SECTION 4.4
AIR QUALITY

This section identifies federal, state and local regulations applicable to air quality and describes the environmental setting with regard to compliance with applicable standards. This section also analyzes potential air quality impacts associated with construction and operation of the proposed Project. Reclamation is discussed on a qualitative basis. Information contained in this section is summarized from the "Air Pollutant Emission Assessment, Seville 4 Solar Project Construction and Operations, Imperial County, California" (EMA 2017c), prepared by Environmental Management Associates. These documents and supporting attachments are provided as **Appendix D** on the attached CD of Technical Appendices of this EIR.

4.4.1 REGULATORY FRAMEWORK

A. FEDERAL

Clean Air Act

The Clean Air Act (CAA) was enacted in 1970 to foster growth in the economy and industry while improving human health and the environment. This law provides the basis for the national air pollution control effort. In order to improve air quality, the CAA requires areas with unhealthy levels of criteria pollutants to develop State Implementation Plans (SIPs). A SIP describes how and when National Ambient Air Quality Standards (NAAQS) will be attained for a specific area. SIPs are a compilation of state and local regulations used by the state to achieve healthy air quality under the Federal CAA. SIPs are comprised of new and previously submitted plans, monitoring programs, modeling programs, permitting programs, district rules, state regulations, and federal controls. State and local agencies are required to involve the public in the adoption process before SIP elements are submitted to the U.S. Environmental Protection Agency (EPA) for approval or disapproval. Likewise, the EPA is required to allow public comment prior to taking action on each SIP submittal. If the SIP is not acceptable to the EPA, the EPA has authority to enforce the CAA in that state.

The most recent major changes to the CAA occurred in 1990. The 1990 amendments established new deadlines for attainment based on the severity of the pollution problem. The amendments also instigated a comprehensive planning process for attaining the NAAQS. In 1997, new national 8-hour ozone (O_3) standards and the fine particulate matter ($PM_{2.5}$) standards were introduced. These new standards resulted in additional statewide air quality planning efforts.

The consistency of projects with the SIP is assessed through land use and growth assumptions that are incorporated into the air quality planning document. If a proposed project is consistent with the applicable General Plan of the jurisdiction where it is located, then the project is assumed to be accounted for as part of the regional air quality planning process. When a project is consistent in this regard, it would not have an adverse regional air quality impact.

National Ambient Air Quality Standards

The NAAQ were established by the EPA per the requirements of the CAA. The NAAQS are used to identify thresholds for specific pollutants. Two types of air quality standards were established by the Clean Air Act: 1) primary standards; and 2) secondary standards. Primary Standards define limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. CO usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.

Lead (Pb)

Lead is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposure to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.

Nitrogen Dioxide (NO_x)

Nitrogen dioxide is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_x is usually visible as a reddish-brown air layer over urban areas. NO_x along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_x above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_x exposure to levels near the current standard may worsen the effect of allergens.

Particulate Matter (PM_{10} or $PM_{2.5}$)

Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 µm or less. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.

Ozone (O_3)

Ozone is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung function.

Sulfur Dioxide (SO_2)

Sulfur dioxide is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Continued exposure to elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

Table 4.4-1 identifies the federal air quality standard for specific pollutants.

TABLE 4.4-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		-		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	--	--	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 hour	20 ppm (23mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	-	Non-Dispersive Infrared Photometry (NDIR)
	8 hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		-	-	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 g/m³)[8]	-	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 g/m³)[8]	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m3)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	-	Ultraviolet Flourescence; Spectro-photometry (Pararosaniline Method)[9]
	3 Hour	-		-	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[11]	-	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	-		0.15 µg/m³		

TABLE 4.4-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[1]		Federal Standards[2]
Visibility Reducing Particles[14]	8 Hour	See Footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards
Sulfates	24 Hour	25 µg/m3	Ion Chromatography	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence	
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography	

Source: CARB 2016a. ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM 2.5 standards (primary and secondary_ were retained at 35 µg/m3, as was the annual secondary of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO2 standards was established and the existing 24-hour and annual primary standards were revoked. The attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb. Is identical to 0.075 ppm.

[12] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designed for the 200 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14.] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Basin standards, respectively.

An area is designated as being in attainment if the concentration of a specific air pollutant does not exceed the standard for that pollutant. An area is designated as being in nonattainment for a specific pollutant if the standard for that pollutant is exceeded. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years.

B. STATE

California Ambient Air Quality Standards

Individual states have the discretion to add additional pollutants beyond those identified as part of the NAAQS. The California Air Resources Board (CARB) is responsible for setting the laws and regulation for air quality on the state level. The State of California has 35 specific air districts, consisting of Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD). These agencies are county or regional governing authorities that have primary responsibility for controlling air pollution from stationary sources, and ensuring that criteria pollutants are below the NAAQS and CAAQS. The Project is located within the Imperial County Air Pollution Control District (ICAPCD), as discussed below.

The California Ambient Air Quality Standards (CAAQS) are either the same or more restrictive than the NAAQS. The CAAQS also include four additional contaminants in keeping with discretionary power granted to the State. The additional contaminants include:

- **Visibility Reducing Particles**: Particles in the air that obstruct visibility.
- **Sulfates**: Salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.
- **Hydrogen Sulfide (H_2S)**: A colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat.
- **Vinyl Chloride**: Also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).

Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard in California. The state therefore created the California SIP, which is designed to provide control measures needed for California Air basins to attain ambient air quality standards.

Table 4.4-1, above, identifies both the national (federal) and state air quality standard for specific pollutants. The CARB defines Reactive Organic Gases (ROG) as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

CARB's Emission Inventory Branch uses the terms Total Organic Gases (TOG) and Reactive Organic Gases (ROG). California air pollution control districts report TOG to CARB's emission inventory. For each source category, CARB derives a value for ROG by multiplying the reported TOG by the Fraction of Reactive Organic Gases (FROG). Each source category is keyed to one of several hundred available chemical speciation profiles. For each category, the FROG value is calculated as the weight fraction of those species designated by CARB as reactive in the speciation profile applicable to the category (CARB 2017a).

The relationships among these organic gas terms are summarized as follows:

- TOG - Exempt compounds = ROG
- TOG x FROG = ROG

B. REGIONAL

Southern California Association of Governments

CEQA requires regional agencies to monitor regional development. The Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization for the counties of Los Angeles, Ventura, Orange, San Bernardino, Riverside and Imperial. SCAG is responsible for reviewing projects and plans in these six counties. Projects and plans with regional significance must demonstrate consistency with a range of adopted regional plans and policies. **Table 4.4-2** identifies one goal applicable to the proposed Project from the SCAG Regional Transportation Plan (RTP) (SCAG 2012).

TABLE 4.4-2
PROJECT CONSISTENCY WITH APPLICABLE SCAG REGIONAL TRANSPORTATION PLAN GOALS

Regional Transportation Plan Goal	Consistent with RTP?	Analysis
Protect the environment and health of our residents by improving air quality and encouraging active transportation.	Yes	As a solar generation facility, the proposed Project would improve air quality by reducing the use of fossil fuels in energy production. PM_{10} emissions associated with construction of the Project would be reduced through compliance with mitigation measures MM 4.4.1a, MM 4.4.1b and MM 4.4.1c. Operation of the proposed Project would not exceed any ICAPCD thresholds or result in significant impacts to air quality. Therefore, the proposed Project would be consistent with this goal.

Source: SCAG 2012, p. 15.

C. LOCAL

Imperial County Air Pollution Control District (ICAPCD)

The ICAPCD covers all of Imperial County including a portion of the Salton Sea Air Basin (SSAB). The ICAPCD is primarily responsible for: monitoring air quality within the County; enforcing regulations for new and existing stationary sources within the Imperial County portion of the SSAB; and, planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards within the ICAPCD.

Criteria pollutant standards are generally attained when each monitor within the region demonstrates no violations during the previous three calendar years. The ICAPCD currently maintains the following NAAQS designations: nonattainment for 24-Hour $PM_{2.5}$, moderate nonattainment for 8-hour O_3 (1997), marginal for 2008 ground-level O_3 standards, and serious nonattainment for PM_{10} (EPA 2012b).

Ozone Standards Compliance

To provide control measures to try to achieve ozone attainment status, Imperial County developed an Ambient Air Quality Plan (AQAP) that was originally adopted by the ICAPCD in 1991. A new standard for ozone was subsequently adopted by EPA in 1997. As a result of the new standards, modified strategies to

decrease higher ozone concentrations were required. In response, ICAPCD adopted the 8-hr Ozone Air Quality Management Plan (AQMP) in 2008 (ICAPCD 2008).

On December 3, 2009 the EPA ruled that Imperial County, which had been a "moderate" 8-hour O3 non-attainment area, had attained the 1997 8-hour NAAQS for O3. This determination effectively suspended requirements that the state submit a variety of related planning documents as long as Imperial County continues to stay in attainment with the 1997 8-hour NAAQS for O3 (ICAPCD 2010a). However, this determination does not constitute a redesignation to attainment under CAA section 107(d)(3). Formal redesignation will not occur until such time as EPA determines that Imperial County meets the CAA requirements for attainment redesignation. To meet these CAA requirements, Imperial County submitted a 2009 8-Hour O3 Modified Air Quality Management Plan (AQMP) and the Reasonable Available Control Technology State Implementation Plan (RACT SIP) for EPA approval. The Modified AQMP and RACT SIP were formally adopted by the Imperial County APCD on July 13, 2010 and apply to VOC and NO_x emission sources located within Imperial County (ICAPCD 2010a & 2010b).

On April 30, 2012, the EPA issued final designations for the 2008 Ground-Level O_3 Standards for Region 9, which includes Imperial County. Imperial County is designated "Marginal" for the 2008 O_3 Standards (EPA 2012a). The 2008 standard final rule was signed March 12, 2008 for the 8-hour standard of 0.075 parts per million (ppm). The 1997 O_3 standard and related implementation rules remain in place (EPA 2012b).

$PM_{2.5}$ Standards Compliance

In September 2006, the EPA reduced the national 24-hour $PM_{2.5}$ standard to 35 micrograms per cubic meter ($\mu g/m^3$). The EPA issued final designations for this standard which became effective in December 2009. The City of Calexico, on the United States-Mexico border in southern Imperial County, and the surrounding area was designated as nonattainment for the 24-hour standard. $PM_{2.5}$ Attainment Plans were due to EPA in December 2012. Urbanized portions of Imperial County are nonattainment, but more rural regions of the county remain in attainment of the 24-hour $PM_{2.5}$ standard.

On December 14, 2012, the EPA reduced the national annual $PM_{2.5}$ primary standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ (EPA 2012a).

PM_{10} Standards Compliance

The Imperial Valley is classified as nonattainment for federal and state PM_{10} standards. As a result, the ICAPCD was required to develop a PM_{10} Attainment Plan. The final 2009 Imperial County SIP for Particulate Matter Less than 10 Microns in Aerodynamic Diameter was adopted by the ICAPCD on August 11, 2009 (ICAPCD 2009). The SIP brings together data and discussion regarding particulate matter in Imperial County. The SIP also identifies control strategies to reduce PM_{10} emissions associated with construction and agricultural operations.

The ICAPCD has also established rules to address fugitive dust (PM_{10}). Regulation VIII, Fugitive Dust Rules, contains rules to reduce the amount of PM_{10} generated from manmade sources within Imperial County. The rules require actions to prevent, reduce, or mitigate the PM_{10} emissions (ICAPCD 2012). Specifically, a project must adhere to Rule 801-Construction and Earthmoving Activities; Rule 805-Paved and Unpaved Road; and Rule 806-Conservation Management Practices to reduce PM_{10} emissions.

Compliance with Regulation VIII is mandatory on all construction sites, regardless of the size of project. However, because compliance with Regulation VIII is required for projects, compliance does not constitute mitigation for air quality impacts.

CEQA Air Quality Handbook (2007)

The *2007 ICAPCD CEQA Handbook for the Preparation of Air Quality Impact Assessments* (ICAPCD CEQA Handbook) provides guidance for project applicants and establishes the thresholds of significance for nonattainment pollutants and their precursors. The screening criteria can be used to demonstrate that a project's total emissions would or would not result in a significant impact as defined by CEQA (refer to Methodology, below). If a proposed Project exceeds the established thresholds, the proponent can propose and administer further emissions reduction mitigation measures to reduce emissions levels to below a level of significance. Under ICAPCD Guidance Policy Number 5, another option available to the proponent is payment of an in-lieu mitigation fee. Policy 5 requires the implementation of control measures or the purchasing of emissions offsets to mitigate project-related NO_X and PM_{10} emissions. Compliance with Policy 5 is separate from the CEQA process, although the control measures used to comply with Policy 5 may be used to mitigate CEQA impacts.

Rule 310-Operational Development Fee

On November 6, 2007, the ICAPCD Board of Directors adopted Rule 310-Operational Development Fee to assist the District with mitigating air impacts produced from the operation of new commercial and residential developments. The funds generated from Rule 310 for the past fiscal year are redistributed by the ICAPCD for various mitigation projects through an Request for Proposal process.

Imperial County General Plan

The General Plan Conservation and Open Space Element (Imperial County 2008a) contains goals, objectives, policies and/or programs to conserve the natural environment of Imperial County. This includes the full spectrum of natural resources as well as air quality. **Table 4.4-3** summarizes the Project's consistency with the applicable air quality goal and objectives from the Conservation and Open Space Element. While this EIR analyzes the Project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.4-3
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goal and Objectives	Consistent with General Plan?	Analysis
CONSERVATION AND OPEN SPACE ELEMENT		
Protection of Air Quality		
Goal 9: The County shall actively seek to improve and maintain the quality of air in the region.	Yes	The proposed Project would be required to comply with all applicable ICAPCD rules and requirements during construction and operation to reduce air emissions. Overall, the proposed Project would improve air quality and reduce GHG emissions by reducing the amount of emissions that would be generated in association with electricity production from a fossil fuel burning facility. Therefore, the proposed Project is consistent with this goal.

TABLE 4.4-3
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goal and Objectives	Consistent with General Plan?	Analysis
Objective 9.1 Ensure that all facilities shall comply with current federal and state requirements for attainment for air quality objectives.	Yes	All facilities proposed as part of the Project would comply with current federal and State requirements for attainment for air quality objectives through conformance with all applicable ICAPCD rules and requirements to reduce fugitive dust and emissions. Further, the Project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures. In addition, the Applicant has identified proposed measures that are included as part of the proposed Project (refer to Table 2.0-6 in Chapter 2.0, Project Description). Lastly, mitigation measures MM 4.4.1a, MM 4.4.1b and 4.4.1c are also identified to reduce impacts associated with PM_{10} during construction. Therefore, the proposed Project is consistent with this objective.
Objective 9.2 Cooperate with all federal and state agencies in the effort to attain air quality objectives.	Yes	The Applicant would cooperate with all federal and State agencies in the effort to attain air quality objectives through compliance with ICAPCD Regulation VIII, requiring the construction contractor to use equipment outfitted with diesel engines with certified NO_x emissions rated as Tier 3 or better. Further, the Project would comply with the ICAPCD Air Quality CEQA Handbook's Mandatory Standard, Discretionary and Enhanced Air Quality Measures. In addition, the Applicant has identified proposed measures that are included as part of the proposed Project (refer to Table 2.0-6 in Chapter 2.0, Project Description). Lastly, mitigation measures MM 4.4.1a, MM 4.4.1b and 4.4.1c would also serve to reduce construction emissions consistent with this objective. Therefore, the proposed Project is consistent with this objective.

4.4.2 ENVIRONMENTAL SETTING

A. PROJECT AREA

Regional and Local Climate/Meteorological Conditions

The Project is located in the Salton Sea Air Basin (SSAB). The SSAB experiences mild and dry winters with daytime temperatures ranging from 65 to 75 degrees Fahrenheit (°F). Summers are extremely hot with daytime temperatures ranging from 104 to 115 °F. Very little rainfall occurs in the SSAB.

Imperial County usually receives approximately three inches of rain per year mostly occurring in late summer or midwinter. Summer weather patterns are dominated by intense heat induction low-pressure areas over the interior desert. The flat terrain of the Imperial Valley, combined with strong temperature differentials created by intense solar heating, produce moderate winds and deep thermal convection.

The general wind speeds of the area are less than 10 miles per hour (mph), but occasionally increase to less than 30 mph during the months of April and May. Wind patterns reflect the temperature disparity between the cool ocean to the west and the warm desert interior. Statistics reveal that prevailing winds blow from the northwest-northeast. A secondary trend of wind from the southeast is also evident (EGI 2012).

Local Air Quality

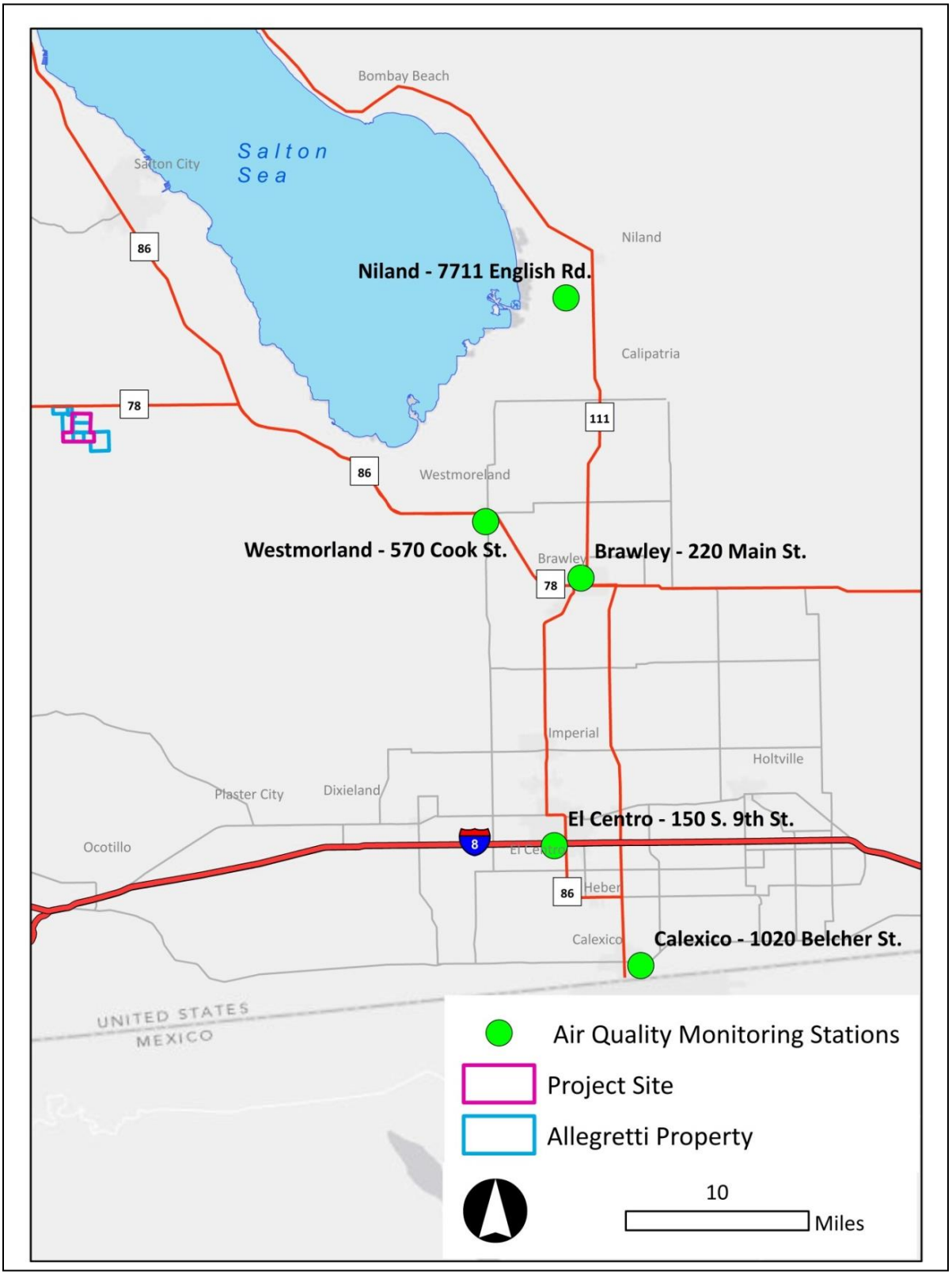
Criteria pollutants are measured continuously throughout Imperial County. The ICAPCD is responsible for monitoring and reporting monitoring data. The data is used to track ambient air quality patterns throughout the County and to determine attainment status when compared to the NAAQS and CAAQS. As noted in the "Annual Network Plan for Ambient Air Monitoring" (CARB 2017c), the ICAPCD is responsible for monitoring four sites (7711 English Road, Niland; 520 Cook Street, Westmorland; 220 Main Street, Brawley; and 150 South 9th Street, El Centro) that collect meteorological and criteria pollutant data used by the District to assist with pollutant forecasting, data analysis and characterization of air pollutant transport. Also, a fifth monitoring location in the City of Calexico (Ethel Street) is operated by CARB.

The pollutants of interest in Imperial County are as follows: Niland, Westmorland, El Centro and Calexico all monitor for O_3 and PM_{10}. Brawley, El Centro, and Calexico all monitor for $PM_{2.5}$ and both El Centro and Calexico monitor CO and NO_2. All stations monitor for supporting meteorological parameters (CARB 2017c, p. 7).

The Westmorland monitoring station located at 570 Cook Street is approximately 20 miles southeast of, and closest to, the Project area. **Table 4.4-4** identifies the criteria pollutants monitored closest to the Project compared to the CAAQS. **Table 4.4-5** identifies the criteria pollutants monitored closest to the Project compared to the NAAQS. Ambient data was obtained from the California Environmental Protection Agency's (CalEPA) Air Resources Board Website (CARB 2017b). **Figure 4.4-1** shows the locations of the monitoring sites relative to the Project site.

Sensitive Receptors

Sensitive receptors refer to individual or uses which could be adversely affected by exposure to air pollutants. High concentrations of air pollutants present health hazards for the general population, but more so for the young, the elderly, and the sick. Respiratory ailments, eye and throat irritations, headaches, coughing, and chest discomfort can result from exposure to smog and other air pollutants. Schools, hospitals, residences, and other facilities where people congregate, especially children, the elderly and infirm, are considered especially sensitive to air pollutants. The Project area is surrounded by primarily by vacant open desert and existing solar development to the northwest. Land under the jurisdiction of California State Parks (i.e. the Ocotillo Wells State Vehicular Recreation Area) is located



Source: Ericsson-Grant, Inc., ICAPCD, Project Applicant and U.S. Department of Commerce Tiger/Line Shapefiles.

FIGURE 4.4-1
LOCATION OF AIR QUALITY MONITORING STATIONS

TABLE 4.4-4
LATEST THREE-YEAR AMBIENT AIR QUALITY DATA - CAAQS

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS[1]	2014+ (# of Days Exceeding Standard)	2015+ (# of Days Exceeding Standard)	2016+ (# of Days Exceeding Standard)
O_3 (ppm)	Westmorland	1 Hour	2014: * 2015-2016: 0.080 ppm	* (*)	0.077 ppm (0)	0.076 ppm (0)
	Westmorland	8 Hour	2014-2016: 0.070 ppm	* (*)	0.061 ppm (0)	0.068 ppm (0)
PM_{10} ($\mu g/m^3$)	Westmorland	24 Hour	50 µg/m3	409.1 µg/m3 (17)	200.7 µg/m3 (12)	* (*)
$PM_{2.5}$ ($\mu g/m^3$)	Brawley	24 Hour	--	24.3 µg/m3 (0)	29.5 µg/m3 (0)	57.9 µg/m3 (NA)
NO_2 (ppb)	El Centro	1 Hour	60 ppb	59 ppb (0)	59 ppb (0)	50 ppb (0)
CO	El Centro	8 Hour	N/A	N/A	N/A	N/A

Source: CARB 2017b.

[1] Refer to Table 4.4-1

+ Measurements are first high per year.

** Insufficient data available to determine the value.*

Notes:

ppm=parts per million; ppb = parts per billion

$\mu g/m^3$ = micrograms per cubic meter

N/A=Not Available for given year

TABLE 4.4-5
LATEST THREE-YEAR AMBIENT AIR QUALITY DATA - NAAQS

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	NAAQS[1]	2014 (# of Days Exceeding Standard)	2015 (# of Days Exceeding Standard)	2016 (# of Days Exceeding Standard)
O_3 (ppm)	Westmorland	1 Hour	2014-2016: *	* (*)	0.077 ppm (0)	0.076 ppm (0)
	Westmorland	8 Hour	2014: 0.075 ppm 2015-2016: *0.070 ppm	* (*)	0.061 ppm (0)	0.068 ppm (0)
PM_{10} ($\mu g/m^3$)	Westmorland	24 Hour	150 µg/m3	404.2 µg/m3 (25.3)	193.4 µg/m3 (18.4)	251.5 µg/m3(12.0)
$PM_{2.5}$ ($\mu g/m^3$)	Brawley	24 Hour	35 µg/ m3	24.3 µg/m3 (0)	29.5 µg/m3 (1)	57.9 µg/m3(5.9)
NO_2 (ppb)	El Centro	1 Hour	0.100 ppb	59.3 ppb (0)	59.1 ppb (0)	50.9 ppb (0)
CO	El Centro	8 Hour	N/A	N/A	N/A	N/A

Source: CARB 2017b.

[1] Refer to Table 4.4-1

+ Measurements are first high per year.

** Insufficient data available to determine the value.*

Notes:

ppm=parts per million; ppb = parts per billion

µg/m³ = micrograms per cubic meter

N/A=Not Available for given year

approximately 1.5 miles to the north on the north side of SR 78. The nearest residential structure (refer to Figure 4.1-1 in Section 4.1 Aesthetics) is located approximately 2.5 miles west-northwest of the Project site. Occupied structures at the Blu-In RV Park are located approximately 3.0 miles northwest of the northwestern boundary of Project site. Because these sensitive receptors are not in the immediate vicinity of the Project area, they would not be affected by any of the construction activities.

4.4.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines, as listed in Appendix G. The Project would result in a significant impact to air quality if it would result in any of the following:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

d) Expose sensitive receptors to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people.

B. ISSUES SCOPED OUT AS PART OF THE INITIAL STUDY

No CEQA Guidelines Appendix G air quality criteria were scoped out as part of the Initial Study.

C. METHODOLOGY

The following criteria air pollutants were assessed for the construction of the Seville 4 Solar Project: particulate matter smaller than 10 microns in aerodynamic diameter (PM_{10}); carbon monoxide (CO); nitrogen oxides (NO_x); and sulfur dioxide (SO_2). In addition, the criteria air pollutant precursor reactive organic gases (ROGs) was also analyzed. Particulate matter smaller than 2.5 microns in aerodynamic diameter ($PM_{2.5}$) and greenhouse gases (GHG), such as carbon dioxide (CO_2) and methane (CH_4) were also analyzed (Refer to Section 4.5, Climate Change and Greenhouse Gases, for discussion of GHG impacts).

Construction Emissions Calculations

CalEEMod

To conduct the air quality analysis, EMA used information from the Seville 4 CalEEMod Supplemental Project Description prepared by EMA with information provided by Titan Solar II LLC (Titan) provided as Attachment A of **Appendix D** on the attached CD of Technical Appendices of this EIR.

Air pollutant emissions for the Project construction activities were estimated using the California Emission Estimator Model (CalEEMod) (version 2016.3.1). CalEEMod is a computer program developed by ENVIRON International Corporation in collaboration with the South Coast Air Quality Management District (SCAQMD) and other California Air Districts that can be used to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with construction from a variety of land use projects. The model quantifies direct emissions from construction (including vehicle use and travel), as well as indirect emissions, such as GHG emissions from energy use.

In addition to the CalEEMod calculations and results, Attachments B also contains a "User Entered Comments and Non-Default Data" section which both identifies non-default inputs and explains how

CalEEMod is used to calculate emissions for the current project. When CalEEMod model defaults were retained and no further explanation was necessary, no "comments" were recorded.

Although the CalEEMod model is capable of calculating air pollutant emissions across many of these construction activities for a number of different projects, its default project types do not include a "solar photovoltaic farm" project. Therefore, the "user defined industrial" land use category was selected as a surrogate. Where applicable, CalEEMod defaults were retained as the model inputs. However, CalEEMod defaults were replaced with project-specific information where available (such as the number of worker-commute and truck traffic, and the percentage of off-site roads to be traveled by off-site traffic which would be paved and unpaved). Defaults were also replaced if applicable project information was available in the CalEEMod Supplemental Project Description using information provided by Titan. Examples of this latter information include the mix of construction equipment expected to be used.

The expected number of worker, vendor truck and haul truck trips, respectively, expected per day for each phase of the project construction and operation are included in Table 11, Table 12, and Table 13 summarized in Attachment A of **Appendix D** of this EIR. The CalEEMod input and output files for each of the eight HSAT array construction phases (and the fixed-frame grading option) are presented in Attachment B-1 of **Appendix D** of this EIR.

The CalEEMod models with grading assumed on-site watering three times daily during the grading activities.

AP-42

Unpaved private industrial road fugitive dust air pollutant emissions were calculated using the U.S. Environmental Protection Agency's (USEPA's) "AP-42, Compilation of Air Pollutant Emission Factors." AP-42 has been published since 1972 as the primary compilation of EPA's air pollutant emission factor information. It contains emission factors and process information for more than 200 air pollution source categories. The emission factors have been developed and compiled from source test data, material balance studies, and engineering estimates. The latest emissions factors are available from the USEPA's website. The AP-42 construction calculations are presented in Attachment C of **Appendix D** of this EIR.

Construction Thresholds

The ICAPCD has established significance thresholds in the *ICAPCD 2007 CEQA Air Quality Handbook* for the preparation of Air Quality Impact Assessments (AQIA). The screening criteria in the ICAPCD CEQA Handbook can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. **Table 4.4-6** shows the ICAPCD screening thresholds for construction CO, ROG, NO_x and PM_{10}. The thresholds are used to guide project developers and interested parties in determining the recommended type of mitigation measures.

TABLE 4.4-6
ICAPCD THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION ACTIVITIES*

Criteria Pollutant	Pounds Per Day
CO	550
NO_x	100
ROG	75
PM_{10}	150

Source: ICAPCD 2007 CEQA Air Quality Handbook, Table 4.
**Table 4.4-8 does not present "significance thresholds" for $PM_{2.5}$, SO_2 or greenhouse gases.*

Projects that generate emissions that exceed the thresholds for construction may have a significant impact on local and, under certain circumstances, regional air quality. These projects must conduct a construction analysis that appropriately reflects the identified potential construction air quality impacts. An analysis of construction air quality impacts has been prepared for the proposed Project and its findings are discussed in subsection 4.4.3, Impacts and Mitigation Measures.

Operational Emissions Calculations

CalEEMod

To conduct the air quality analysis, EMA used information from the Seville 4 CalEEMod Supplemental Project Description prepared by EMA with information provided by Titan Solar II LLC (Titan) provided as Attachment A of **Appendix D** on the attached CD of Technical Appendices of this EIR.

Air pollutant emissions for the Project operation were estimated using the California Emission Estimator Model (CalEEMod) (version 2016.3.1). Operations would commence once construction is complete. Each operational activity has the potential to produce air pollutant emissions which vary in both the specific type and quantity emitted. Operational emissions were calculated for both the Fixed-Frame Configuration and the HSAT Configuration. The CalEEMod input and output files for the HSAT array operation phase (and the fixed-frame operation option) are also presented in Attachment B of **Appendix D** on the attached CD of Technical Appendices of this EIR.

AP-42

Daily air pollutant emissions from the Project operations were calculated using AP-42 emission factors. The AP-42 calculations are presented in Attachment C of **Appendix D** on the attached CD of Technical Appendices of this EIR.

Operations Assumptions

Project operation would begin after construction is completed at the end of month six. Once the Seville 4 Substation and Gen-Tie Line have been constructed, the installed solar panels will begin delivering power to the IID system and operation of the Project will have begun. The Project is not expected to have a regular on-site staff based at the Project site during operation. Workers may occasionally be required to maintain the common access roads and storm water retention basins, clean the solar panels, and/or perform specific maintenance activities. During the Project operations phase, up to eight worker trips and two vendor truck trips could occur daily.

Periodic washing of the PV modules could be needed to remove dust in order to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at five acre-feet per washing (depending on the water required for dust control during panel washing), with up to two washings per year, or a total of up to 10-acre feet per year. This water would be obtained from the Ranch Oasis Mutual Water Company. Each washing is expected to take less than one week to complete.

The Project (HSAT Configuration) would consume an estimated 300 kW-hours of electrical energy daily from the IID power system to operate the solar panel trackers, the on-site security system and the solar facility monitoring and control system. The Fixed-Frame Configuration is estimated to use 250 kW-hours of electrical energy daily, as there are no solar trackers.

Operational Thresholds

The *ICAPCD 2007 CEQA Air Quality Handbook* provides guidance to assist CEQA Lead Agencies in making a determination on the type of environmental document to prepare. Table 1 of the Handbook provides general guidelines for determining the significance of impacts and the recommended type of

environmental analysis required based on the total emissions that are expected from the operations phase of a project (ICAPCD 2007, p. 8). **Table 4.4-7** presents the "Thresholds of Significance for Project Operations" from Table 1 of the *ICAPCD 2007 CEQA Air Quality Handbook*.

TABLE 4.4-7
ICAPCD DAILY OPERATIONAL EMISSIONS THRESHOLDS

Criteria Pollutant*	Pounds Per Day
ROG	55
NO_x	55
CO	550
SO_2	150
PM_{10}	150

Source: ICAPCD 2007 CEQA Air Quality Handbook in EMA 2017c.
**The Table 4.4-11 does not present "significance thresholds" for $PM_{2.5}$ or GHG.*

The ICAPCD has adopted the Operation Development Fee under Rule 310. This Rule provides the ICAPCD with a sound method for mitigating emissions produced from the operation of new commercial and residential development projects. Projects unmitigable through standard procedures are assessed a one-time fee for either Ozone Precursors or PM_{10} impacts which is based upon either the square footage of the commercial development or the number of residential units. Operational impacts are not anticipated given that the proposed Project creates renewable energy and would add very few daily trips (refer to Table 4.3-7 in Section 4.3, Transportation and Traffic.

D. PROJECT IMPACTS AND MITIGATION MEASURES

Conflict with or Obstruct Air Quality Plan/Violate Air Quality Standard

Impact 4.4.1 Implementation of the proposed Project would increase air pollutant emissions during Project construction and operation. The mitigated and unmitigated daily emissions (both winter and summer) of PM_{10} were calculated to exceed ICAPCD thresholds during construction weeks 3-20 of for both the Fixed-Frame Configuration and HSAT Configuration. No criteria pollutant thresholds were calculated to be exceeded during Project operations. Therefore, the Project's potential to conflict with or obstruct an air quality plan or violate an air quality standard is considered a **potentially significant impact** during Project construction.

Construction Emissions

Project construction would consist of different activities which would be undertaken in phases through to the operation of the Project. Construction of the Project is expected to consist of the following eight activities (CalEEMod "phases"): access road (all-weather) construction; grading/fencing; racking installation; solar panel installation; system wiring and trenching; inverter installation; Gen-Tie Line construction; and Seville 4 Substation and IID Switching Station construction. Some of the eight activities are expected to overlap another construction activity. Construction of the Project is estimated to take approximately six months. The schedule presented in **Table 4.4-8** includes the likely phasing of the various construction activities applicable to both the Fixed-Frame Configuration or HSAT Configuration.

TABLE 4.4-8
ANTICIPATED CONSTRUCTION AND OPERATION SCHEDULE

Construction Activity	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
	Week #																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Access Road Construction	X	X																						
Grading/Fencing			X	X	X																			
Racking Installation						X	X	X	X	X	X	X	X	X	X									
Gen-Tie Construction											X	X	X											
Solar Panel Installation											X	X	X	X	X	X	X	X						
System Wiring & Trenching															X	X	X	X	X	X	X			
Inverter Installation																			X	X	X	X	X	
Operation																								X

Source: EMA 2017c.

Each construction activity has the potential to produce air pollutant emissions which vary in both the specific type and quantity emitted. **Table 4.4-9A thru Table 4.4-9J** summarize the daily air pollutant emissions from the Project's eight construction activities (described below) based on the CalEEMod model and twelve AP-42 emission factors. These tables include emission calculations for criteria pollutants ROG, NOX, CO, SO2, PM 10 and PM 2.5 both unmitigated and mitigated for summer and winter. "Unmitigated" emissions are those calculated by CalEEMod when none of the air pollutant mitigation measures contained within the CalEEMod program are selected. "Mitigated" emissions are those calculated by CalEEMod after the application of the air pollutant mitigation measures described above which are contained within, and can be calculated by, CalEEMod. Emissions of ROG, NOX, CO and PM10 are compared to the ICAPCD Significance Thresholds shown in **Table 4.4-6**. The CalEEMod input and output files for each of the eight HSAT Configuration construction phases (and the Fixed-Frame Configuration grading option) are presented in Attachment B of **Appendix D** on the attached CD of Technical Appendices of this EIR. The AP-42 calculations are presented in Attachment C of **Appendix D** on the attached CD of Technical Appendices of this EIR.

Access Road

Construction of the Project would commence with building of the approximately 3,000 feet of private, all-weather access road, which would be constructed to extend 2.1 miles of private, all-weather road from SR 78 to the Project site. This new, 24-foot wide access road is expected to require light site preparation, grading, and compacting. These access road construction activities are expected to require two weeks to complete. These grading activities are expected to occur over approximately 1.65 acres; the total cumulative acreage disturbed from grading is approximately ten acres (approximately six passes over the 1.65-acre area). An estimated 12 worker trips and 12 haul truck trips per day traveling an average of approximately 2.4 miles (2.1 miles plus one-half of 0.6 miles) of all-weather private road are expected daily traveling to the work site. The equipment expected to be used during the construction of the new segment of access includes one 187 horsepower (hp) grader, one 402 hp water truck and one 80 hp roller. Each would operate for 8 hours daily. **Table 4.4-9A** summarizes the emissions from construction of the access road. All traffic to the Project site during each additional construction phase will travel the approximately 2.7 miles of all-weather private road.

Grading/Fencing

Grading activities for the HSAT configuration are expected to total approximately three passes over the 174-acre Project site, or a total of approximately 522 acres of grading. Grading activities for the

Fixed-Frame configuration area is expected to total approximately three passes over the 146-acre Project site, or a total of approximately 438 acres of grading. Fence installation is also anticipated to occur during this phase. The grading phase with fence installation is expected to require approximately three weeks. An estimated 104 worker trips, six vendor trips and four delivery truck trips per day would be traveling to the Project site.

On-site parking would be provided for all construction workers. During grading, actively disturbed on-site areas would be watered least three times a day as necessary to reduce fugitive dust emissions. The equipment expected to be used during the grading phase includes two 187-hp graders, two 402-hp water trucks, two 247-rubber tired dozers, three 367-hp scrapers, two 97-hp tractors/loaders/backhoes, two 158-hp excavators, and two 65-hp skid steer loads. Each piece would operate six hours per day with the exception of the water trucks that would operate seven hours per day.

Table 4.4-9B summarizes the emissions from grading and fencing for the HSAT Configuration. **Table 4.4-9C** summarizes the emissions from grading and fencing for the Fixed-Frame Configuration.

Racking Installation

Racking installation (installation of the supports for the PV arrays) would commence once grading and fencing is complete. Approximately ten haul truck trips per day would deliver equipment and supplies to the Project site laydown area or directly to the active work area. Racking installation is expected to take about ten weeks and generate 112 worker trips per day traveling to the Project site. On-site parking would be provided for all construction workers. During this construction period, crews of laborers would commence work at a point on the perimeter or from another point within the site, and continue until the assigned area is complete.

During racking installation each on-road delivery truck may be driving an estimated one mile on on-site unpaved roads to deliver construction materials directly to the active work locations.

The equipment anticipated to be used during racking installation for the Project includes one 84-hp generator set, one 402-hp water truck, six pieces of 88-hp other general industrial equipment and two 78-hp skid steer loaders. The water trucks and other general industrial equipment would operate for six hours a day, the generator set would operate for eight hours per day and the skid steer loaders would operate for seven hours per day. **Table 4.4-9D** summarizes the emissions from racking installation during weeks 6-10 of construction. Racking installation would continue along with other construction activities in weeks 11-14 (**Table 4.4-9E**) and week 15 (**Table 4.4-9F**).

Solar Panel Installation

Solar panel installation would commence once sufficient racking is installed. Approximately ten haul truck trips per day (typical eighteen-wheelers and similar sized trucks) would deliver solar panels and other equipment and supplies to the Project site laydown area or directly to the active work area. Solar panel installation is expected to also take about ten weeks and generate 112 worker trips per day traveling to and from the Project site. On-site parking would be provided for all construction workers. During this construction period, crews of laborers would commence work at a point on the perimeter or from another point within the site, and continue to work until the assigned area is complete. Work crews would carry out the task of mounting the panels on the support frames. During solar panel installation each on-road delivery truck may be driving an estimated one mile on on-site unpaved roads to deliver construction materials directly to the active work locations.

The equipment anticipated to be used during solar panel installation includes one 84-hp generator set, one 402-hp water truck, one piece of 88-hp other general industrial equipment, two 67-hp trenchers, and two 78-hp skid steer loaders. The generator set and other general industrial equipment would operate for

eight hours a day; the skid steer loaders would operate for seven hours per day; and water trucks and trenchers would operate for six hours per day.

Table 4.4-9C summarizes air pollutant construction emissions of the Fixed-Frame Configuration that differ from the HSAT Configuration based on the single phase the CalEEMod model and the one AP-42 emission factor. Solar panel installation would continue along with other construction activities in weeks 11-14 (**Table 4.4-9E**), week 15 (**Table 4.4-9F**), weeks 16-18 (**Table 4.4-9G**) and weeks 19-20 (**Table 4.4-9H**).

System Wiring and Trenching Equipment

The System Wiring and Trenching phase would commence once sufficient solar panels have been installed. Approximately ten haul truck trips per day would deliver equipment and supplies to the Project site laydown area or directly to the active work area. System wiring and trenching is expected to take about seven weeks. System wiring and trenching is also expected to generate 32 worker trips per day traveling to the Project site. On-site parking would be provided for all construction workers. During this construction period, crews of laborers would commence work at a point on the perimeter or from another point within the site, and continue to work until the assigned area is complete. During system wiring and trenching, each on-road delivery truck may be driving an estimated one mile on on-site unpaved roads to deliver system wiring construction materials directly to the active work locations.

The equipment anticipated to be used during system wiring and trenching for the Project includes two 84-hp generator sets, one 402-hp water truck, one piece of 88-hp other general industrial equipment, two 67-hp trenchers, and two 78-hp skid steer loaders. The generator set and other general industrial equipment would operate for eight hours a day; the skid steer loaders would operate for seven hours per day and water trucks; and trenchers would operate for six hours per day. **Table 4.4-9I** summarizes the emissions from system wiring and trenching.

Inverter Installation

Inverter installation would commence work in parallel with solar panel installation, system wiring and trenching. Inverter installation is expected to take approximately five weeks. Inverter installation is expected to generate 32 worker trips and 16 haul truck trips per day traveling to the Project site. On-site parking would be provided for all construction workers. During this construction period, crews of laborers would commence work at a point on the perimeter or from another point within the site and continue to work until the assigned area is complete.

The equipment anticipated to be used during inverter installation for the Project includes one 84-hp generator set, one 402-hp water truck, one piece of 88-hp other general industrial equipment, and two 78-hp skid steer loaders. The generator set and other general industrial equipment would operate for eight hours a day; the skid steer loaders would operate for seven hours per day; and the water truck would operate for six hours per day. **Table 4.4-9J** summarizes the emissions from inverter installation.

Electrical Substation and Switch Station

The Seville 4 Substation and IID Switching Station would be built in parallel with the Gen-Tie Line. The substation and switch station would be located adjacent to the existing Seville 1 Solar and Seville 2 Solar substation and switch station in Lot C/Lot D. Construction of the substation and switch station would likely require an estimated eight weeks to complete. An estimated 16 worker trips and four haul truck trips per day would be required for construction, each traveling the approximately 0.6 miles of all-weather private road to and from SR 78 and the substation and switch station. The substation and switch station equipment are expected to be pre-painted and not require painting (coating) on site. The equipment anticipated to be used during substation and switch station construction includes two 63-hp aerial lifts; one 231-hp crane; one 88-hp piece of other general industrial equipment; and one 97-hp

tractor/loader/backhoe. Each piece would operate for six hours a day with the exception of one piece of other general industrial equipment that would operate for eight hours per day. Seville 4 Substation and IID Switching Station construction would take place concurrent with other construction activities in weeks 11-14 (**Table 4.4-9E**), week 15 (**Table 4.4-9F**), weeks 16-18 (**Table 4.4-9G**) and weeks 19-20 (**Table 4.4-9H**).

Gen-Tie

Construction of the 34.5 kV Gen-Tie Line would occur simultaneously with initial construction of the Project substation. Approximately 2.4 miles of new 34.5-kV Gen-Tie Line would be constructed for the Project. Construction of the Gen-Tie Line would be expected to take approximately four weeks. An estimated 16 worker trips and two vendor trips per day would be required for construction of the Gen-Tie Line, each traveling an average of 1.7 miles of all-weather private road to and from the construction site and State Route 78. The equipment anticipated to be used during construction of the Gen-Tie Line includes three 63-hp aerial lifts; two 212-hp crawler tractors; and one 88-hp piece of other equipment. The aerial lifts and crawler tractors would operate for four hours per day and the one piece of other equipment would operate for eight hours per day. Gen-Tie Line construction would take place concurrent with other construction activities in weeks 11-14 (**Table 4.4-9E**).

Table 4.4-9A summarizes emissions associated with construction of the all-weather access road for both winter and summer, unmitigated and mitigated.

TABLE 4.4-9A
ACCESS ROAD CONSTRUCTION (ALL-WEATHER) - WEEK 1-2 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.57	17.66	8.16	0.02	29.09	0.67	29.75	2.93	0.61	3.54
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.59	17.65	8.33	0.02	29.09	0.67	29.75	2.93	0.61	3.54
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.57	17.66	8.16	0.02	28.60	0.67	29.27	2.88	0.61	3.49
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.59	17.65	8.33	0.02	28.60	0.67	29.27	2.88	0.61	3.49
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			

Source: EMA 2017c.

As shown, construction of the all-weather access road would not exceed any ICAPCD significance thresholds and air quality impacts would be **less than significant**.

Table 4.4-9B summarizes emissions associated with grading and fencing construction activities for the HSAT Configuration for both winter and summer, unmitigated and mitigated.

TABLE 4.4-9B
HSAT CONFIGURATION GRADING/FENCING - WEEKS 3-5 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM
Total	8.15	87.90	52.11	0.10	190.68	3.66	194.34	23.48	3.37	26.85
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM
Total	8.32	87.85	53.61	0.10	190.68	3.66	194.34	23.48	3.37	26.85
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM
Total	8.15	87.90	52.11	0.10	168.80	3.66	172.46	18.92	3.37	22.29
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM
Total	8.32	87.85	53.61	0.10	168.80	3.66	172.46	18.92	3.37	22.29
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, grading and fencing construction activities for the HSAT Configuration would not exceed ICAPCD significance thresholds for ROG, NO_x and CO. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 3-5. This is considered a **potentially significant impact.**

Table 4.4-9C summarizes emissions associated with grading and fencing construction activities for the Fixed-Frame Configuration for both winter and summer, unmitigated and mitigated.

TABLE 4.4-9C
FIXED-FRAME CONFIGURATION GRADING/FENCING - WEEK 3-5 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.32	87.85	53.61	0.10	185.74	3.66	189.39	22.95	3.37	26.31
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.32	87.85	53.61	0.10	185.74	3.66	189.39	22.95	3.37	26.31
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.15	87.90	52.11	0.10	166.57	3.66	170.23	18.68	3.37	22.05
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.32	87.85	53.61	0.10	166.57	3.66	170.23	18.68	3.37	22.05
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, grading and fencing construction activities for the Fixed-Frame Configuration would not exceed ICAPCD significance thresholds for ROG, NO_x and CO. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 3-5. This is considered a **potentially significant impact**.

Table 4.4-9D summarizes emissions associated with racking installation construction for both winter and summer, unmitigated and mitigated for weeks 6-10.

TABLE 4.4-9D
RACKING INSTALLATION - WEEKS 6-10 - 2018

Unmitigated Winter										
Winter Unmitigated	**Emission Rate (lbs/day)**									
	ROG	**NOx**	**CO**	**SO2**	**FUGPM10**	**EXHPM10**	**TOTPM10**	**FUGPM2.5**	**EXHPM2.5**	**TOTPM2.5**
Total	3.30	24.91	23.68	0.04	166.32	1.53	167.85	16.74	1.43	18.16
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	**Emission Rate (lbs/day)**									
	ROG	**NOx**	**CO**	**SO2**	**FUGPM10**	**EXHPM10**	**TOTPM10**	**FUGPM2.5**	**EXHPM2.5**	**TOTPM2.5**
Total	3.48	24.87	25.32	0.04	166.32	1.53	167.85	16.74	1.43	18.16
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	**Emission Rate (lbs/day)**									
	ROG	**NOx**	**CO**	**SO2**	**FUGPM10**	**EXHPM10**	**TOTPM10**	**FUGPM2.5**	**EXHPM2.5**	**TOTPM2.5**
Total	3.30	24.91	23.68	0.04	166.32	1.53	167.85	16.74	1.43	18.16
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	**Emission Rate (lbs/day)**									
	ROG	**NOx**	**CO**	**SO2**	**FUGPM10**	**EXHPM10**	**TOTPM10**	**FUGPM2.5**	**EXHPM2.5**	**TOTPM2.5**
Total	3.48	24.87	25.32	0.04	166.32	1.53	167.85	16.74	1.43	18.16
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, racking installation construction would not exceed ICAPCD significance thresholds for ROG, NO_x and CO. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 6-10. This is considered a **potentially significant impact**.

Table 4.4-9E summarizes emissions associated with racking installation, solar panel installation, Gen-Tie Line construction, and Seville 4 Substation and IID Switching Station construction for both winter and summer, unmitigated and mitigated for weeks 11-14.

TABLE 4.4-9E

RACKING INSTALLATION, SOLAR PANEL INSTALLATION, GEN-TIE CONSTRUCTION, & SUBSTATION & SWITCH STATION CONSTRUCTION - WEEKS 11-14 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.45	70.19	59.40	0.10	353.63	3.96	357.59	35.60	3.68	39.28
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.87	70.11	63.14	0.10	353.63	3.96	357.59	35.60	3.68	39.28
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.45	70.18	59.40	0.10	353.63	3.96	357.59	35.60	3.68	39.28
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	8.87	70.10	63.14	0.10	353.63	3.96	357.58	35.60	3.68	39.28
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, racking installation, solar panel installation, Gen-Tie Line construction, Seville 4 substation and IID Switching Station construction would not exceed ICAPCD significance thresholds for ROG, NOx and CO. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 11-14. This is considered a **potentially significant impact.**

Table 4.4-9F summarizes emissions associated with racking installation, solar panel installation, Gen-Tie Line construction, and Seville 4 Substation and IID Switching Station construction for both winter and summer, unmitigated and mitigated for week 15.

TABLE 4.4-9F

RACKING INSTALLATION, SOLAR PANEL INSTALLATION, SUBSTATION & SWITCH STATION CONSTRUCTION, & SYSTEM WIRING AND TRENCHING - WEEK 15 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	10.27	83.19	72.81	0.12	399.01	4.92	403.93	40.15	4.61	44.77
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	10.71	83.11	76.80	0.12	399.01	4.92	403.93	40.15	4.61	44.77
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	10.27	83.18	72.81	0.12	399.01	4.92	403.93	40.15	4.61	44.77
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	10.71	83.09	76.80	0.12	399.01	4.92	403.93	40.15	4.61	44.77
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, racking installation, solar panel installation, Gen-Tie Line construction, Seville 4 substation and IID Switching Station construction would not exceed ICAPCD significance thresholds for ROG, NOx and CO in week 15. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during week 15. This is considered a potentially significant impact.

Table 4.4-9G summarizes emissions associated with solar panel installation, Seville 4 Substation and IID Switching Station construction, and system wiring and trenching for both winter and summer, unmitigated and mitigated for weeks 16-18.

TABLE 4.4-9G
SOLAR PANEL INSTALLATION, SEVILLE 4 SUBSTATION & IID SWITCHING STATION CONSTRUCTION, & SYSTEM WIRING AND TRENCHING - WEEKS 16-18 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	6.97	58.29	49.14	0.08	232.69	3.40	236.09	23.42	3.19	26.60
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.23	58.24	51.48	0.08	232.69	3.40	236.09	23.42	3.19	26.60
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	6.97	58.27	49.13	0.08	232.69	3.40	236.09	23.42	3.19	26.60
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.23	58.23	51.48	0.08	232.69	3.40	236.09	23.42	3.19	26.60
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, with solar panel installation, substation and switch station construction, and system wiring and trenching construction would not exceed ICAPCD significance thresholds for ROG, NOx and CO in weeks 16-18. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 16-18. This is considered a **potentially significant impact**.

Table 4.4-9H summarizes emissions associated with solar panel installation, system wiring and trenching, and inverter installation for both winter and summer, unmitigated and mitigated for weeks 19-20.

TABLE 4.4-9H

SOLAR PANEL INSTALLATION, SYSTEM WIRING AND TRENCHING, & INVERTER INSTALLATION - WEEKS 19-20 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.64	62.83	53.94	0.09	276.92	3.60	280.52	27.86	3.40	31.25
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.92	62.69	56.51	0.10	276.92	3.60	280.52	27.86	3.40	31.25
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.63	62.79	53.94	0.09	276.92	3.60	280.52	27.86	3.40	31.25
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	7.92	62.73	56.51	0.10	276.92	3.60	280.52	27.86	3.40	31.25
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				Yes			

Source: EMA 2017c.

As shown, solar panel installation, system wiring and trenching, and inverter installation construction would not exceed ICAPCD significance thresholds for ROG, NOx and CO in weeks 19 and 20. However, the ICAPCD significance threshold for total PM_{10} would be exceeded during weeks 19 and 20. This is considered a **potentially significant impact**.

Table 4.4-9l summarizes emissions associated with solar panel installation, system wiring and trenching, and inverter installation for both winter and summer, unmitigated and mitigated for week 21.

TABLE 4.4-9l
SYSTEM WIRING AND TRENCHING & INVERTER INSTALLATION - WEEK 21 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	4.69	40.97	33.45	0.06	110.60	2.33	112.93	11.12	2.21	13.33
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	4.79	40.87	34.37	0.06	110.60	2.33	112.93	11.12	2.21	13.33
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	4.69	40.94	33.44	0.06	110.60	2.33	112.93	11.12	2.21	13.33
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	4.79	40.91	34.38	0.06	110.60	2.33	112.93	11.12	2.21	13.33
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			

Source: EMA 2017c.

As shown, system wiring and trenching, and inverter installation construction during week 21 would not exceed any ICAPCD significance thresholds and air quality impacts would be **less than significant**.

Table 4.4-9J summarizes emissions associated with solar panel installation, system wiring and trenching, and inverter installation for both winter and summer, unmitigated and mitigated for weeks 22-23.

TABLE 4.4-9J
INVERTER INSTALLATION - WEEKS 22-23 - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.75	15.42	12.87	0.02	50.18	0.80	50.98	5.05	0.76	5.81
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.80	15.32	13.32	0.02	50.17	0.80	50.97	5.05	0.76	5.81
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.75	15.40	12.86	0.02	50.18	0.80	50.98	5.05	0.76	5.81
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	1.80	15.38	13.33	0.03	50.18	0.80	50.98	5.05	0.76	5.81
ICAPCD Significance	75.00	100.00	550.00				150.00			
CEQA Significant?	No	No	No				No			

Source: EMA 2017c.

As shown, inverter installation construction during weeks 22 and 23 would not exceed any ICAPCD significance thresholds and air quality impacts would be **less than significant**.

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Operational Emissions

As shown in **Table 4.4-6**, operations would commence once construction is complete. Each operation activity has the potential to produce air pollutant emissions which vary in both the specific type and quantity emitted. A single-phase the CalEEMod model was used to calculate the daily air pollutant emissions from the operation of the Fixed-Frame Configuration. The CalEEMod input and output files for the HSAT Configuration (and the Fixed-Frame Configuration) are also presented in Attachment B of **Appendix D** of this EIR. The AP-42 calculations are presented in Attachment C of **Appendix D** of this EIR.

Daily Operations

Once the Seville 4 Substation and Gen-Tie Line have been constructed, the installed solar panels will begin delivering power to the IID system and operation of the Project will have begun. The Project is not expected to have a regular on-site staff based at the Project site during operation. Workers may occasionally be required to maintain the common access roads and storm water retention basins, clean the solar panels, and/or perform specific maintenance activities. During the Project operations phase, up to eight worker trips and two vendor truck trips could occur daily. **Table 4.4-10A** summarizes the operational air quality emissions associated with the Fixed-Frame Configuration. **Table 4.4-10B** summarizes the operational air quality emissions associated with the HSAT Configuration.

Periodic Panel Washing

Periodic washing of the PV modules could be needed to remove dust in order to maintain power generation efficiency. The amount of water needed for this purpose is conservatively estimated at five-acre feet per washing (depending on the water required for dust control during panel washing), with up to two washings per year, or a total of up to 10-acre feet per year. This water would be obtained from the Ranch Oasis Mutual Water Company. Each washing is expected to take less than one week to complete. The equipment anticipated to be used during operations includes one 402-hp water truck that would operate for six hours per day.

Operation of the Fixed-Frame Configuration and HSAT Configuration would generate air emissions below ICAPCD thresholds during both the summer and winter both without and with mitigation. Therefore, operational air quality impacts are considered **less than significant**.

Reclamation

Reclamation activities would increase air pollutant emissions as a result of earth-moving activities and exhaust from diesel equipment. Activities would include dismantling and removal of all structures and infrastructure on the Project site. Both dust and exhaust associated with reclamation activities would be temporary and similar to those generated during construction. All reclamation activities would implement appropriate fugitive dust control measures consistent with applicable ICAPCD requirements in effect at the time of reclamation. Thus, reclamation activities would result in a **less than significant impact** with regard to conflicting with or obstructing an air quality plan or violating an air quality standard. However, if the reclaimed site were reestablished as active farmland, dust and emissions may be generated similar to levels historically occurring on the approximately 60 acres that were previously farmed. Dust would be mitigated through required adherence to ICAPCD Rule 800. The ICAPCD has grant funds available under the Carl Moyer Program to assist Imperial County individuals and businesses in reducing pollutants from diesel engines (such as tractors) by replacing them with newer, cleaner, technologies.

Table 4.4-10A summarizes emissions associated with the Fixed-Frame Configuration operations for both winter and summer, unmitigated and mitigated.

TABLE 4.4-10A
FIXED-FRAME CONFIGURATION OPERATIONS - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.53	4.99	3.22	0.01	25.51	0.17	25.69	2.55	0.16	2.71
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Operations 2018 - Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.53	4.99	3.22	0.01	25.51	0.17	25.69	2.55	0.16	2.71
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Operations 2018 - Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.53	4.99	3.22	0.01	25.51	0.17	25.69	2.55	0.16	2.71
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Operations 2018 - Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.53	4.99	3.22	0.01	25.51	0.17	25.69	2.55	0.16	2.71
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			

Source: EMA 2017c.

As shown, Fixed-Frame Configuration operations would not exceed any ICAPCD significance thresholds and air quality impacts would be **less than significant**.

Table 4.4-10B summarizes emissions associated with HSAT Configuration operations for both winter and summer, unmitigated and mitigated.

TABLE 4.4-10B
HSAT CONFIGURATION OPERATIONS - 2018

Unmitigated Winter										
Winter Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.62	6.53	3.58	0.01	26.06	0.23	26.29	2.60	0.21	2.81
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Unmitigated Summer										
Summer Unmitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.63	6.52	3.68	0.01	26.06	0.23	26.29	2.60	0.21	2.81
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Mitigated Winter										
Winter Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.62	6.53	3.58	0.01	26.06	0.23	26.29	2.60	0.21	2.81
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA Significant?	No	No	No	No			No			
Mitigated Summer										
Summer Mitigated	Emission Rate (lbs/day)									
	ROG	NOx	CO	SO2	FUGPM10	EXHPM10	TOTPM10	FUGPM2.5	EXHPM2.5	TOTPM2.5
Total	0.63	6.52	3.68	0.01	26.06	0.23	26.29	2.60	0.21	2.81
ICAPCD Significance	55.00	55.00	550.00	150.00			150.00			
CEQA	No	No	No	No			No			

Source: EMA 2017c.

As shown, HSAT Configuration operations would not exceed any ICAPCD significance thresholds and air quality impacts would be **less than significant**.

Mitigation Measures

Construction Mitigation

MM 4.4.1a Compliance with ICAPCD Regulation VIII

The Project Applicant shall prepare a Dust Control Plan for control of fugitive dust during construction as required by ICAPCD Regulation VIII. The Dust Control Plan shall also include dust control measures to be implemented during the operation and maintenance phase of the Project. The Dust Control Plan shall address construction and earthmoving activities, track-out, open areas and unpaved roads. The Dust Control Plan shall also include information on the dust suppressants to be applied and the specific surface treatment(s) and/or control measures to be utilized to control track-out where unpaved and/or access points join paved public access roads. The Dust Control Plan shall be submitted for ICAPCD review prior to any earthmoving activities.

Timing/Implementation: *Submittal of Dust Control Plan to ICAPCD for review prior to any earthmoving activities; Implementation of Dust Control Plan during construction and operation/maintenance phases as specified in the Dust Control Plan.*

Enforcement/Monitoring: *ICPDSD and ICAPCD.*

As noted in the Methodology discussion, all construction activity CalEEMod modeling was done incorporating on-site watering three times daily during the grading activities. Accordingly, the following mitigation measures shall be employed:

MM 4.4.1b To reduce fugitive dust, water shall be applied to the all-weather private road at least three times per day and speeds shall be limited to 25 mph.

Timing/Implementation: *During construction of the all-weather private road.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department and ICAPCD.*

MM 4.4.1c Actively disturbed areas on the Project site would also be watered at least three times a day as necessary to reduce fugitive dust emissions during grading, racking installation, panel installation, system wiring and trenching and inverter installation.

Timing/Implementation: *During grading, racking installation, panel installation, system wiring and trenching and inverter installation.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department and ICAPCD.*

Significance After Mitigation

Implementation of mitigation measure MM 4.4.1a requires preparation of a Dust Control Plan and MM 4.4.1b and MM 4.4.1c would ensure Project compliance with ICAPCD Rule 800 (Dust Control Plan). These measures, along with mandatory Project compliance with the ICAPCD Air Quality CEQA Handbook's Standard, Discretionary and Enhanced Measures, and Applicant proposed dust control measures (i.e. apply dust suppressants, control track-out where unpaved and/or access points join paved public access roads) would be effective to reduce PM_{10} generated during construction. In addition, Applicant-proposed periodic application of chemical stabilization agents (soil binders) to exposed soil surfaces during operations would serve to reduce operational emissions. Following implementation of the Applicant-proposed measures (refer to Table 2.0-6 in Chapter 2.0 Project Description) and required mitigation

measures, PM_{10} emissions would be reduced below County thresholds. Therefore, Project construction and operations emissions would not conflict with or obstruct an air quality plan or violate an air quality standard and these potential impacts would be reduced to **less than significant**.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Impact 4.4.2 Exhaust generated by diesel equipment during construction, operation and maintenance, and reclamation could result in elevated levels of diesel particulate matter emissions. However, the nearest sensitive receptors are over 2.5 miles from Project site. Therefore, exposure of sensitive receptors to substantial pollutant concentrations is considered a **less than significant impact.**

Some members of the population are especially sensitive to air pollutant emissions and are given additional consideration when evaluating air quality impacts from projects. These include children, older adults, and persons with preexisting respiratory or cardiovascular illness. Therefore, at-risk land uses sensitive to poor air quality would include residences, schools, day care centers, playgrounds, medical facilities, and nursing homes.

The Project site is in an undeveloped and unincorporated portion of northwest Imperial County. Land surrounding the Project area consists of undeveloped open desert and existing solar development. No schools, day care centers, playgrounds, medical facilities, or nursing homes are near the Project site. Scattered residences exist to the west of the Project site. The nearest residential structure (Residence #7 refer to Section 4.1, Aesthetics, Figure 4.1-1) is located approximately 2.5 miles west-northwest of the Project site. Occupied structures at the Blu-In RV Park are located approximately 3.0 miles northwest of the northwestern boundary of Project site (refer to Section 4.1, Aesthetics). These are considered the closest sensitive receptors that could be affected by construction, operation and maintenance, and reclamation of the Project site.

Construction

On-site construction activities for each phase of the proposed Project would produce criteria air pollutant emissions (primarily from fugitive dust and diesel engine exhaust) which could exceed the ICAPCD's construction emission thresholds for PM_{10}. However, as described under Impact 4.4.1, implementation of mitigation measures MM 4.4.1a (water shall be applied to the all-weather private road at least three times per day and limit speed on the all-weather private road to 25 mph) and MM 4.4.1b (watering three times daily during grading activities), as well as compliance with the ICAPCD Air Quality CEQA Handbook's Standard, Discretionary and Enhanced measures, would effectively reduce PM_{10} emissions generated during construction below the ICAPCD construction thresholds. Implementation of these mitigation measures, and the resulting emission reductions, combined with the substantial distance to the residences to the west of the Project site, would ensure that the Project would not create, nor expose sensitive receptors to substantial pollutant concentrations during construction.

Construction of the proposed Project would also result in short-term Diesel Particulate Matter (DPM) emissions from the use of heavy-duty diesel-fueled construction equipment. CARB has declared diesel exhaust particulate matter emissions to be a TAC which can cause chronic (long-term) health effects and cancer. The dose to which sensitive receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the time-period over which that person has been exposed to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximum exposed individual (MEI). Thus, the risks estimated for a MEI are higher if a fixed exposure occurs over a longer period of time.

According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions (which may cause chronic health effects or cancer), should be based on a 70-year (840 months) exposure period; however, such assessments should be limited to the period/duration of activities associated with a project. Because short-term high exposures are not necessarily equivalent to longer-term lower exposures even when the total dose is the same, the OEHHA does not support the use of current cancer potency factors to evaluate cancer risk for exposures of less than nine years. The duration of the proposed construction activities is only 6 months which is substantially less than nine years, and would constitute only about 0.7 percent of a 70-year exposure period ([6 months ÷ 840 months] x 100 = 0.7%). The daily DPM emissions would also average less than five pounds. Because the use of diesel mobile construction equipment would be temporary and there are no sensitive receptors located immediately adjacent to areas where construction would occur, DPM from construction activities would not be anticipated to result in the exposure of sensitive receptors to levels that exceed applicable standards. Therefore, impacts to sensitive receptors associated with Project construction would be **less than significant**.

Operation

Air pollutant emissions resulting from typical Project operations would be very small, as there are no air pollutant emissions from normal solar operations and few workers would be on site which could generate fugitive dust emissions. In addition, the Applicant proposes to control dust during operations by the periodic application of chemical stabilization agents (soil binders) to exposed soil surfaces. These very small air pollutant emission rates, combined with the substantial distance to the residences to the west, would ensure that the Project would not create, nor expose sensitive receptors to, substantial pollutant concentrations during operations. Therefore, impacts to sensitive receptors associated with operation and maintenance of the Project would be **less than significant**.

Reclamation

As with construction, reclamation activities for the proposed Project would produce criteria air pollutant emissions from fugitive dust and diesel engine exhaust which could exceed the ICAPCD's construction emission thresholds for PM_{10}. However, as described under Impact 4.4.1, implementation of mitigation measures MM 4.4.1a (water shall be applied to the all-weather private road at least three times per day and limit speed on the all-weather private road to 25 mph) and MM 4.4.1b (watering three times daily during grading activities), as well as Project compliance with the ICAPCD Air Quality CEQA Handbook's Standard, Discretionary and Enhanced measures, would effectively reduce PM_{10} emissions below the ICAPCD construction thresholds. Implementation of these mitigation measures, and the resulting emission reductions, combined with the substantial distance to the residences to the west of the Project site would ensure that the Project would not create, or expose sensitive receptors to, substantial pollutant concentrations during reclamation.

Reclamation of the proposed Project would also result in short-term DPM emissions from the use of heavy-duty diesel-fueled construction equipment. As described under the discussion of construction, above, health risk assessments should be limited to the period/duration of activities associated with a project. Because short-term high exposures are not necessarily equivalent to longer-term lower exposures even when the total dose is the same, OEHHA does not support the use of current cancer potency factors to evaluate cancer risk for exposures of less than nine years. The duration of reclamation and the daily reclamation emissions are both expected to be less than those of the construction period and would accordingly be substantially less than nine years. As a result, the daily DPM emissions would also average less than five pounds. The use of diesel mobile construction equipment would be temporary and no sensitive receptors are located immediately adjacent to areas where reclamation activities would occur. As a result, DPM from reclamation activities would not be anticipated to result in exposure of sensitive

receptors to levels that exceed applicable standards. Therefore, impacts to sensitive receptors associated with Project reclamation would be **less than significant**.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Create Objectionable Odors Affecting a Substantial Number of People

Impact 4.4.3 Use of diesel equipment during construction, operation, and reclamation activities could result in temporary emissions of adverse odors. This is considered a **less than significant impact.**

The occurrence and severity of odor impacts depend on numerous factors including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause physical harm, they can be very unpleasant, and generate citizen complaints to local governments and regulatory agencies.

Construction

Construction of the Project is not anticipated to generate objectionable odors. The most likely potential sources that may emit odors during construction activities are diesel-fueled construction equipment. Odors from these sources would be localized and generally confined to the immediate area surrounding the construction equipment. There are very few residences or other concentrations of people in the Project area. The nearest residential structure is located approximately 2.5 miles west-northwest of the Project site. Given the low population in the Project vicinity, construction activities would not create objectionable odors affecting a substantial number of people. Therefore, a **less than significant** odor impact would occur during Project construction.

Operation

The proposed Project, as a solar electricity generating facility, is not anticipated to generate objectionable odors. Similar to the construction phase, the most likely potential sources that may emit odors during maintenance activities are the exhaust from diesel-fueled equipment. Odors from these sources would be localized and generally confined to the immediate area surrounding the emitting equipment. Operation of the Project would use less diesel-fueled equipment than construction, and would not be expected to add new odor sources. As a result, the Project would not create objectionable odors affecting a substantial number of people, and a **less than significant** odor impact would occur during Project operation and maintenance.

Reclamation

Similar to the construction phase, odors may temporarily be emitted from diesel-fueled equipment during reclamation activities. Diesel exhaust would be localized and generally confined to the immediate area surrounding the reclamation activity. Further, it is anticipated that regulatory requirements for controlling diesel exhaust would be similar to or more stringent than what is currently in place at the time of Project reclamation (i.e. 30+ years in the future). Likewise, BACTs are also anticipated to be more stringent, and cleaner burning equipment is anticipated to be available at the time of Project reclamation. As a result, the Project would not create objectionable odors affecting a substantial number of people, and a **less than significant** odor impact would occur during Project reclamation.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

4.4.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for air quality is the geographic scope encompassed by SSAB. Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of O_3 (8-hour) and PM_{10}.

Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali (Mexico) substantially contribute to the non-attainment conditions in the SSAB. Cumulative projects within the SSAB include any existing, recently approved, proposed, and reasonably foreseeable development envisioned by the Imperial County General Plan. A list of large scale proposed, approved and reasonably foreseeable renewable energy projects is provided in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, of this Draft EIR.

A. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Violate Air Quality Standard/Cause Air Quality Violation

Impact 4.4.4 The proposed Project would generate criteria pollutant emissions during construction. However, the short-term construction emissions exceedances of ICAPCD thresholds would be mitigated with implementation of mitigation measures. Operational emissions would not exceed ICAPCD thresholds but would still incorporate Applicant-proposed measures to reduce dust. Therefore, the proposed Project would result in a **less than cumulatively considerable impact** with regard to violating an air quality standard.

Construction

The projects listed in Table 3.0-1 are large scale renewable energy projects. As such, the majority of air emissions from these projects would be generated during construction with drastically reduced emissions occurring during operations and maintenance.

The construction phase of the proposed Project may contribute to a net increase in criteria pollutants PM_{10}. As noted above, the Imperial Valley is classified as non-attainment for federal and state PM_{10} standards. Thus, the Project's contribution to existing criteria pollutants could be cumulatively considerable without mitigation. However, as described under Impact 4.4.1 above, implementation of mitigation measures MM 4.4.1a, MM 4.4.1b and MM 4.4.1c would reduce construction-phase PM_{10} emissions to less than significant levels, resulting in a **less than cumulatively considerable contribution** to existing criteria pollutants. In addition, all other cumulative projects are required to comply with Regulation VIII and would also be assumed to implement mitigation measures to reduce their individual construction air quality emissions. In this way, each individual cumulative project would reduce construction emissions on a project-by-project basis resulting in less than cumulatively considerable contributions to existing criteria pollutants. Because the proposed Project would mitigate air quality emissions associated with construction, and other cumulative projects would also mitigate construction emissions on a project-by-project basis, emissions resulting in a violation of an air quality standard would be reduced to **less than cumulatively considerable**.

Operation

Emissions resulting from operations of the Project for all criteria pollutants would be limited and very low in number (limit operational maintenance, periodic panel washing). Such levels of emissions should not cause localized exceedances or contribute cumulatively to existing exceedances of the State or federal ozone and PM_{10} standards. Further, the Project would implement Applicant-proposed mitigation measures to periodically apply chemical stabilization agents (soil binders) to exposed soil surfaces during operations. Therefore, the proposed Project would result in a **less than cumulatively considerable contribution** to air quality standard violations during operations. Moreover, operation of the proposed Project, in combination with other cumulative projects identified in Table 3.0-1, would result in **less than cumulatively considerable** impacts to air quality standards and air quality violations.

Reclamation

Reclamation activities would increase air pollutant emissions as a result of earth-moving and exhaust from diesel equipment. The dust and exhaust generated would be temporary in nature and are anticipated to be similar to levels generated during construction. However, it is anticipated that regulatory compliance similar to or greater than those required under mitigation measures MM 4.4.1a, MM 4.4.1b and MM 4.4.1c would be required at the time of reclamation. Likewise, BACTs are also anticipated to be more stringent, and cleaner burning equipment is anticipated to be available, at the time of Project reclamation (i.e. 30+ years in the future). In addition, all other cumulative projects with dust and diesel-generated emissions would be required to comply with applicable regulations and BACTs to reduce their individual construction air quality emissions. In this way, each individual cumulative project would reduce reclamation emissions on a project-by-project basis resulting in a **less than cumulatively considerable contribution** to identified criteria pollutants. Because the proposed Project and other cumulative projects would reduce reclamation emissions on a project-by-project basis, emissions resulting in a violation of an air quality standard would be reduced to **less than cumulatively considerable**.

Mitigation Measures

Implementation of MM 4.4.1a, MM 4.4.1b and MM 4.4.1c would reduce construction PM_{10} emissions to less than significant levels on a project-specific basis. Likewise, although ICAPCD thresholds would likely not be exceeded during operations, applicant-proposed mitigation measures are identified to further reduce operational emissions of PM_{10}.

Significance After Mitigation

Following implementation of the recommended and required mitigation measures, PM_{10} emissions would be reduced to less than significant. Therefore, Project emissions would not cumulatively contribute to conflicts or obstruction of an air quality plan. Impacts would be l**ess than cumulatively considerable**.

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