class II/III landfill	16 tons
Excavated soil	Excavation, trenching	Soils	< 25,000 CYs	On-site re-use or Class II/III landfill	449,900 cubic yards
Scrap metal	Construction of infrastructure	Metal	< 4 tons	Recycle or Class II/III landfill	65 tons
Cardboard	Packaging	Paper	< 19 tons	Recycle or Class II/III landfill	337 tons
Office waste	Administrative work	Paper, plastic	< 6 tons	Recycle or Class II/III landfill	108 tons

Sanitary waste	Portable restrooms, handwashing	Biological liquid/solid	< 1.5 tons	Off-site treatment/disposal by contractor	27 tons
Process Water	Washing of equipment, dust suppression	Water, dirt	< 17,000 gal	Evaporation	300,000 gallons

1) Solar cell designation as a hazard material determined by Qcell (current anticipated solar panel to be installed) SDS which states product has a 1% lead content, which is equivalent to 10,000 PPM. According to DTSC, total threshold limit for lead is 1,000 PPM. The exact model solar cell to be installed could change as needed to a panel of equivalent construction and function.

Nonhazardous construction waste would be recycled or disposed of at a Class II/III landfill, 6 of which exist within a 100-mile radius of the project site. The project would employ third parties to manage appropriate handling and disposal of nonhazardous solid waste. During construction, portable sanitary facilities would be located in the project area and maintained by a local contractor. Considering there are multiple locations that would accept anticipated construction waste streams, and the solid waste landfills listed in Table C would have a collective remaining capacity of over 228 million cubic yards, waste generated from construction of the solar facility, step-up substation, and gen-tie line components would not exceed the capacity of surrounding accepting facilities. Therefore, project construction would have a **less than significant impact** involving solid waste recycling, disposal capacity, and impaired attainment of solid waste reduction goals.

Operation and Maintenance

Project operation is expected to produce minimal amounts of solid waste, primarily from on-site workers conducting regular maintenance. This waste will be gathered by the workers either daily or as needed and will be taken to a certified landfill or recycling facility off-site for proper disposal. Additionally, during operation and maintenance, some photovoltaic panels would require replacement due to breakage or other damage or to take advantage of new technologies. Removed photovoltaic panels would be recycled or disposed of in accordance with applicable local, state, and federal standards and regulations. Table 3.9-6 presents a summary of anticipated waste streams created during project operation. The quantities listed in Table 3.9-6 are estimates and are subject to change based on design modifications or market conditions.

Table 3.9-6. Potential Waste Generated during Operations

Waste	Origin	Composition	Maximum Quantity Stored On-site	Disposal	Estimated Quantity Generated Annually
Scrap metal	Miscellaneous O&M projects	Metal	< 30 lbs	Recycle or Class II/III landfill	< 500 lbs
Office waste	Administrative work	Paper, plastic	< 2000 lbs	Recycle or Class II/III landfill	< 30,000 lbs
Panel washing water	Washing of array panels	Water, dirt	< 45,000 gal	Evaporation	750,000 gallons

Considering there are multiple locations that would accept anticipated operational waste streams, and the solid waste landfills listed in Table 3.19-4 have a collective remaining capacity of over 228 million cubic yards, waste generated from operation of the solar facility, step-up substation, and gen-tie line components would not exceed the capacity of surrounding accepting facilities. Therefore, project

3.9.6 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to hazards and hazardous materials are discussed and summarized in Table 3.7-7.

Table 3.9-7. Laws, Ordinances, Regulations, and Standards

LORS	Administering Agency	Applicability	Compliance
Environmental Protection Agency California Toxics Rule	U.S. Environmental Protection Agency	Contains general requirements for protection of designated uses of surface waters, enclosed bays, and estuaries	Section 3.9.3.4, Impact HAZ-2. The Project would prepare a SWPPP and implement any and all controls necessary under Clean Water Act Section 303(c)(2)(B) to ensure that the Project does not impact the designated use of any surface waters, enclosed bays, or estuaries.
Resource Conservation and Recovery Act	U.S. Environmental Protection Agency	Governs the management and disposal of solid and hazardous waste	Section 3.9.3.4, Impact HAZ- and Impact HAZ-7. The Project would comply with any and all regulations noted under 40 CFR 239–282 to comply with RCRA
Comprehensive Environmental Response, Compensation, And Liability Act And Superfund Amendments And Reauthorization Act	U.S. Environmental Protection Agency	Establishes requirements for the treatment of abandoned hazardous waste sites and provides for liability of persons responsible for releases of hazardous waste at these sites. Establishes requirements for notification of release of hazardous materials and recordkeeping	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all regulations under CERCLA, specifically Sections 304 and 311 as they pertain to recordkeeping and requirements for notifications of release of hazardous materials
Clean Air Act	U.S. Environmental Protection Agency	Specifications and requirements for Hazardous Materials Business Plan (HMBP)	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with the requirements set forth in 49 CFR 68, and maintain a HMBP
Toxic Substances Control Act	U.S. Environmental Protection Agency	Establishes a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with the requirements set forth in 15 USC 2601–2692
Hazardous Materials Transport Act	U.S. Department of Transportation	Establishes laws and regulations pertaining to transportation of hazardous materials	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with the requirements set forth in 49 CFR Parts 171–180 relating to the transport of hazardous materials.
Federal Aviation Administrative Regulations	U.S. Environmental Protection Agency	Regulates aviation at regional, public, private, and military airports and regulates objects affecting navigable airspace including structures taller than 200 feet	Section 3.9.3.4, Impact HAZ-5. The Project would comply with any and all regulations set forth by the Federal Aviation Administration (FAA) and the California Department of Transportation relating to navigable airspace above Project site.
Occupational Safety and Health Act Of 1970	Occupational Safety and Health Administration	Requires special training of handlers of hazardous materials, notification to employees who work in the vicinity of	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would implement any and all regulations required under

		hazardous materials, and acquisition from the manufacturer of MSDSs	Occupational Safety and Health Act (29 USC 651)
National Fire Protection Association 855	National Fire Protection Association	Provides minimum requirements for mitigating hazards associated with energy storage systems	Section 3.9.3.2. The Project design, construction, and installation of ESSs and related equipment would comply with NFPA 855 Chapter 4
Department Of Toxic Substance Control Regulations	California Department of Toxic Substances Control	Regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all regulations under the California Health and Safety Code (primarily Title 22, Division 20, Chapters 6.5–10.6; and Title 22, Division 4.5)
California Occupational Safety and Health Administration Regulations	California Occupational Safety and Health Administration	Responsible for worker safety in the handling and use of chemicals in the workplace	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings under 8 California Code of Regulations (CCR) 337–340
Safe Drinking Water and Toxics Enforcement Act	California Environmental Protection Agency	Identifies chemicals that cause cancer and reproductive toxicity, provides information for the public, and prevents discharge of the chemicals into sources of drinking water	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any regulations under Health and Safety Code 25249.5 et seq or set forth by California's Office of Environmental Health Hazard Assessment.
Aboveground Petroleum Storage Act	Office of the State Fire Marshall	Requires the owner or operator of a tank facility with an aggregate storage capacity greater than 1,320 gallons of petroleum to file an inventory statement with the local Certified Unified Program Agency (CUPA) and prepare a Spill Prevention, Control, and Countermeasure (SPCC) plan	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project expects to have total petroleum storage over the 1,320 gallons limit and would complete an inventory statement and develop an SPCC plan as required under the Aboveground Petroleum Storage Act.
Hazardous Materials Release Response Plans and Inventory Act Of 1985	California Department of Toxic Substances Control	Requires local governments to regulate local businesses using hazardous materials in excess of certain quantities	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would prepare a Hazardous Materials Business Plan (HMBP) that describes the facility, inventory, emergency response plans, and training programs to the local CUPA and report releases to the local CUPA (San Bernardino County Fire Protection District Hazardous Materials Section) and the California Office of Emergency Services (CaOES)
California Accidental Release Program	California Department of Toxic Substances Control	Regulates the registration and handling of regulated substances	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project does not anticipate having any materials regulated under CalARP in excess of their respective threshold values. If in the future the Project intends to handle any regulated materials in excess of their respective threshold quantities, the Project will develop a Risk Management Plan (RMP)

Process Safety Management of Acutely Hazardous Materials	California Department of Toxic Substances Control	Governs process safety and management of acutely hazardous materials	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any regulations under 8 CCR § 5189 if the threshold quantity of any of the listed regulated materials excess their respective threshold quantity, which is not anticipated to occur at this time. On-site fuel storage in mobile fuelers is expected to be 500 gallons maximum for diesel and gasoline, which together at max will not exceed the 10,000 pound limit
Hazardous Waste Control Law	California Department of Toxic Substances Control	Establishes the state hazardous waste management program	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all regulations under 22 CCR 66250 et seq., which includes provisions for the management of hazardous waste, including but not limited to identification, classification, generation, transportation, treatment, storage, disposal, as well as provisions for the facilities that handle hazardous wastes.
Uniform Hazardous Waste and Hazardous Materials Management Regulatory Program	California Department of Toxic Substances Control	Consolidates six hazardous materials and waste programs (Program Elements) under one agency, the locally designated CUPA	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all regulations set forth by the local CUPA (San Bernardino County Fire Protection District Hazardous Materials Section).
California Highway Patrol Regulations	California Highway Patrol	Establishes licensing requirements for the transport of hazardous materials	Section 3.9.3.4, Impact HAZ-1. Any and all transporation of hazardous materials in support of the Project would comply with Vehicle Code Section 3200.5. All vehicles transportating regulated hazardous waste would have a valid Hazardous Materials Transportation License, issued by the California Highway Patrol
California Green Building Standards Code	California Building Standards Commission	Requirements for mandatory recycling	Section 3.9.3.4, Impact HAZ-7. The Project would comply with all regulations established by CALGreen, including Sections 5.408 and 5.408.3 relating to the recyling of nonhazardous waste and debris generated by land clearing and soil excavation
San Bernardino County Hazardous Waste Management Plan	San Bernardino County Fire Protection District	Serves as the primary planning document for the management of hazardous waste in San Bernardino County	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with all regulations and rules established by the San Bernardino County Hazardous Waste Management Plan
San Bernardino County Division of Environmental Health Services, Solid Waste Local Enforcement Agency	San Bernardino County Division of Environmental Health Services	Inspects and permits refuse vehicles and solid waste facilities	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-7. The Project would comply with any and all regulations set forth by San Bernardino County Division of Environmental Health Services, Solid Waste Local Enforcement Agency regarding the handling of nonhazardous solid waste generated on site

San Bernardino County Emergency Response Plan		Illustrates strategies for minimizing or preventing hazard risks in the unincorporated area of the county and the five special districts	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would be developed in an unincorporated portion of San Bernardino County, and would comply with the San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) to minimize or prevent the loss of life and damage to property
San Bernardino County Fire Department—Hazardous Materials Division	San Bernardino County Fire Department	As the state-designated CUPA for San Bernardino County, this local agency is responsible for the enforcement of a variety of hazardous materials management requirements	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would comply with any and all regulations set forth by the local CUPA (San Bernardino County Fire Protection District Hazardous Materials Section).
San Bernardino County Fire Department Fire Prevention Standards	San Bernardino County Fire Department	Requires building plans to be submitted to the Fire Department for review and approval of access roads and points and Knox Box mounting location, position, and operating standards prior to installation	Section 3.9.3.4, Impact HAZ-1 and Impact HAZ-2. The Project would conform with any and all regulations set forth in the San Bernardino County Fire Protection District operational code, including the Fire Apparatus Access Roads standard (No. 503.1) and Fire Personnel Key Boxes (Knox Box) standard (No. 506).

3.9.7 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix V, Table 2-1. Permits Required for Soda Mountain Solar Project. Federal, state, and local permits applicable to hazards and hazardous materials are also summarized in Appendix V, Table 2-1 and below in Table 3.9-8.

Table 3.9-8. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
Department of Toxic Substances Control	Hazardous Materials Business Plan (HMBP)	Wayne Lorentzen, Division Chief 1001 “I” Street, P.O. Box 806, Sacramento, CA 95812 916-255-3883 Wayne.Lorentzen@dtsc.ca.gov	After project approval and prior to construction. Updated/new HMBP submittal for operational phase.
California Department of Environmental Protection	Hazardous Materials Business Plan	Elizabeth Brega, Senior Environmental Scientist 1001 “I” St., Sacramento, CA 95814 916-318-8156 elizabeth.brega@calepa.ca.gov	After project approval and prior to construction. Updated/new HMBP submittal for operational phase.
County of San Bernadino	Construction Waste Management Plan	Nancy Sansonetti, Supervising Planner, Environmental Management Division Address: 825 East Third Street, San Bernardino, CA 92414 909-387-7910 Nancy.Sansonetti@dpw.sbcounty.gov	After project approval and prior to construction. Updated/new HMBP submittal for operational phase.
County of San Bernadino	Hazardous Materials Business Plan	Manikhone Cruz, Planner, Department of Public Works	After project approval and prior to construction.

Exhibit 7

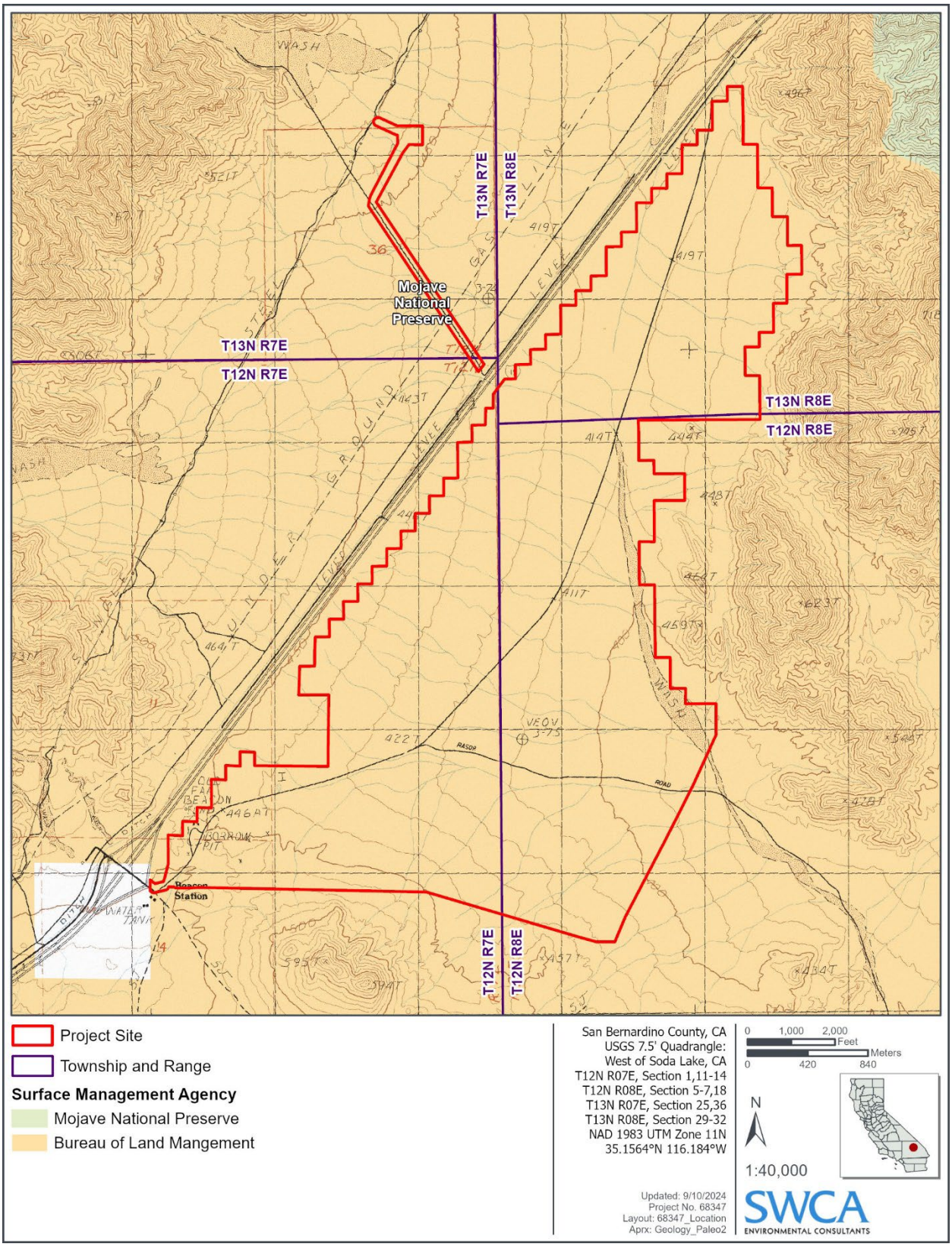


Figure 3.11-1. Project location and management agency.

Exhibit 8

3.22.6 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to paleontological resources are discussed and summarized in Table 3.7-3.

Table 3.7-3. Laws, Ordinances, Regulations, and Standards

LORS	Regulatory Agency	Applicability	Compliance
Paleontological Resources Preservation Act of 2009	Department of the Interior/Bureau of Land Management	Requires the Secretary of the Interior to manage and protect paleontological resources on federal land using scientific principles and expertise and requires the BLM to develop appropriate plans for inventorying and monitoring, and the scientific and educational use of, paleontological resources, in accordance with applicable agency laws, regulations, and policies. Where possible, these plans should emphasize interagency coordination and collaborative efforts with nonfederal partners, the scientific community, and the general public.	The project will adhere to the policies of the Paleontological Resources Preservation Act of 2009 through implementation of APMs [Section 3.22.3].
Federal Land Policy and Management Act of 1976	Department of the Interior/Bureau of Land Management	Requires the Secretary of the Interior to retain and maintain public lands in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric water resource, archeological and other values. FLPMA also requires the BLM to develop regulations and plans for the protection of public land areas of critical environmental concern, "which include important historic, cultural or scenic values," and to protect life and safety from natural hazards.	The project will adhere to the protection of scientific resources through implementation of APMs [Section 3.22.3].
Antiquities Act of 1906	Department of the Interior/Bureau of Land Management	Requires federal agencies that manage public lands to preserve the scientific, commemorative, and cultural values of such sites.	The project will adhere to the Antiquities Act and its policies through implementation of APMs [Section 3.22.3].
Title 43 CFR 49	Department of the Interior/Bureau of Land Management	Provides for the management, preservation, and protection of paleontological resources on lands administered by the BLM and other agencies under the Department of the Interior. The regulation addresses the collection in accordance with permits, curation in an approved repository, maintenance of confidentiality of specific locality data, and the civil and criminal penalties for illegal collecting, damaging, otherwise altering or defacing, or selling paleontological resources.	The project will adhere to the Paleontological Resources Preservation and its policies through implementation of APMs [Section 3.22.3].
Title 43 CFR 8365.1-5	Department of the Interior/Bureau of Land Management	Prohibits the destruction, damage, or removal of scientific resources on federal land.	The project will adhere to the public lands policies through implementation of APMs [Section 3.22.3].
California Environmental Quality Act	California Energy Commission	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the project and to reduce environmental impacts to the extent feasible.	The approval of the project would comply with CEQA, as required by the California Energy Commission's Opt-In Application process.

3.22.7 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix V, Table 2-1. Permits Required for Soda Mountain Solar Project. The paleontological consultant that is contracted to implement the paleontological APMs for the project will be required to hold a Paleontological Resource Use Permit issued by the BLM California state office, as well as a project-

specific Notice to Proceed permit from the BLM Barstow Field Office, for conducting paleontological monitoring and collecting paleontological resources encountered during development of the project. All permits need to be valid and current through the duration of the paleontological mitigation program, and all paleontological personnel involved will need to be permitted or otherwise authorized by the BLM. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable local statute, ordinance, or regulation.

Table 3.7-4. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
Bureau of Land Management, State Office	Paleontological Resource Use Permit	Tony Overly, BLM California Paleontology Lead 2800 Cottage Way Sacramento, CA 95825-1886 916-978-4684 soverly@blm.gov	Prior to construction
Bureau of Land Management, Barstow Field Office	Notice to Proceed	Alexis Francois 2601 Barstow Road Barstow, CA 92311 760-252-6000 afrancois@blm.gov	Prior to construction

Exhibit 9

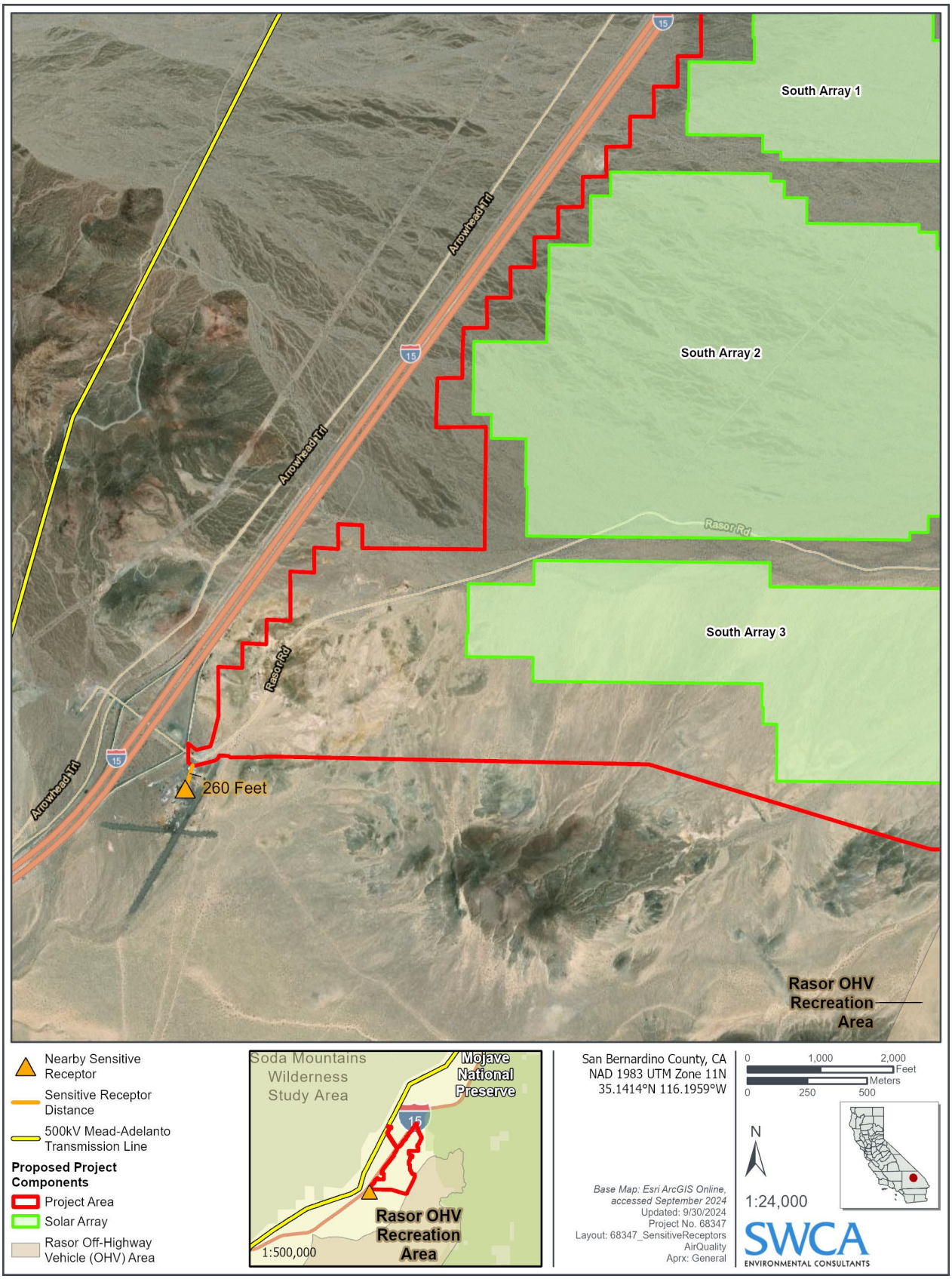


Figure 3.21-1. Sensitive Receptor Location.

SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (SCAQMD 2003). In this report, AQMD clearly states (page D-3):

> …the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.
>
> Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).

Individual projects that do not generate operational or construction emissions that exceed MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the MDAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. The project would also not exceed the General Conformity de minimis thresholds for any pollutants in nonattainment. As previously noted, the project construction-source and operational-source air pollutant emissions would not exceed applicable MDAQMD regional thresholds. However, the project would incorporate APMs AIR-1 through AIR-9 and MDAQMD (Rule 403.2) requirements to further reduce potential emissions.

As the project's individual construction-related cancer risk and chronic hazard index are below the MDAQMD thresholds, and project operation would not result in a significant emission of TACs, a cumulative air quality impact modeling analysis is not needed. Further, based on CARB's Pollution Mapping Tool, the nearest permitted source is the Mountain Pass Mine approximately 43 miles northeast of the Project site (CARB 2024). Therefore, as there are no other permitted facilities within 6-miles of the project, no cumulative effects from nearby sources are anticipated. As such, project construction and operational-source TAC emissions are considered **less than significant.**

3.21.6 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to public health are discussed and summarized in Table 3.21-3.

Table 3.21-3. Laws, Ordinances, Regulations, and Standards

LORS	Administering Agency	Applicability	Compliance
Federal Clean Air Act	Mojave Desert Air Quality Management District	Establishes federal ambient air quality standards.	Section 3.21.3.3, 3.21.3.4
California Clean Air Act	Mojave Desert Air Quality Management District	Establishes state ambient air quality standards.	Section 3.21.3.3, 3.3.3.4
Mojave Desert Air Quality Management District Rules	Mojave Desert Air Quality Management District	Regulates air pollutant emission throughout the Mojave Desert Air Basin	Section 3.21.3.3, 3.3.3.4

and Air Quality Management Plans			
County of San Bernardino Municipal Code	County of San Bernardino Building Division	Identifies diesel exhaust emissions control measures	Section 3.21.3.3, 3.21.3.4

3.21.7 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix V, Table 2-1. Permits Required for Soda Mountain Solar Project. Federal, state, and local permits applicable to air quality are also summarized in Appendix V, Table 2-1 and below in Table 3.21-4.

Table 3.21-4. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
Mojave Desert Air Quality Management District	Authority to Construct	Brad Poiriez, Executive Director 14306 Park Avenue, Victorville, CA 92392 760-245-166 bradp@mdaqmd.ca.gov	After project approval and prior to construction.
Mojave Desert Air Quality Management District	Air Quality Construction Management Plan	Brad Poiriez, Executive Director 14306 Park Avenue, Victorville, CA 92392 760-245-166 bradp@mdaqmd.ca.gov	No less than 60 days prior to the start of construction.
Mojave Desert Air Quality Management District	Solar Project Dust Control Plan	Brad Poiriez, Executive Director 14306 Park Avenue, Victorville, CA 92392 760-245-166 bradp@mdaqmd.ca.gov	Not less than 10 days prior to active operations.

Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable local statute, ordinance, or regulation. However, the Applicant and CEC would collaborate with the County of San Bernardino on review of this Opt-in Application to ensure compliance with County rules and regulations.

3.21.8 References Cited

California Air Pollution Control Officers Association (CAPCOA). 2023. S. California Emission Estimator Model (CalEEMod) and User Guide. Version 2022.1.1.21. Available at: http://www.caleemod.com/.

California Air Resources Board (CARB). 2000a. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/toxics/asbestos/ofr_2000-019.pdf.

———. 2000b. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf.

———. 2011. CARB Toxic Air Contaminant Identification List. Available at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

Exhibit 10

Socioeconomic Laws, Ordinances, Regulations and Standards

LORS	Requirement/Applicability	Administering Agency	Application Section Explaining Conformance
Federal			
Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community. Applies only to federal agencies.	U.S. EPA	3.5 Impacts to Environmental Justice Populations
State			
Government Code Sections 65996-65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities. School districts may charge a one time assessment fee to mitigate potential school impacts.	Local School Districts	3.3.8 Public Schools
Education Code Section 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities. Local school districts may charge a one-time assessment fee to mitigate potential school impacts.	CDE	3.3.8 Public Schools
Local			
Solar Energy Development Standards (SBCC §84.29.040)	Requirement for the developer of an approved commercial solar energy generation facility to pay an annual public services impact fee on a per acre basis based on a project-specific study of the project's public safety services impacts.	County of San Bernadino	Section 3.3.7 Cost of Public Services

Exhibit 11

Table C: Solid Waste Disposal Facilities Proximal to Project Site

Facility	Location	Class	Permitted Capacity (CYD)	Remaining Capacity (CYD)	Permitted Throughput (TPD)	Estimated Closure Date	Enforcement Actions Noted	Accepts C&D Waste	Accepts Soil
Barstow Landfill	32553 Barstow Rd. Barstow, CA 92311	III	80,354,500	71,481,660.00	1,500.00	5/1/2071	3	Yes	No
Victorville Landfill	18600 Stoddard Wells Road Victorville, CA 92307	III	93,400,000	79,400,000.00	3,000.00	10/1/2047	4	Yes	Yes
Mid-Valley Landfill	2390 N. Alder Avenue Rialto, CA 92377	III	101,300,000.00	54,219,377.00	7,500.00	4/1/2045	5	Yes	Yes

Source: Department of Public Works San Bernardino County and CalRecycle Solid Waste Information System (SWIS) database
https://www2.calrecycle.ca.gov/SolidWaste/Site/Search
CYD = cubic yards

TPD = tons per day

Table E: LORS Applicable to Waste Management Plan

Jurisdiction	LORS	Applicability	Project Conformity
Federal	RCRA 42 United States Code 6901, Subtitle D	Sets national standards for the management of solid waste.	Solid waste generated by the Project would be collected and disposed of in accordance with Subtitle D.
Federal	RCRA 42 United States Code 6901, Subtitle C	Sets national standards for hazardous waste management	Hazardous waste generated by the Project would be handled and disposed in conformance with Subtitle C.
State	CEQA	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible.	The Project would conform with CEQA, as required by the California Energy Commission's Opt-In Application process.
State	California Green Building Standards Code	Provides mandatory recycling requirements.	Project-generated solid waste would be recycled in accordance with CALGreen requirements for recycling percentages.
State	California Integrated Waste Management Act (CIWMA)	Controls solid waste collectors, recyclers, and depositors.	Solid waste generated by the Project would be collected and disposed by a collection firm in conformance with CIWMA
State	Assembly Bill 341	Requires commercial businesses that generate 4 cubic yards or greater of solid waste to recycle.	The Project would recycle solid waste as able, in accordance with Assembly Bill 341.

Table E: LORS Applicable to Waste Management Plan

Jurisdiction	LORS	Applicability	Project Conformity
State	CCR Title 22, Division 4.5	Regulations regarding environmental health standards for the management of hazardous waste and universal waste.	Hazardous waste generated by the Project would be managed in conformance with CCR Title 22, Division 4.5
State	2018 CA State Hazard Mitigation Plan	Provides an updated and comprehensive description of California's historical and current hazard analysis, mitigation strategies, goals, and objectives.	The Project would comply with all mitigation strategies necessary to reduce/eliminate the risk of hazardous waste materials becoming or contributing to a natural hazard.
State	Hazardous Waste Control Act, Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq	Authorizes the DTSC and local certified unified program agencies (CUPAs) to regulate facilities that generate hazardous waste.	Hazardous waste generated by the Project would be in conformance with the Hazardous Waste Control Act.
Local	San Bernardino County General Plan: 1) Policy Plan Goal HZ-2 Policy HZ-2.4 2) Policy Plan Goal IU-4 Solid Waste	1) Describes truck routes for hazardous materials 2) Describes Countywide Plan policies taken to progress toward achieving the Countywide Plan goals.	Project would ensure all hazardous wastes transported off-site comply with established Truck Routes for Hazardous Materials set by the county. Project would not negatively impact Countywide Plan policy goals with respect to solid waste management (IU-4) as all waste would be properly recycled/disposed

Table E: LORS Applicable to Waste Management Plan

Jurisdiction	LORS	Applicability	Project Conformity
Local	San Bernardino County Code of Ordinances: Title 4, Division 3, Chapter 3	Authorizes Chief of County Fire Department (CFD), Chief of the Division of Environmental Health Services (DEHS) or public health department, and their enforcement officers to enforce provisions of the Public Nuisance Abatement Chapter, which includes accumulations of waste and hazardous materials.	The Project would take necessary steps to ensure no storage of wastes reaches quantities sufficient to warrant classification as a public nuisance and would allow for any necessary inspections of site deemed necessary by the CFD, DEHS, or public health department.
Local	San Bernardino County Code of Ordinances: Title 4, Division 3, Chapter 8	Establishes minimum standards for the storage of nonhazardous wastes within the unincorporated area of the County of San Bernadino.	The Project will comply with Chapter 8 to ensure storage of nonhazardous wastes meet standards for the storage of nonhazardous wastes in unincorporated San Bernardino County.
Local	San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP)	Outlines plan for reducing and/or eliminating risk in unincorporated area of the County and within areas overseen/managed by Flood Control District, Fire District, and Special Districts Department.	Plan does not have any regulations specific to hazardous wastes, as outlined in Table 7 of the MJHMP, but the Project would consider ways that the activities on site could increase likelihood of or worsen an identified hazard on the MJHMP and reduce/eliminate the risk accordingly, and would comply with the State Hazard Mitigation Plan.

Table E: LORS Applicable to Waste Management Plan

Jurisdiction	LORS	Applicability	Project Conformity
Local	San Bernardino County Division of Environmental Health Services, Solid Waste Local Enforcement Agency (LEA)	Ensures proper storage and disposal of solid waste, minimizes the presence of vectors related to solid waste handling and disposal methods and respond to public complaints relating to solid waste in San Bernardino County.	The Project would conform to the requirements of the San Bernardino County Solid Waste LEA.

Sources: US EPA (2024), CalRecycle (n.d.-a, -b, -c), San Bernardino County (n.d.-a, -b,-c,-d, 2022), California OPR (n.d.), California OES (n.d.)

OES: Office of Emergency Services

OPR: Governor's Office of Planning and Research

1.6 Agencies and Agency Contact

The U.S. Environmental Protection Agency, DTSC, and local agencies regulate and oversee the management of waste. In general, regulations are administered by San Bernardino County. A summary of Agency Contacts for waste management related to the Project have been provided in Table F below. No agencies listed have yet been contacted. All agencies will need to be contacted, notified of regulated activities to occur, and have all regulatory requirements met prior to commencement of any construction activities on Project site.

Table F: Agency Contact for Waste Management

Issue	Agency	Contact
Solid Waste Management	San Bernardino County Environmental Health Division, Solid Waste LEA	Adela Evans, Chief of Environmental Health Services 385 N. Arrowhead Ave, 2nd Floor San Bernardino, CA 92415 Phone: (800) 442-2283
	San Bernardino County Department of Public Works Solid Waste Management Division	Darren J. Meeka, Deputy Director Phone: (909) 386-8701
Hazardous Waste Management	Department of Toxic Substance Control (DTSC)	DTSC Chatsworth Regional Office: Phone: (818) 717-6500 Waste Management: Phone: (800) 618-6942
Hazardous Materials Business Plan/CUPA Hazardous and Nonhazardous Waste Management	CalEPA	Email: HMBP@calepa.ca.gov
	San Bernardino County Fire Protection District	Department Headquarters Daniel R. Munsey, Fire Chief/Fire Warden 598 S Tippecanoe Ave San Bernardino, CA 92408 Phone: (909) 387-5974 Email: info@sbcfire.org

1.7 Permits and Permit Schedule

Permits would be obtained after project approval for temporary storage and disposal of hazardous wastes. Additional permits pertaining to waste management during Project construction and operations phases are summarized in Table G.

Table G: Permits and Permit Schedule for Waste Management

Permit	Schedule	Status
Onsite Wastewater Treatment System (OWTS) Permit	After Project approval and prior to beginning construction	Completion upon Project approval
Hazardous Materials Business Plan (HMBP)	After Project approval and prior to beginning construction. Updated/new HMBP submittal for operations phase	Completion upon Project approval
Construction Waste Management Plan (San Bernardino County Solid Waste Management)	After Project approval and prior to beginning construction. This WMP is submitted as a part of the CEC's Opt-In application, and would be reviewed and updated as necessary to comply with San Bernardino County	Completion upon Project approval

Exhibit 12

OPERATIONAL ANALYSES

As mentioned prior, the major concern for the trips generated into and out of the Project site is during the construction period. There may be some trips generated near the Project site due to traffic entering and existing a nearby Shell Oil gasoline station and the Rasor Off-Highway Vehicle (OHV) Recreational Area. However, these land uses are not major traffic generators. Therefore, our LOS analysis is centered on the trips generated from Project construction for the following scenarios for a typical weekday (Monday through Thursday) and a typical Friday:

- Existing Conditions
- Project Construction Conditions

EXISTING CONDITIONS

Intersection Operations

Existing LOS results for the study intersections are shown in Table 4 and Table 6. The results indicate that all study intersections operate with little or no delay during all peak hours for both a typical weekday and Friday. Detailed results can be found in Appendix D.

Table 4: Typical Weekday (Monday – Thursday) Existing Conditions Intersections LOS Summary

ID	Intersection	Control Type	Delay (s/veh)			LOS		
			AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Ramps & Rasor Road	SSSC	9.4	9.8	9.7	A	A	A
2	I-15 SB Ramps & Rasor Road	SSSC	9.3	9.6	9.3	A	A	A

Note:

SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 5: Friday Existing Conditions LOS Results - Intersection

ID	Intersection	Control Type	Delay (s/veh)			LOS		
			AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Ramps & Rasor Road	SSSC	9.5	9.8	9.7	A	A	A
2	I-15 SB Ramps & Rasor Road	SSSC	9.3	9.7	9.4	A	A	A

Note:

SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Basic Freeway Segment Operations

Existing LOS results for the study highway mainline segments are shown in Table 6 and Table 7. The results indicate that all study segments operate LOS C or better during all peak hours for both a typical weekday and Friday. Detailed results can be found in Appendix E.

Table 6: Typical Weekday (Monday – Thursday) Existing Conditions LOS Results – Mainline Segment

Mainline Segment	Density (pc/mi/ln)			LOS		
	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
I-15 NB *Between Basin Road and Rasor Road*	8.2	15.9	11.1	A	B	B
I-15 NB *Between Rasor Road and Zzyzx Road*	8.2	15.9	11.1	A	B	B
I-15 SB *Between Basin Road and Rasor Road*	6.6	13.4	13.3	A	B	B
I-15 SB *Between Rasor Road and Zzyzx Road*	6.6	13.4	13.3	A	B	B

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 7: Friday Existing Conditions LOS Results – Mainline Segment

Mainline Segment	Density (pc/mi/ln)			LOS		
	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
I-15 NB *Between Basin Road and Rasor Road*	9.9	16.4	12.3	A	B	B
I-15 NB *Between Rasor Road and Zzyzx Road*	9.9	16.4	12.3	A	B	B
I-15 SB *Between Basin Road and Rasor Road*	8.1	20.4	25.5	A	C	C
I-15 SB *Between Rasor Road and Zzyzx Road*	8.1	20.4	25.5	A	C	C

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

PROJECT CONSTRUCTION CONDITIONS

Project construction is expected to take place over an 18-month period. The results below represent the expected change in operations during project construction.

Intersection Operations

Project LOS results for the study intersections are shown in Table 8 and Table 9. With construction traffic, longer delays would be experienced at the intersection of I-15 NB Ramps & Rasor Road, especially during the AM and PM peak hours. The intersection of I-15 SB Ramps & Rasor Road would experience longer delays during the PM peak hour and result in LOS E operations. Compared to the typical weekday results, the results for Friday were found to be similar. Detailed results can be found in Appendix D.

Table 8: Typical Weekday (Monday – Thursday) Project Construction Conditions Intersection LOS Summary

ID	Intersection	Control Type	Delay (s/veh)			LOS		
			AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Ramps & Rasor Road	SSSC	15.5	9.9	15.4	C	A	C
2	I-15 SB Ramps & Rasor Road	SSSC	9.7	9.6	46.3	A	A	E

Note:

SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 9: Friday Project Construction Conditions Intersection LOS Summary

ID	Intersection	Control Type	Delay (s/veh)			LOS		
			AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Ramps & Rasor Road	SSSC	15.7	9.9	15.5	C	A	C
2	I-15 SB Ramps & Rasor Road	SSSC	9.7	9.8	46.5	A	A	E

Note:

SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

As indicated prior, I-15 Southbound Ramps & Rasor Road would operate at LOS E during the PM peak hour. Upon further investigation, it has been found that the vehicles along the westbound approach, I-15 Southbound off-ramp, were predicted to experience an increase in delay by approximately 37 seconds per vehicle. Along this approach, only six vehicles would be affected during the PM peak hour. The 95th percentile queue length along this approach is approximately seven feet. With a storage capacity of 1,450 feet, any additional queuing that the delays may cause will most likely not spill onto the freeway mainline and affect freeway operations. Additionally, these delays are temporary traffic conditions that will not affect long-term traffic operations. Overall, even though this is considered less than ideal performance standards (LOS C or better), it is not considered a significant traffic operational deficiency since minimal vehicles are affected, the additional delay will not affect the freeway mainline, and these conditions are temporary during the construction period.

Basic Freeway Segment Operations

Project LOS results for the study highway mainline segments are shown in Table 10 and Table 11. Compared to existing conditions, the AM peak on a typical weekday and Friday during project construction would temporarily worsen from LOS A to LOS B along I-15 Northbound between Basin Road and Rasor Road. During the PM peak on a Friday, the LOS will temporarily worsen from LOS C to LOS D along I-15 Southbound between Basin Road and Rasor Road. Detailed results can be found in Appendix E.

Provided that project construction would generate a small amount of traffic compared to current traffic volumes, the project would not result in a significant traffic operational deficiency at the study freeway mainline segments.

Table 10: Typical Weekday (Monday – Thursday) Project Construction Conditions LOS Results – Mainline Segment

Mainline Segment	Density (pc/mi/ln)			LOS		
	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
I-15 NB *Between Basin Road and Rasor Road*	12.6	16.0	11.1	B	B	B
I-15 NB *Between Rasor Road and Zzyzx Road*	8.2	15.9	11.6	A	B	B
I-15 SB *Between Basin Road and Rasor Road*	6.6	13.5	17.4	A	B	B
I-15 SB *Between Rasor Road and Zzyzx Road*	7.0	13.4	13.3	A	B	B

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 11: Friday Project Construction Conditions LOS Results – Mainline Segment

Mainline Segment	Density (pc/mi/ln)			LOS		
	AM Peak Hour	MD Peak Hour	PM Peak Hour	AM Peak Hour	MD Peak Hour	PM Peak Hour
I-15 NB *Between Basin Road and Rasor Road*	14.3	16.5	12.3	B	B	B
I-15 NB *Between Rasor Road and Zzyzx Road*	9.9	16.4	12.8	A	B	B
I-15 SB *Between Basin Road and Rasor Road*	8.1	20.4	31.7	A	C	D
I-15 SB *Between Rasor Road and Zzyzx Road*	8.6	20.4	25.5	A	C	C

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

OFF-RAMP QUEUING ANALYSIS

Queuing analyses were conducted for off-ramp approaches at ramp intersections. The queuing analysis compares the minimum required storage lengths to the storage lengths provided for the analyzed intersections. The minimum required storage lengths are based on the maximum 95th percentile queue lengths for all lane groups on the off-ramp approach as calculated in the Vistro queuing worksheets. Vistro reports the 95th percentile queue length according to HCM procedures for a single lane of a lane group (highest queue length considering all lanes of the lane group) instead of the total queue length of all lanes in that lane group.

The provided storage lengths for an off-ramp are measured from the off-ramp gore point to the crosswalk if it is a continuous lane. Our off-ramp queuing analysis is centered on the trips generated from the construction of the solar farm for the following scenarios:

- Existing Conditions
- Project Construction Conditions

EXISTING CONDITIONS

Intersection queuing analysis results for the off-ramp interchanges are shown in Table 12 and Table 13. In all peak hours analyzed, queues at the study interchanges do not exceed the allocated storage capacity. Detailed results can be found in Appendix D.

Table 12: Typical Weekday (Monday – Thursday) Existing Conditions Off-Ramp Queuing Results

ID	Location	Control Type	Storage Capacity (feet)	95th Percentile Queue (feet)		
				AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Off-Ramp	SSSC	1,550	2.4	4.3	4.0
2	I-15 SB Off-Ramp	SSSC	1,450	0.9	2.3	0.9

Note:
SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 13: Friday Existing Conditions Off-Ramp Queuing Results

ID	Location	Control Type	Storage Capacity (feet)	95th Percentile Queue (feet)		
				AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Off-Ramp	SSSC	1,550	2.9	4.8	4.4
2	I-15 SB Off-Ramp	SSSC	1,450	1.0	3.2	0.9

Note:
SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

PROJECT CONSTRUCTION CONDITIONS

Intersection queuing analysis results for the off-ramp interchanges are shown in Table 14 and Table 15. Compared to existing conditions, queues increase in length during all peak hours, especially at the I-15 Northbound Off-Ramp during the AM and PM peak hours. However, the queues at the study interchanges still do not exceed the allocated storage capacity during project construction and are minimal compared to the storage capacity at the freeway off-ramps. The highest queue is projected to be approximately 110 feet which corresponds to the approximate length of a 6-axle truck or five passenger/light duty vehicles(conservatively). Moreover, due to the low traffic volumes along Rasor Road, queues along the I-15 off-ramps would be negligible. Therefore, off-ramp queues would not adversely affect travel on the freeway mainline. Detailed results can be found in Appendix D.

Table 14: Typical Weekday (Monday – Thursday) Project Construction Conditions Off-Ramp Queuing Results

ID	Location	Control Type	Storage Capacity (feet)	95th Percentile Queue (feet)		
				AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Off-Ramp	SSSC	1,550	109.6	4.9	5.7
2	I-15 SB Off-Ramp	SSSC	1,450	7.4	2.4	6.7

Note:
SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

Table 15: Friday Project Construction Conditions Off-Ramp Queuing Results

ID	Location	Control Type	Storage Capacity (feet)	95th Percentile Queue (feet)		
				AM Peak Hour	MD Peak Hour	PM Peak Hour
1	I-15 NB Off-Ramp	SSSC	1,550	112.4	5.3	6.2
2	I-15 SB Off-Ramp	SSSC	1,450	7.5	3.4	6.8

Note:
SSSC = Side-Street Stop-Controlled

SOURCE: KITTELSON & ASSOCIATES, INC (2024)

applicable County requirements relative to the provision of safe access for vehicles, pedestrian, and bicyclists. Furthermore, since modifications to access and circulation plans are largely confined to a project site and immediate surrounding area, a combination of impacts with other cumulative projects that could potentially lead to cumulative impacts is not expected. Therefore, there **would not be a significant cumulative impact** regarding geometric hazards, nor would the proposed project's potential contribution to cumulative impacts associated with hazardous design conditions be considerable.

With regard to emergency access, the proposed project would not result in a significant impact. The project site and the surrounding area are developed with existing roadway networks, and with existing routes for emergency vehicles and evacuation. Similar to the proposed project, cumulative projects would likely implement a similar CTMP (see APM TRA-1) to include construction traffic measures to ensure adequate emergency access is maintained in and around the cumulative project sites throughout construction activities. Coordination of these plans will ensure construction activities of concurrent cumulative projects and associated hauling activities (if any) are managed in collaboration with one another and the project. Therefore, there **would not be a significant cumulative impact** regarding emergency access, nor would the project's potential contribution to cumulative impacts associated with emergency access be considerable.

3.17.6 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to transportation are discussed and summarized in Table 3.17-5.

Table 3.17-5. Laws, Ordinances, Regulations, and Standards

LORS	Administering Agency	Applicability	Compliance
Title 49 CFR, sections 171–177 and 35-399	San Bernadino County Environmental Health Services	Requires proper handling and storage of hazardous materials during transportation.	Section 3.9.3.3, 3.9.3.4
California Vehicle Code, Division 15, Sections 35000–35796	California Department of Transportation	Regulates size, weight, and loads of vehicles upon highways.	Section 3.17.3.2, 3.17.3.3
California Streets and Highways Code, Division 1, Sections 660–759.3	California Department of Transportation	Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery; includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits; and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.	Section 3.17.3.2, 3.17.3.3
County of San Bernardino Countywide Plan	County of San Bernardino Planning Department	Identifies diesel exhaust emissions control measures.	Section 3.17.3.2, 3.17.3.3

3.17.7 Agencies Contacted and Permits

A list of agencies that were contacted during preparation of this application is provided in Appendix V, Table 2-1. Permits Required for Soda Mountain Solar Project. Federal, state, and local permits applicable to transportation are also summarized in Appendix V, Table 2-1 and below in Table 3.17-6.

Table 3.17-6. Permits Required

Regulatory Agency	Permit Required	Agency Contact	Schedule
California Department of Transportation	Encroachment Permit	James Camarillo Associate Transportation Planner, District 8 – Planning Division, Office of Local Development Review San Bernardino Coordinator 464 W. 4th Street MS-726, San Bernardino, CA 92401 909-383-4555 / 909-963-8604 james.camarillo@dot.ca.gov	Prior to construction.
California Department of Transportation	Oversize/Heavy Load Permit	James Camarillo Associate Transportation Planner, District 8 – Planning Division, Office of Local Development Review San Bernardino Coordinator 464 W. 4th Street MS-726, San Bernardino, CA 92401 909-383-4555 / 909-963-8604 james.camarillo@dot.ca.gov	Prior to construction.
California Department of Transportation	Transportation Management Plan	James Camarillo Associate Transportation Planner, District 8 – Planning Division, Office of Local Development Review San Bernardino Coordinator 464 W. 4th Street MS-726, San Bernardino, CA 92401 909-383-4555 / 909-963-8604 james.camarillo@dot.ca.gov	Prior to construction.

Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable local statute, ordinance, or regulation. However, the Applicant and CEC would collaborate with the County of San Bernardino on review of this Opt-in Application to ensure compliance with County rules and regulations.

3.17.8 References Cited

California Department of Transportation (Caltrans). 2020a. Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG). Available at: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Accessed May 2024.

———. 2020b. Highway Design Manual. Chapter 100, Basic Design Policies, Topic 102--Design Capacity and Level of Service. Available at: https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp0100-092923-a11y.pdf. Accessed June 2024.

———. 2022. Annual Average Daily Traffic. Available at: https://dot.ca.gov/programs/traffic-operations/census. Accessed May 2024.

Federal Highway Administration. 2023. Manual on Uniform Traffic Control Devices for Streets and Highways, 11th Edition. Available at: https://mutcd.fhwa.dot.gov/pdfs/11th_Edition/mutcd11thedition.pdf. Accessed July 2024.

Exhibit 13

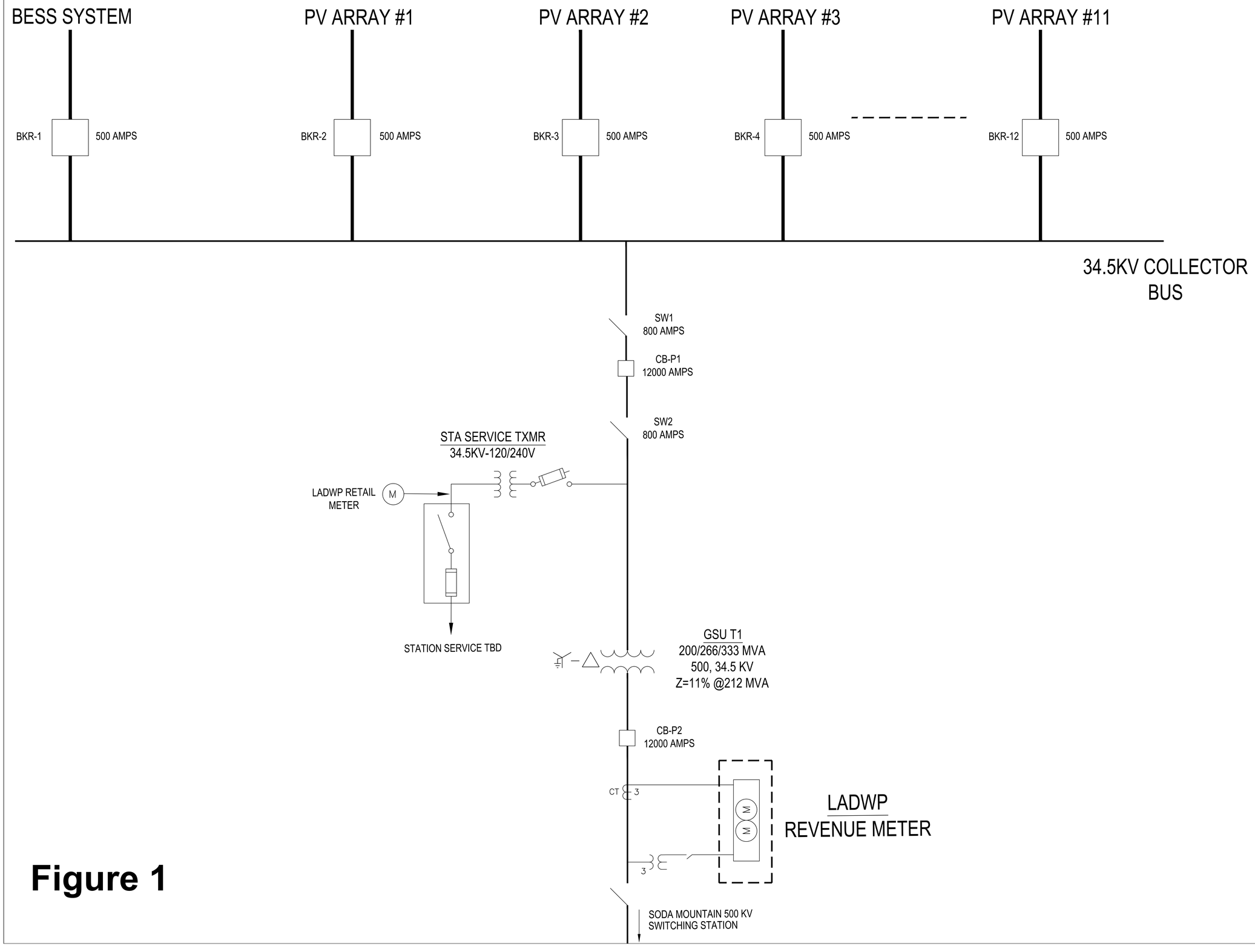


Figure 1

SODA MOUNTAIN SUBSTATION

CONFIDENTIAL DOCUMENTS

THE INFORMATION EMBODIED ON THIS DRAWING IS STRICTLY CONFIDENTIAL AND IS SUPPLIED WITH THE UNDERSTANDING THAT IT WILL BE HELD CONFIDENTIAL AND NOT DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN CONSENT OF ZGLOBAL, INC.

REV.	BY	DESCRIPTION	DATE	APPR'D BY
1	DI	DESIGN	9/23/24	BR

REGISTERED PROFESSIONAL ENGINEER
BRIAN RAHMAN
E - 14914
ELECTRICAL
REN.
STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

1 inch
Scale to Confirm 24"x36" Plot

PLOT: 9/23/2024 2:01 PM

ZGLOBAL
Power Engineering & Energy Solutions

604 SUTTER ST, STE 250
FOLSOM, CA 95630
Phone : 916.985.9461
Fax: 916.985.9467

SHEET TITLE:

DRAWN BY:
CHECKED: BR
SCALE:
JOB NO:
DATE:

DRAWING No.

REV No. 1

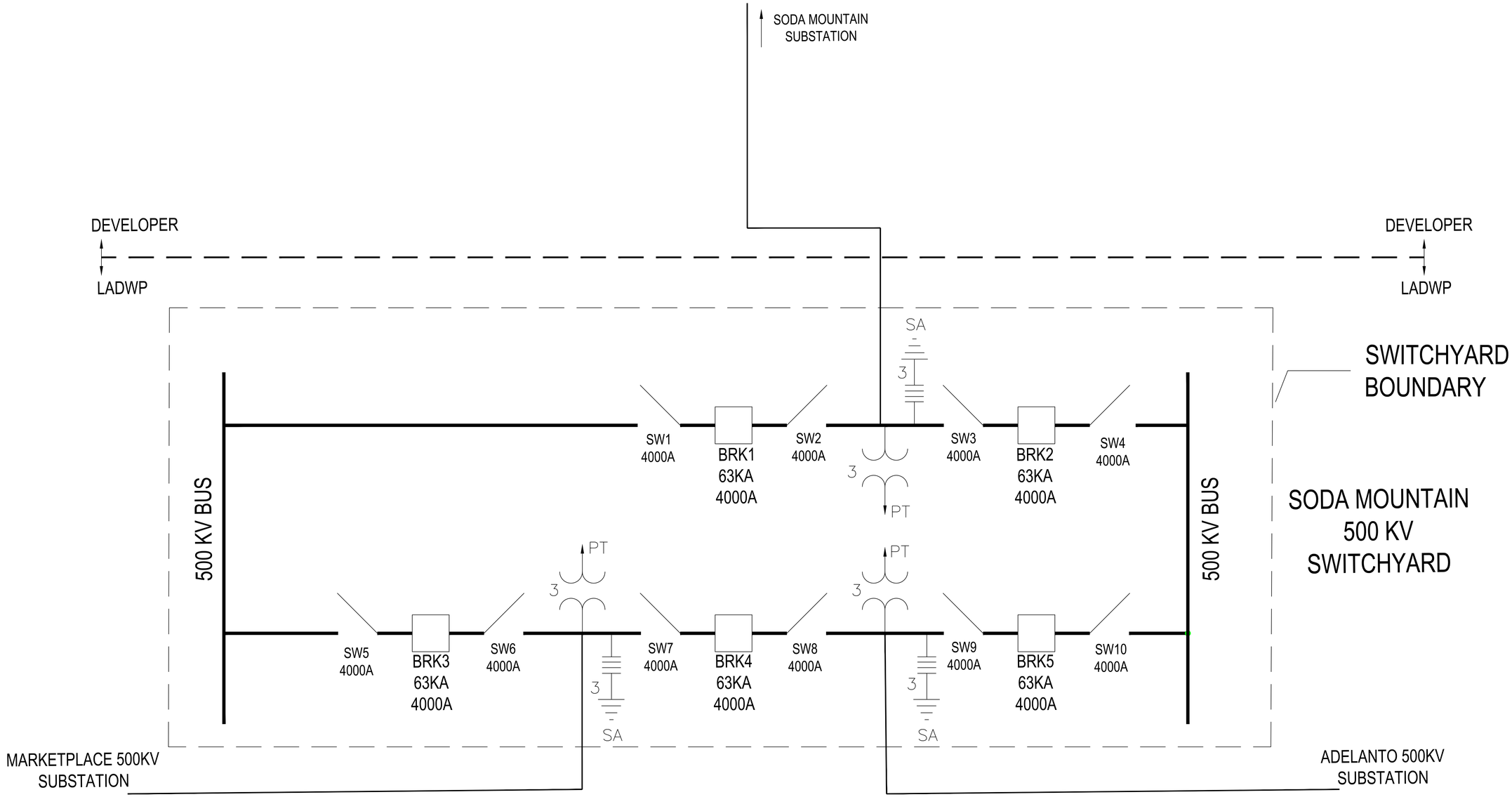


Figure 2

SODA MOUNTAIN
SWITCHYARD

CONFIDENTIAL DOCUMENTS

THE INFORMATION EMBODIED ON THIS DRAWING IS STRICTLY CONFIDENTIAL AND IS SUPPLIED WITH THE UNDERSTANDING THAT IT WILL BE HELD CONFIDENTIAL AND NOT DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN CONSENT OF ZGLOBAL, INC.

REV.	BY	DESCRIPTION	DATE	APPR'D BY
1	DI	DESIGN	9/23/24	BR

REGISTERED PROFESSIONAL ENGINEER
BRIAN RAHMAN
E - 14914
ELECTRICAL
REN.
STATE OF CALIFORNIA

1 inch
Scale to Confirm 24"x36" Plot

NOT FOR CONSTRUCTION

PLOT: 9/23/2024 1:18 PM

ZGLOBAL
Power Engineering & Energy Solutions

604 SUTTER ST, STE 250
FOLSOM, CA 95630
Phone : 916.985.9461
Fax: 916.985.9467

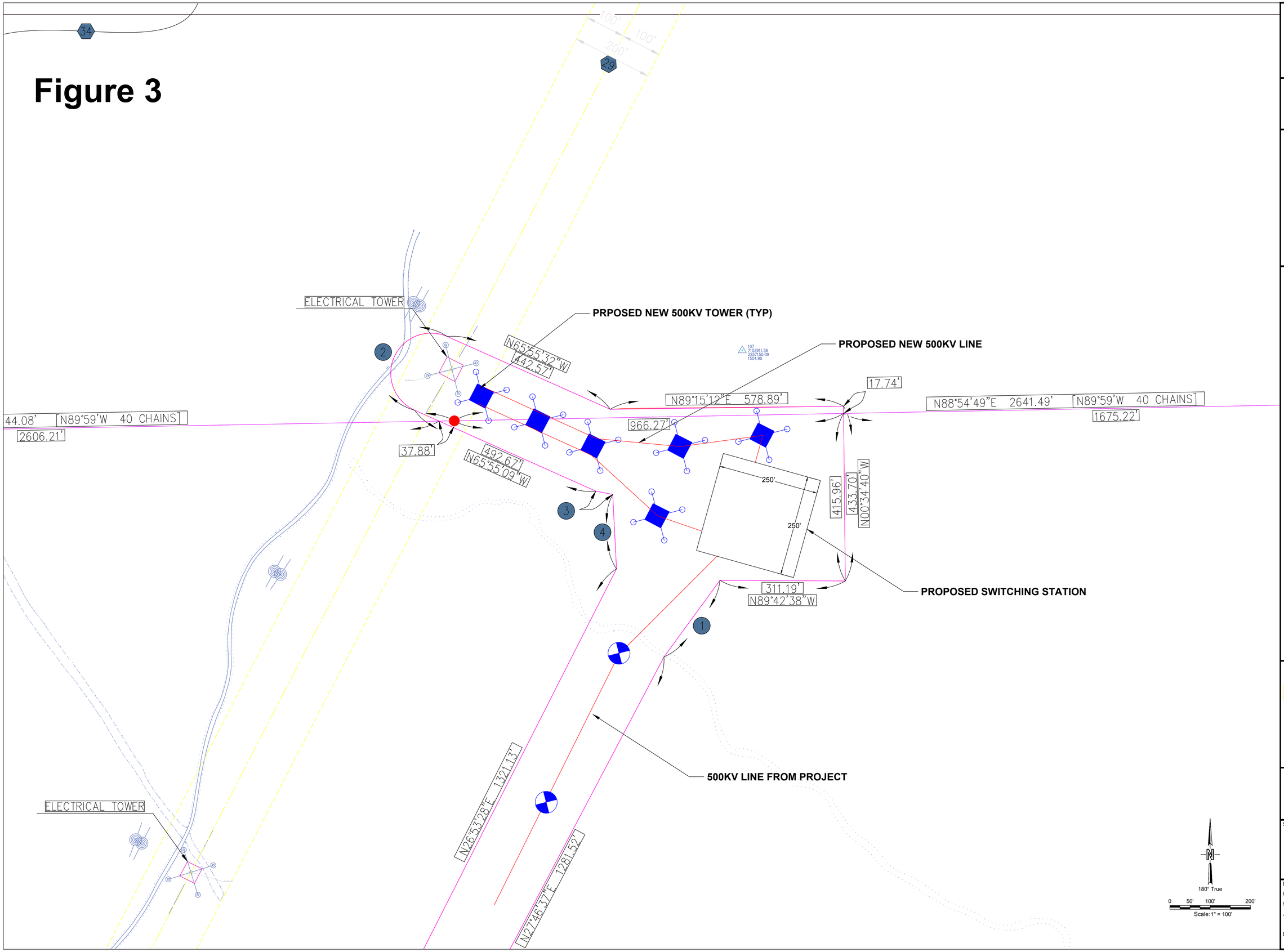
SHEET TITLE:

DRAWN BY:
CHECKED: BR
SCALE:
JOB NO:
DATE:

DRAWING No.

REV No. 1

Figure 3



SODA MOUNTAIN PROJECT

CONFIDENTIAL DOCUMENTS

THE INFORMATION EMBODIED ON THIS DRAWING IS STRICTLY CONFIDENTIAL AND IS SUPPLIED WITH THE UNDERSTANDING THAT IT WILL BE HELD CONFIDENTIAL AND NOT DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN CONSENT OF ZGLOBAL, INC.

1 inch

Scale to Confirm 24"x36" Plot

PLOT: 10/2/2024 2:29 PM

ZGLOBAL
Power Engineering & Energy Solutions

604 SUTTER ST, STE 250
FOLSOM, CA 95630
Phone : 916.985.9461
Fax: 916.985.9467

SHEET TITLE:

SWITCHING STATION INTERCONNECTION

DRAWN BY:	DRAWING No.
CHECKED:	---
SCALE: AS NOTED	
JOB NO:	
DATE:	REV No.

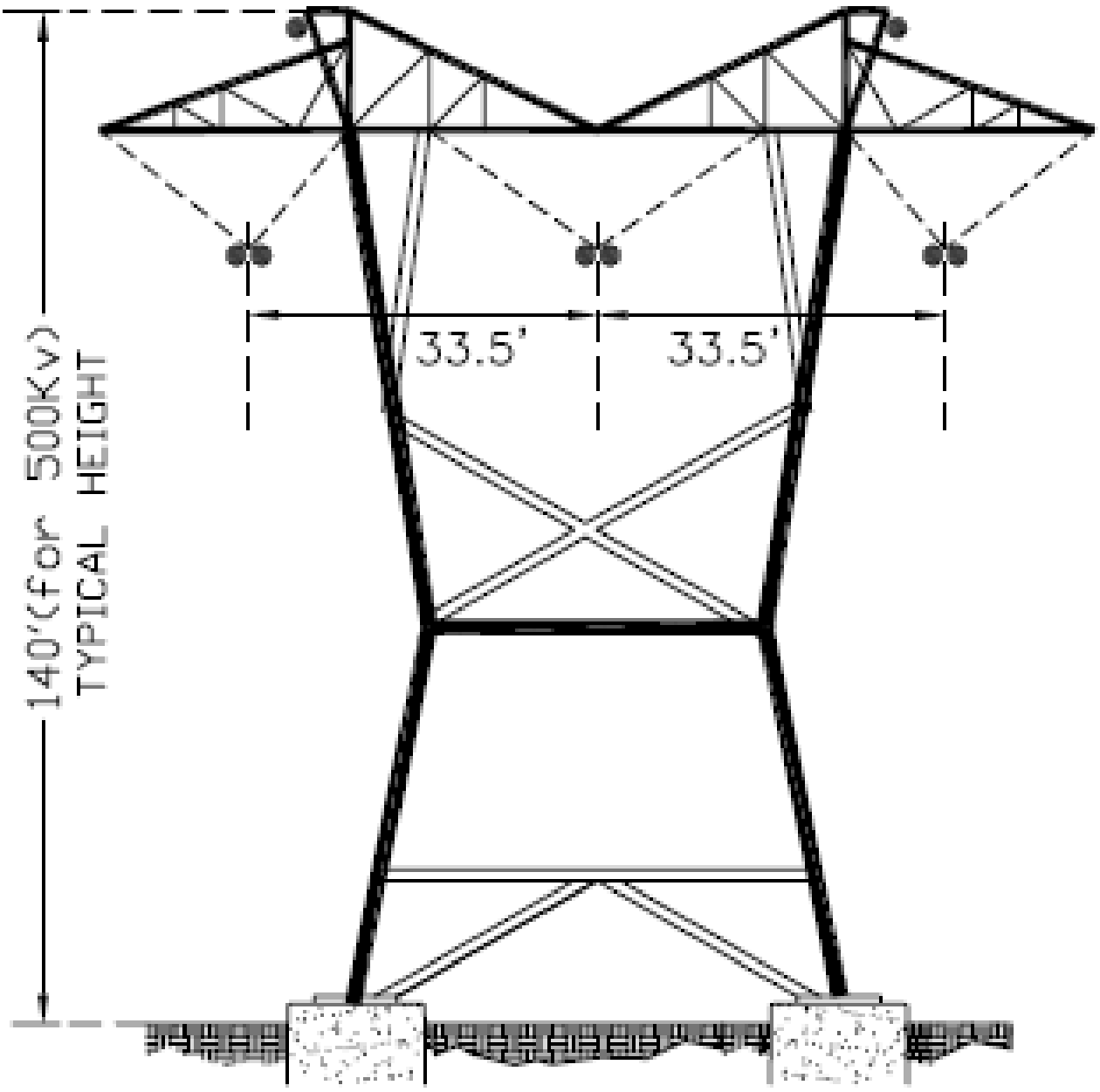


Figure 4

Exhibit 14

1.2.4.5 Miscellaneous Fire Prevention and Suppression

This subsection describes the Project's fuel handling and fire detection and suppression systems for both the BESS yard and for the general facility (administrative/operational buildings).

The Project would conform with any requirements set forth in San Bernardino County Code of Ordinances Title 2 Division 3 Chapters 2 – 8, which establishes policies, procedures, and the authority of county organizations (including the San Bernardino County Fire Protection District) to regulate items related to Fire Protection and Explosives and Hazardous Materials, which includes the design and operation of the fire suppression system.

The Project will complete a Plan Review with the San Bernardino County Fire Protection District (SBCFPD), which will include (but not be limited to) the submission and review of technical materials and design specifications for any and all fire suppression systems on Site, including the BESS fire suppression systems. No construction or installation of any buildings or systems required for Plan Review by the San Bernardino Fire Protection District will commence until approval of plans is given by the SBCFPD.

In the event of a fire, the nearest fire station to Project site is San Bernardino County Fire Station 53, which is located approximately 11 miles north-east of Project site just off of I-15.

1.2.4.5.1 Fuel Handling

Most of the fuel, including gasoline and diesel fuel, will be procured at commercial gas stations in the local area during construction and operations staff vehicles and engines. To fuel construction equipment, a mobile fueling and maintenance vehicle will be brought in daily, as needed. A limited amount of #2 diesel and gasoline petroleum fuels (approximately 500 gallons each) will be stored in staging areas in temporary above ground steel tanks with secondary containment during construction only.

1.2.4.5.2 BESS Hazard Mitigation Analysis and Fire Suppression

Fire detection measures are intrinsically incorporated in the Project design in accordance with National Fire Protection Association (NFPA) safety standards. Should a thermal event occur, the battery energy storage system (BESS) units would be designed and certified so that fire would not propagate from one cabinet to the neighboring cabinet. Exhaust created by a thermal event would be considered a Class B Fire, which is a fire that involves flammable liquids, gases, or greases.
The Project intends to install CATL EnerC Plus BESS units for the purposes of energy storage (Units). The Units are sold as singular modular self-containments that can easily be combined in parallel with one another to meet the energy storage needs for each project. An individual Unit is packaged in a 20' x 8' x 9.5' metal housing. Units will be installed with minimum setback distances of 28' from roads within the BESS yard. Roads in the BESS yard will be 20' in width.

Each unit comes installed with a BESS controller. The BESS controller is a multilevel control system for the battery modules, power conversion system, medium-voltage system, and up to the point of connection with the electrical grid. The controllers ensure that the BESS effectively mimics conventional turbine generators when responding to grid emergency conditions. The BESS enclosure would also house required heating, ventilation, and air conditioning (HVAC) and fire protection systems.

With respect to fire detection systems, the battery compartment of each Unit comes standard equipped with 2 hydrogen gas detectors, 2 smoke detectors, and 2 heat detectors, and the electrical compartment of each unit has 1 smoke detector. All detection signals are received and processed by a fire control panel that also comes standard with each unit.

With respect to fire alarm systems, each unit comes standard equipped with a Horn-Strobe alarm. Additionally, the fire control panel (FCP) comes designed with a first-class and second-class fire alarm system which can be connected to a building management system (BMS) or emergency management system (EMS).

With respect to fire suppression systems, each unit comes standard equipped with a ventilation fan (for removal of hydrogen gas and/or smoke) and an aerosol system (for active fire suppression). The units will additionally have a dry pipe fire suppression system for fire cessation via displacement of oxygen with an inert gas.

The hydrogen gas detectors go into alarm when a concentration of 10% of the lower explosive limit (LEL) for hydrogen gas in air is detected. When the FCP receives an alarm signal from one or both of the hydrogen gas detectors, it will activate the ventilation fan.

Any singular activation of a smoke or heat detector alarm will trigger a first-class alarm signal from the FCP, which in turn will trigger the Horn-Strobe alarm, activate the ventilation fan, and alert the BMS and/or EMS system. In the event of A) simultaneous activation of 1 heat detector and 1 smoke detector alarm or B) simultaneous activation of 2 heat detectors alarms, a second-class alarm signal will be sent from the FCP, which in turn will trigger the Horn-Strobe alarm, activate the ventilation fan, alert the BMS and/or EMS systems, and enable the aerosol fire suppression systems. A second-class fire alarm signal will also enable the optional dry pipe fire suppression system if installed.

Pursuant to manufacturer specifications, the BESS units are fully certified to the most rigorous international safety standards. This includes the following select certifications:

- UL 1642 – Standard for Lithium Batteries (cell level certification)
- UL 1973 – Standard for Batteries for Use in Stationary Applications (module level certification)
- UL 9540A – Standard Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
- IEC 62619 – Standard for Battery Safety in Stationary Applications
- IEC 62477-1 - Safety Requirements for Power Electronic Converter Systems and Equipment
- IEC 61000-6-2 - Electromagnetic compatibility (EMC) Immunity Standard for Industrial Environment.
- IEC 61000-6-4 - Electromagnetic compatibility (EMC) Emission standard for industrial environments
- IEC 62933-5-2 - Safety Requirements for Grid-integrated Electrical Energy Storage (EES) Systems - Electrochemical-Based Systems
- NFPA 855 - Standard for the Installation of Stationary Energy Storage Systems
- UN 38.3 – Transportation Testing for Lithium Batteries

As required by NFPA 855, the Project will generate and maintain a Hazard Mitigation Analysis (HMA). The purpose of an HMA generally is to provide a record of the iterative process of determining fire and explosion hazards, as well as the appropriate fire prevention, fire protection, and explosion prevention

policies and procedures to mitigate those hazards. The scope of the HMA for this Project will be to establish the fire and explosion protection design criteria for the BESS yard/Units.

In support of an effective HMA, the following documentation will always be kept, regularly updated, and easily available:

- Location and layout diagram of the BESS yard with all relevant dimensions noted (e.g. road width, setback distances, distances between Units)
- Details on any fire-resistant-rated assemblies provided or relied upon for BESS yard fire suppression
- The quantity, manufacturer, and model of the Units, including mention of any optional features installed, manufacturer specifications and ratings
- Description of Unit storage management systems and operations, including routine inspection activities and frequency
- Location and content of required signage
- Details on fire suppression/protection, smoke or fire detection, gas detection, thermal management, ventilation, and exhaust systems provided by manufacturer
- Support arrangement associated with the installation, including any required seismic support

The HMA will include, incorporate, or consider any and all relevant General and Project-Specific inputs, including but not limited to:

- State and local building and fire codes pertaining to general surrounding infrastructure or specific to energy storage systems.
- Industry and utility company standards relevant to battery energy storage systems.
- Environmental or worker safety regulations (OSHA, CalOSHA, USEPA, CalEPA).
- Specific energy capacity and power delivery for the BESS yard as they relate to fire risk.
- The number and general locations of personnel on Site, both in and around the BESS yard.
- The proximity of the BESS yard to administrative and operations buildings, access roads, and major surrounding infrastructure (e.g. I-15).
- Availability of water supply to facility (groundwater wells).
- The capabilities and proximity of emergency responders/services like San Bernardino County Emergency Services and Fire Protection District.
- Storage configuration for the Units as it relates to fire and explosion risks.
- Historical loss information and fire reports for comparable facilities under comparable conditions (e.g. lithium-ion battery-based ESS, high ambient heat and low precipitation/humidity).

Of particular concern are those hazards associated with the gaseous products of thermal runaway (i.e. self-heating of an electrochemical system in an uncontrollable manner), which include fire, explosions, and acute toxicity via inhalation or dermal absorption. The HMA will include considerations for the potential of thermal runaway fault conditions occurring within a single battery storage rack, cell module, or cell array. The analysis shall include mitigations to prevent flammable gases released during fire, battery overcharge, and any other abnormal operating conditions within the BESS yard from generating a fire, explosion, or toxic exposure hazard that could injure personnel or emergency responders.

1.2.4.5.3 General Fire Safety and Suppression - Construction

Water would be needed primarily for dust control and soil compaction during the first 90 days of grading activities. With small amounts during Stage 1 and Stage 2 of construction, which includes the 90-day grading period, the project would require approximately 196,500 gpd, or approximately 220 acre-feet per year (af/yr). Water requirements in the second year of construction are expected to be less than 110 af/yr, or half of the requirement of the first year of construction.

Five temporary water tanks of 100,000 gallons would be brought on-site by truck to store water in anticipation of construction water needs. The tanks would be housed on trailers located along access roads or within areas that have been cleared for installation of project components. The tanks may be moved around the site as construction progresses and would be used to fill on-site water trucks. The temporary water storage tanks would be removed after construction. Water used for construction would be supplied by two existing private groundwater wells in Newbury Springs, San Bernardino County.

1.2.4.5.4 General Facility Fire Safety and Suppression – O&M Building

An approximately 22,500-gallon tank would be located near the operation and maintenance building to provide storage of fire suppression water. The tank would not require a regular supply of water because the water would be withdrawn only in the event of a fire. The tank would be monitored periodically and refilled as needed to replace evaporative losses. For fire suppression water supply, the project would conform to County requirements, which incorporate National Fire Protection Association (NFPA) Standards 1142 and 13 by reference and provide minimum requirements for fire suppression water supply where no public water supply is available (Standard 1142) and sprinkler systems (Standard 13).

1.3 Laws, Ordinances, Regulations, and Standards

The LORS that may apply to the Project related to worker safety are summarized in Table E on the following page. Table E also provides a summary of the applicable national consensus standards. used for sanitary and other purposes.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
Federal	29 CFR Part 1910	Contains the minimum occupational safety and health standards for general industry in the United States	The Project would implement occupational safety and health protocols during construction, operation, and decommissioning activities in compliance with 29 CFR Part 1910
Federal	29 CFR Part 1926	Contains the minimum occupational safety and health standards for the construction industry in the United States	The Project would implement occupational safety and health protocols during construction, operation, and decommissioning activities in compliance with 29 CFR Part 1926
Federal	National Institute for Occupational Safety and Health (NIOSH)	Conducts research and makes recommendations for prevention of work-related injury and illness	The Project would comply with the health and safety requirements set forth by NIOSH
Federal	American National Standards Institute (ANSI) / American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code	Specifications and requirements for pressure vessels	The use of pressure vessels associated with the Project would comply with the requirements set forth in the Boiler and Pressure Vessel Code
Federal	ANSI/ASME, B31.2	Specifications and requirements for fuel gas piping	The Project would comply with the requirements for fuel gas piping set forth in American National Standards Institute, B31.2

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
Federal	29 CFR Part 1910.38	Outlines procedures for employees in the event of an emergency	The Project would comply with the requirements set forth in 29 CFR Part 1910 to prepare an Emergency Action Plan
State	California HSC § 25500, et seq. And the related regulations of 19 CCR 2620 et seq.	Outlines identified hazardous materials, emergency response procedures for releases of hazardous materials, and training requirements	The Project would implement a Hazardous Materials Business Plan to comply with California HSC 25500
State	California Occupational Safety and Health Act of 1973	Establishes minimum safety and health standards for construction and general industry operations in California	The Project would implement occupational safety and health protocols during construction, operation, and decommissioning activities in compliance with the California Occupational Safety and Health Act of 1973
State	8 CCR § 339	Requires list of hazardous chemicals relating to the Hazardous Substance Information and Training Act	Hazardous chemicals stored at the facility would be reported in accordance with the requirements set forth in 8 CCR § 339

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 450	Addresses hazards associated with pressurized vessels	Design, construction, installation, inspection, operation, and repair activities applying to compressed and liquefied natural gas or air tanks would be conducted in compliance with the requirements set forth in 8 CCR § 450
State	8 CCR § 750	Addresses hazards associated with high-pressure steam	Design, construction, installation, inspection, operation, and repair activities applying to pressurized vessels would be conducted in compliance with the requirements set forth in 8 CCR § 750
State	8 CCR, Construction Safety Orders, § 1500	Establishes safety orders for construction work	Construction activities would comply with the applicable requirements set forth in 8 CCR § 1500
State	8 CCR § 1509	Addresses requirements for construction, accident, and prevention plans	An IIPP would be prepared and implemented for Project construction activities in compliance with 8 CCR § 1509
State	8 CCR § 1528, et seq., and § 3380, et seq.	Requirements for PPE	Respiratory protection would be required under circumstances defined in 8 CCR § 1528, et seq., and § 3380, et seq. When required, respiratory protection would comply with 8 CCR § 1528, et seq., and § 3380, et seq.
State	8 CCR § 1597, et seq., and § 1590, et seq.	Requirements addressing the hazards associated with traffic accidents and earthmoving	Vehicle usage during construction, operation, and decommissioning activities associated with the Project would comply with the requirements set forth in 8 CCR § 1597, et seq., and § 1590, et seq.
State	8 CCR § 1604, et seq.	Requirements for construction hoist equipment	The use of personnel hoists during construction and maintenance activities associated with the Project would comply with the requirements set forth in 8 CCR § 1604, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 1620, et seq., and § 1723, et seq.	Addresses miscellaneous hazards	Construction of roofing and railings associated with temporary and permanent structures at the Project site would comply with the requirements set forth in 8 CCR § 1620, et seq., and § 1723, et seq.
State	8 CCR § 1709, et seq.	Requirements for steel reinforcing, concrete pouring, and structural steel erection operations	Construction of facilities associated with the Project would comply with the requirements set forth in 8 CCR § 1709, et seq.
State	8 CCR § 1900, et seq.	Requirements for use of helicopters	Helicopter usage associated with construction activities at the Project site would comply with the requirements set forth in 8 CCR § 1900, et seq.
State	8 CCR § 1920, et seq.	Requirements for fire protection systems	A Fire Protection and Prevention Plan would be prepared for both construction and O&M activities associated with the Project that would comply with the requirements set forth in 8 CCR § 1920, et seq.
State	8 CCR, Electrical Safety Orders § 2300, et seq., and § 2320, et seq.	Requirements for addressing low- voltage electrical hazards	Electrical equipment used during construction, operation, and decommissioning activities would be operated in compliance with the requirements set forth in 8 CCR § 2300, et seq., and § 2320, et seq.
State	8 CCR § 2395, et seq.	Addresses electrical installation requirements	Electrical equipment connected by cord and plug used during construction, operation, and decommissioning activities would be operated in compliance with the requirements set forth in 8 CCR § 2395, et seq.
State	8 CCR § 2700, et seq.	Addresses high-voltage electrical hazards	High voltage electrical equipment used during construction, operation, and decommissioning activities would be operated in compliance with the requirements set forth in 8 CCR § 2700, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR, § 5139, et seq.	Requirements for control of hazardous substances	Handling of hazardous substances during construction, operation, and decommissioning of the Project would comply with the requirements set forth in 8 CCR § 5139, et seq.
State	8 CCR, General Industry Safety Orders § 3200, et seq.	Requirements for control of hazardous substances	Handling of hazardous substances during construction, operation, and decommissioning of the Project would comply with the requirements set forth in 8 CCR § 3200, et seq.
State	8 CCR § 3203, et seq.	Requirements for operational accident prevention programs	An IIPP would be prepared and implemented for O&M activities associated with the Project in compliance with 8 CCR § 3203
State	8 CCR § 3270, et seq.	Requirements for the use of compressed air or gases	The use of compressed air or gases during construction, operation, or decommissioning of the Project would comply with the requirements set forth in 8 CCR § 3270, et seq.
State	8 CCR § 3209, et seq.	Requirements for evacuation plans and procedures	Evacuation procedures associated with Project activities would comply with the requirements set forth in 8 CCR § 3209, et seq.
State	8 CCR § 3301, et seq.	Requirements for addressing miscellaneous hazards, including hot pipes, hot surfaces, compressed air systems, relief valves, enclosed areas containing flammable or hazardous materials, rotation equipment, pipelines, and vehicle-loading dock operations	The use of compressed air or gases during construction, operation, or decommissioning of the Project would comply with the requirements set forth in 8 CCR § 3301, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 3360, et seq.	Addresses requirements for sanitary conditions	Access to sanitary facilities would be provided during construction, operation, and decommissioning of the Project and facilities would comply with the requirements set forth in 8 CCR § 3360, et seq.
State	8 CCR § 3511, et seq., and § 3555, et seq.	Requirements for addressing hazards associated with stationary engines and compressors, as well as portable, pneumatic, and electrically powered tools	The usage of stationary engines and compressors associated with the Project would comply with the requirements set forth in 8 CCR § 3511, et seq., and § 3555, et seq.
State	8 CCR § 3649, et seq., and § 3700, et seq.	Requirements for addressing hazards associated with field vehicles	The Project would comply with the requirements set forth in 8 CCR § 3649, et seq., and § 3700, et seq.
State	8 CCR § 3940, et seq.	Requirements for addressing hazards associated with power transmission, compressed air, and gas equipment	Power transmission associated with the Project would comply with the requirements set forth in 8 CCR § 3940, et seq.
State	8 CCR § 5095, et seq.	Requirements for controlling noise exposure	Noise exposure would be controlled in compliance with the requirements set forth in 8 CCR § 5095, et seq.
State	8 CCR § 5109, et seq.	Requirements for addressing construction accident and prevention programs	The IIPP prepared for the Project would include provisions related to construction accident and prevention programs and would comply with the requirements set forth in 8 CCR § 5109, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 5110, et seq.	Requirements for the implementation of an ergonomics program	The IIPP prepared for the Project would include provisions related to ergonomics and would comply with the requirements set forth in 8 CCR § 5110, et seq.
State	8 CCR § 5139, et seq.	Requirements for employee exposure to dusts, fumes, mists, vapors, and gases	The IIPP prepared for the Project would include provisions related to dust, fumes, mists, vapors, and gases and would comply with the requirements set forth in 8 CCR § 5139, et seq.
State	8 CCR § 5139, et seq.	Requirements for addressing hazards associated with welding, sandblasting, grinding, and spray-coating	Welding, sandblasting, grinding, and spray- coating activities associated with the Project would comply with the requirements set forth in 8 CCR § 5139, et seq.
State	8 CCR § 5156, et seq.	Requirements for confined space entry	Confined space entry that would occur in association with the Project would comply with the requirements set forth in 8 CCR § 5156, et seq.
State	8 CCR § 5155, et seq.	Requirements for use of respirators and for controlling employee exposure to airborne contaminants	Employee exposure to airborne contaminants would be minimized through the use of respirators in compliance with the requirements set forth in 8 CCR § 5155, et seq.
State	8 CCR § 5160, et seq.	Requirements for addressing hot, flammable, poisonous, corrosive, and irritant substances	Hot, flammable, poisonous, corrosive, and/or irritant substances used during construction, operation, maintenance, or decommissioning activities associated with the Project would comply with the requirements set forth in 8 CCR § 5160, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 5184 and § 5185	Requirements for storage battery systems and charging storage batteries	Storage battery systems associated with the Project would comply with the requirements set forth in 8 CCR § 5184 and § 5185
State	8 CCR § 5192, et seq.	Requirements for conducting emergency response procedures	Emergency response procedures would be included in the IIPP prepared for the Project and would be developed and implemented in compliance with the requirements set forth in 8 CCR § 5192, et seq.
State	8 CCR § 5193, et seq.	Requirements for controlling employee exposure to bloodborne pathogens associated with exposure to raw sewage water and bodily fluids associated with first aid/cardiopulmonary resuscitation (CPR) duties	Exposure to bloodborne pathogens would be controlled through implementation of requirements set forth in 8 CCR § 5193, et seq.
State	8 CCR § 5405, et seq.; § 5426, et seq.; § 5465 et seq.; § 5500, et seq.; § 5530, et seq.; § 5531, et seq., § 5545, et seq.; § 5554, et seq.; § 5565, et seq.; § 5583, et seq.; § 5606, et seq.	Requirements for flammable liquids, gases, and vapors	Use of flammable liquids, gases, and vapors associated with the Project would comply with the requirements set forth in 8 CCR § 5405, et seq., § 5426, et seq., § 5465, et seq., § 5500, et seq., § 5530, et seq., § 5531, et seq., § 5545, et seq., § 5554, et seq., § 5565, et seq., § 5583, et seq., § 5606, et seq.
State	8 CCR § 5583, et seq.	Requirements for design, construction, and installation of venting, diking, valving, and supports	Design, construction, and installation of venting, diking, valving, and supports associated with flammable liquids, gases, and vapors would comply with the requirements set forth in 8 CCR § 5583, et seq.

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
State	8 CCR § 6150, et seq.; § 6151, et seq.; § 6165, et seq.; § 6170, et seq.; § 6175, et seq.; § 6183, et seq.; § 6184, et seq.	Requirements for fire protection	A Fire Prevention and Protection Plan would be developed in compliance with the requirements set forth in 8 CCR § 6150, et seq.; § 6151, et seq.; § 6165, et seq.; § 6170, et seq.; § 6175, et seq.; § 6183, et seq.; § 6184, et seq.
State	24, Part 3, California Electrical Code	Requirements for electrical safety, which include the Uniform Electrical Code, Title 24, Part 3	Electrical work associated with the Project would comply with the requirements set forth in the California Electrical Code, Title 24, Part 3
State	24, Part 9, California Fire Code, Chapter 12, § 1205 through § 1207	Requirements for solar photovoltaic power systems, stationary fuel cell power systems, and electrical energy storage systems (ESS)	The Project would comply with the requirements for photovoltaic power systems and energy storage systems set forth in the California Fire Code, Title 24, Part 9, Chapter 12, Sections § 1205 through § 1207
State	California Health and Safety Code (HSC) § 25500 through § 25541	Requirements for the preparation of a HMBP that details emergency response plans for a hazardous materials emergency at the facility	An HMBP would be prepared in accordance with HSC Sections § 25500 through § 25541
Local	San Bernardino County General Policy Plan Safety & Security Section	Sets forth goals and policies related to the safety and security of residents, businesses, workers, and visitors	The Project would conform with any requirements set forth in San Bernardino County Code General Policy Plan Goal Safety & Security section
Local	San Bernardino County General Policy Plan Goal HZ-2, Policies HZ-2.1 - HZ-2.11	Outlines policies related to Human-generated Hazards, including hazardous materials, noise, safer materials alternatives	The Project would conform with any requirements set forth in San Bernardino County Code General Policy Plan Goal HZ-2 and associated policies

Table E: LORS Applicable to Worker Health and Safety

Jurisdiction	LORS	Applicability	Project Conformity
Local	San Bernardino County Code of Ordinances, Title 2, Division 1, Chapter 1	Establishes authority of miscellaneous Emergency Services Organizations, which includes the authority to regulate Emergency programs in for private corporations	The Project would conform with the health and safety requirements set forth by any regulatory county body noted in the San Bernardino County Code of Ordinances Title 2 Division 1 Chapter 1
Local	San Bernardino County Code of Ordinances, Title 2, Division 3, Chapters 2 - 8	Establishes policies, procedures, and authority of county organizations to regulate items related to Fire Protection and Explosives and Hazardous Materials	The Project would conform with any requirements set forth in San Bernardino County Code of Ordinances Title 2 Division 3 Chapters 2 - 8
Local	San Bernardino County Code of Ordinances, Title 6, Division 3, Chapters 1 - 5	Establishes minimum building and construction standards for San Bernardino County	The Project would conform with the requirements set forth in the San Bernardino County Code of Ordinances

Source: Code of Federal Regulations, California Occupational Safety and Health Act of 1973, CCR, California Health and Safety Code, American National Standards Institute/American Society of Mechanical Engineers, San Bernardino County Code of Ordinances, San Bernardino County General Plan

1.4 Agencies and Agency Contact

Applicable agency contacts for worker health and safety and fire protection and prevention-related approvals are shown in Table F.

Table F: Agency Contacts for Worker Health and Safety

Issue	Agency	Contact
Worker Health and Safety	Cal/OSHA, Region 3, Santa Ana Regional Office	Vacant Regional Manager 2 MacArthur Place, Suite 720 Santa Ana, CA 92707 Phone: (714) 558-4300 Email: DIRDOSHRegionIII@dir.ca.gov
	Cal/OSHA, Region 3, San Bernardino District Office	Michael Loupe, District Manager 464 W. 4th Street, Suite 332 San Bernardino, CA 92401 Phone: (909) 383-4321 Email: DOSHSB@dir.ca.gov
	San Bernardino County Department of Public Health - Environmental Health Services	San Bernardino Office 385 N. Arrowhead Ave. 2nd Floor San Bernardino, CA 92415 Phone: (800) 442-2283
CUPA for HMBP	San Bernardino County Fire Protection District - Office of Fire Marshal	Monica Ronchetti, Fire Marshal 598 S Tippecanoe Ave San Bernardino, CA 92408 Phone: (909) 386-8400 24-hr Spill Notification Hotline: (909) 389-8425
Emergency Response for Hazardous Materials Spills and Fires	San Bernardino County, Office of Emergency Services	General Contact (909) 356-3998 sbcoa@oes.sbcounty.gov
		Anjila Lebsock, Assistant Director of Emergency Management 1743 Miro Way Rialto, CA 92376 Phone: (909) 356-3931 Email: anjila.lebsock@oes.sbcounty.gov
Fire Hazards	San Bernardino County Fire Protection District Department Headquarters	Department Headquarters Daniel R. Munsey, Fire Chief/Fire Warden 598 S Tippecanoe Ave San Bernardino, CA 92408 Phone: (909) 387-5974 Email: info@sbcfire.org

1.5 Permits and Permit Schedule

Applicable permits and permit schedule related to worker health and safety are shown in Table G.

Table G: Permits and Permit Schedule for Worker Health and Safety

Permit	Schedule	Status
CalOSHA Project Permit, for: • Trench/Excavation • Construction or Building/Structure • Scaffold/Falsework/Vertical Shoring	Submittal to and approval by Cal/OSHA Region 3 district office prior to commencing construction.	To be submitted prior to any construction
San Bernardino County Building Permit	Submittal to and approval by San Bernardino County Building and Safety Division prior to commencing construction.	To be submitted prior to any construction
San Bernardino County Fire Protection District Plan Review, including: • Planning • Commercial/Multi-Family Construction • Non-Residential Fire Sprinklers • Fire Alarms • Pre-Engineered System/ASTs • Non-residential Pumps	Detailed plans and associated documents related to the design of support buildings, the fire sprinklers/suppression system, the fire alarms, pre-engineered systems (fixed fire extinguishing systems, refrigeration systems, dust collection systems, gas detection systems, photovoltaic systems, above ground storage tanks), and any fire pumps must all be submitted to and approved by the San Bernardino County Fire Protection District prior to commencing construction. Estimated turn around time according to the FPD is approximately 21 business days. Submission of Plan Review however relies on prior approval by all FPD departments and Land Use Services.	Contact made but no official process begun. To be submitted prior to commencing any construction activities.
Hazardous Materials Business Plan	Submittal at least 30 days prior to operation and submitted through California Environmental Reporting System (CERS). Permit administered by local CUPA enforcement agency, San Bernardino County Fire Protection District	To be submitted prior to any construction
Tower Crane Permit	Submittal to and approval by Cal/OSHA Region 3 district office prior to commencing construction.	To be submitted prior to any construction
Pressure Vessel Permit	Submittal to and approval by Cal/OSHA Region 3 district office prior to commencing construction.	To be submitted prior to any construction

Source: CalOSHA, San Bernardino Fire Protection District, San Bernardino County Building and Safety Division