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5.7 Air Quality

The section presents the air quality impact assessment related to the Darden Clean Energy Project (Project). This section relies on information from the Air Quality and Greenhouse Gas Emissions Study prepared for the Project (Rincon 2023; Appendix N). Section 5.7.1 describes the existing air quality setting, including local air quality and sensitive receptors. Section 5.7.2 provides an overview of the regulatory setting related to air quality. Section 5.7.3 identifies potential impacts that may result from Project construction and operation (including maintenance), as well as mitigation measures that should be considered during Project construction and operation. Section 5.7.4 discusses cumulative impacts. Section 5.7.5 presents laws, ordinances, regulations, and standards (LORS) applicable to noise. Section 5.7.6 identifies regulatory agency contacts. Section 5.7.7 describes permits required for the Project related to air quality. Section 5.7.8 provides references for this section.

5.7.1 Environmental Setting

The United States Environmental Protection Agency (USEPA) has identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare standards. The Project site is located in the unincorporated area of western Fresno County near the community of Cantua Creek, which is part of the San Joaquin Valley Air Basin (SJVAB). Criteria pollutants that are a concern in the SJVAB are described below.

Criteria Pollutants

Ozone

Ozone is a highly oxidative unstable gas produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)/volatile organic compounds (VOC).[1] ROG is composed of non-methane hydrocarbons (with specific exclusions), and NO_X is composed of different chemical combinations of nitrogen and oxygen, mainly nitric oxide and nitrogen dioxide (NO_2). NO_X is formed during the combustion of fuels, while ROG is formed during the combustion and evaporation of organic solvents. As a highly reactive molecule, ozone readily combines with many different atmosphere components. Consequently, high ozone levels tend to exist only while high ROG and NO_X levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant. In addition, because ozone requires sunlight to form, it mainly occurs in concentrations considered serious between April and October. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors. Depending on the level of exposure, ozone can cause coughing and a sore or scratchy throat; make it more difficult to breathe deeply and vigorously and cause pain when taking a deep breath; inflame and damage the airways; make the lungs more susceptible to infection; and aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.

[1] The California Air Resources Board defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," (40 Code of Federal Regulations 51.100) with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this document.

Nitrogen Dioxide

NO_2 is a by-product of fuel combustion. The primary sources are motor vehicles and industrial boilers, and furnaces. The principal form of NO_X produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2, commonly called NO_x. NO_2 is a reactive, oxidizing gas and an acute irritant capable of damaging cell linings in the respiratory tract. Breathing air with a high concentration of NO_2 can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases leading to respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma and children and the elderly are generally at greater risk for the health effects of NO_2. NO_2 absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of ozone/smog and acid rain.

Sulfur Dioxide

Sulfur dioxide (SO_2) is included in a group of highly reactive gases known as “oxides of sulfur.” The largest sources of SO_2 emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore and burning fuels with a high sulfur content by locomotives, large ships, and off-road equipment. Short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2.

Carbon Monoxide

Carbon monoxide (CO) is a localized pollutant found in high concentrations only near its source. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic's incomplete combustion of petroleum fuels. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of CO include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces during the winter. When CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability to get oxygenated blood to their hearts in situations where they need more oxygen than usual. As a result, they are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain, also known as angina.

Particulate Matter

Particulates less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$) are comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $PM_{2.5}$ are emitted into the atmosphere as by-products of fuel combustion and wind erosion of soil and unpaved roads. The atmosphere, through chemical reactions, can form particulate matter. The characteristics, sources, and potential health effects of PM_{10} and $PM_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles. In contrast, $PM_{2.5}$ is generally associated with combustion processes and formation in the atmosphere as a secondary pollutant through chemical reactions. PM_{10} can cause increased respiratory disease, lung damage, cancer, premature death, reduced visibility, and surface soiling. For $PM_{2.5}$, short-term

exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases.

Lead

Lead (Pb) is a metal found naturally in the environment, as well as in manufacturing products. The major sources of Pb emissions historically have been mobile and industrial. However, due to the USEPA's regulatory efforts to remove lead from gasoline, atmospheric Pb concentrations have declined substantially over the past several decades. The most dramatic reductions in Pb emissions occurred before 1990 due to the removal of Pb from gasoline sold for most highway vehicles. Pb emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least partly due to national emissions standards for hazardous air pollutants. As a result of phasing out leaded gasoline, metal processing is currently the primary source of Pb emissions. The highest Pb level in the air is generally found near Pb smelters. Other stationary sources include waste incinerators, utilities, and Pb-acid battery manufacturers. Pb can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and cardiovascular system depending on exposure. Pb exposure also affects the oxygen-carrying capacity of the blood. The Pb effects most likely encountered in current populations are neurological in children. Infants and young children are susceptible to Pb exposures, contributing to behavioral problems, learning deficits, and lowered intelligence quotient.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are a diverse group of airborne substances that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about 1/70th the diameter of a human hair) and thus is a subset of $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include asthma, respiratory symptoms, and decreased lung function. The Fresno County Department of Public Health has not published health studies specific to the Project site and vicinity related to the health effects of TACs.

Dust-related Concerns

Valley Fever

Valley Fever or coccidioidomycosis is caused locally by the microscopic fungus *Coccidioides immitis (C. immitis)*. The *Coccidioides* fungus resides in the soil in southwestern United States, northern Mexico, and parts of Central and South America. During drought years, the number of organisms competing with *C. immitis* decreases, and *the C. immitis* remains alive but dormant. When rain finally occurs, the fungal spores germinate and multiply more than usual because of fewer other competing organisms. Later, the soil dries out in the summer and fall, and the fungi can become airborne and potentially infectious. Infection occurs when the spores of the fungus become airborne and are inhaled. The fungal spores become airborne when contaminated soil is disturbed by human activities, such as construction and agricultural activities, and natural phenomena, such as windstorms, dust storms, and earthquakes. About 60 percent of infected persons have no symptoms. The remainder develop flu-like symptoms that can last for a month and tiredness that can sometimes last for longer than a few weeks. Without proper treatment, Valley Fever can lead to severe pneumonia, meningitis, and even death. Symptoms may appear between one to four weeks after exposure. Most cases of Valley Fever (over 65 percent) are diagnosed in people living in the Central Valley and Central Coast regions.

5.7.1.1 Background Air Quality

Ambient Air Quality Standards

The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) establish ambient air quality standards and establish regulatory authorities designed to attain those standards. As required by the CAA, the USEPA has identified criteria pollutants and has established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. Under the CCAA, California has adopted the California Ambient Air Quality Standards (CAAQS), which are more stringent than the NAAQS for certain pollutants and averaging periods. Table 5.7-1 presents the current federal and state standards for regulated pollutants and the SJVAB's attainment status for each standard. California has also established CAAQS for sulfates, hydrogen sulfide, and vinyl chloride.

As required by the federal CAA and the CCAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the standards have been achieved. In some cases, an area's status is unable to be determined, in which case the area is designated "unclassified". The air quality in an attainment area meets or is better than the NAAQS or CAAQS. A non-attainment area has air quality that is worse than the NAAQS or CAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. As shown in Table 5.7-1, the SJVAB currently is classified as nonattainment for the one-hour state ozone standard as well as for the federal and state eight-hour ozone standards. The SJVAB is also designated as nonattainment for the federal and state annual arithmetic mean and federal 24-hour $PM_{2.5}$ standards. Additionally, the SJVAB is classified as nonattainment for the state 24-hour and annual arithmetic mean PM_{10} standards. The SJVAB is unclassified or classified as attainment for all other pollutant standards.

Table 5.7-1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	State Standard Concentration	State Standard SJVAB Attainment Status	National Standard Concentration	National Standard SJVAB Attainment Status
Ozone	8-Hour 1-Hour	0.070 ppm 0.090 ppm	Nonattainment/ Severe Nonattainment	0.070 ppm –	Nonattainment/ Extreme[1]
Carbon Monoxide (CO)	1-Hour 8-Hour	9.0 ppm 20 ppm	Attainment/ Unclassified	9.0 ppm 35 ppm	Attainment/ Unclassified
Nitrogen Dioxide (NO_2)	1-Hour Annual	0.180 ppm 0.030 ppm	Attainment	0.100 ppm 0.053 ppm	Attainment/ Unclassified
Sulfur Dioxide (SO_2)	1-Hour 3-Hour 24-Hour Annual	0.25 ppm – 0.04 ppm –	Attainment	0.075 ppm 0.5 ppm* 0.14 ppm 0.03 ppm	Attainment/ Unclassified
Respirable Particulate Matter (PM_{10})	24-Hour Annual	50 μg/m^3 20 μg/m^3	Nonattainment	150 μg/m^3 –	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Annual	– 12 μg/m^3	Nonattainment	35 μg/m^3 12 μg/m^3	Nonattainment
Lead (Pb)	30-Day Quarterly	1.5 μg/m^3 –	Attainment	– 1.5 μg/m^3	No Designation/ Classification

ppm = parts per million; ppb = parts per billion; μg/m^3 = micrograms per cubic meter

[1] Though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

Source: Appendix N

Existing Ambient Air Quality

The San Joaquin Valley Air Pollution Control District (SJVAPCD) operates 10 air quality monitoring stations in the SJVAB within Fresno County. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The nearest monitoring station to the Project is the Tranquility-32650 West Adams Avenue monitoring station, located at 32650 West Adams Avenue in Fresno, approximately 13 miles north of the Project site. This monitoring station measures only ozone and $PM_{2.5}$. For PM_{10} and NO_2; therefore, additional data from the Fresno-Drummond Street monitoring station was used, which is located at 4706 East Drummond Street in Fresno, approximately 38 miles northeast of the Project site. In addition, data from the Fresno-Garland monitoring station, approximately 30 miles northeast of the Project site, is provided. Because monitoring is not generally conducted for pollutants for which the SJVAB is in attainment, there is no recent monitoring data available for CO or SO_2.

Table 5.7-2 indicates the number of days that each of the federal and State standards has been exceeded at monitoring stations near the Project site in each of the last three years for which data is available. The federal and State 8-hour ozone standards were exceeded in 2020 and 2021 at the Tranquility monitoring station. The federal and State 8-hour ozone standards were exceeded at the Fresno-Drummond and Fresno-Garland monitoring stations. Additionally, the PM_{10} State standards were exceeded all three years at all three monitoring stations. The federal PM_{10} standards were exceeded in 2020 at all three monitoring stations, and 2021 at the Fresno-Garland monitoring stations.

The $PM_{2.5}$ federal standards were exceeded in 2020 and 2021 at the Tranquility monitoring station at in 2020, 2021, and 2022 at the Fresno-Garland monitoring station. No other federal or state standards were exceeded at this monitoring station.

Table 5.7-2 Ambient Air Quality at Monitoring Stations in Fresno County

Pollutant	2020	2021	2022
Tranquility 32650 West Adams Avenue Monitoring Station			
Ozone			
8 Hour Ozone (ppm), 8-Hr Maximum	0.079	0.080	0.066
Number of Days of State exceedances (>0.070)	3	6	0
Number of days of Federal exceedances (>0.070)	3	5	0
Ozone (ppm), Worst Hour	0.087	0.088	0.074
Number of days above State standard (>0.09 ppm)	0	0	0
Respirable Particulate Matter, PM_{10}			
Particulate Matter 10 microns, μg/m^3, Worst 24 Hours	--	--	--
Number of days above State standard (>50 μg/m^3)	--	--	--
Number of days above Federal standard (>150 μg/m^3)	--	--	--
Fine Particulate Matter, $PM_{2.5}$			
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours	146.2	65.3	33.1
Number of days above Federal standard (>35 μg/m^3)	21	7	0
Nitrogen Dioxide, NO_2			
Nitrogen Dioxide (ppb), Worst Hour	66.8	64.5	58.3
Number of days above State standard (>180 ppb)	0	0	0
Number of days above Federal standard (>100 ppb)	0	0	0
Fresno-Drummond Street Monitoring Station			
Ozone			
8 Hour Ozone (ppm), 8-Hr Maximum	0.091	0.099	0.089
Number of Days of State exceedances (>0.070)	27	41	8
Number of days of Federal exceedances (>0.070)	27	39	8
Ozone (ppm), Worst Hour	0.123	0.125	0.111
Number of days above State standard (>0.09 ppm)	11	9	3
Respirable Particulate Matter, PM_{10}			
Particulate Matter 10 microns, μg/m^3, Worst 24 Hours	350.4	151.8	73.4
Number of days above State standard (>50 μg/m^3)	25	20	133
Number of days above Federal standard (>150 μg/m^3)	1	0	0
Fine Particulate Matter, $PM_{2.5}$[1]			
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours	--	--	--
Number of days above Federal standard (>35 μg/m^3)	--	--	--

Pollutant	2020	2021	2022
Nitrogen Dioxide, NO_2			
Nitrogen Dioxide (ppb), Worst Hour	66.8	64.5	58.3
Number of days above State standard (>180 ppb)	0	0	0
Number of days above Federal standard (>100 ppb)	0	0	0
Fresno-Garland Monitoring Station			
Ozone			
8 Hour Ozone (ppm), 8-Hr Maximum	0.099	0.093	0.083
Number of Days of State exceedances (>0.070)	24	22	10
Number of days of Federal exceedances (>0.070)	24	18	10
Ozone (ppm), Worst Hour	0.119	0.112	0.096
Number of days above State standard (>0.09 ppm)	10	6	2
Respirable Particulate Matter, PM_{10}			
Particulate Matter 10 microns, μg/m^3, Worst 24 Hours	296.4	281.0	116.1
Number of days above State standard (>50 μg/m^3)	99	91	73
Number of days above Federal standard (>150 μg/m^3)	14	1	0
Fine Particulate Matter, $PM_{2.5}$			
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours	163.2	99.9	53.3
Number of days above Federal standard (>35 μg/m^3)	62	58	61
Nitrogen Dioxide, NO_2[3]			
Nitrogen Dioxide (ppb), Worst Hour	47.5	56.3	54.7
Number of days above State standard (>180 ppb)	0	0	0
Number of days above Federal standard (>100 ppb)	0	0	0

μg/m³ = micrograms per cubic meter; ppb = parts per billion

[1] Air quality data for $PM_{2.5}$ is unavailable from the Fresno-Drummond Monitoring Station

Source: Appendix N

5.7.1.2 Climate and Meteorology

The overall climate in the SJVAB is warm and semi-arid. The San Joaquin Valley is in a Mediterranean climate zone. Mediterranean climate zones occur on the west coast of continents at 30 to 40 degrees latitude and are influenced by a subtropical high-pressure area most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in the winter. There is only one wet season during the year and 90 percent of the precipitation falls during October through April. Snow in the San Joaquin Valley is infrequent and thunderstorms seldom occur. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees Fahrenheit (°F) in the San Joaquin Valley. The SJVAB's topography has a dominating effect on wind patterns. Winds tend to blow somewhat parallel to the valley and mountain range orientation. In spring and early summer, thermal low-pressure systems develop over the interior basins east of the Sierra Nevada mountain range, and the Pacific High (a high-pressure system that develops over the central Pacific Ocean near the Hawaiian Islands) moves northward. These meteorological

developments and the topography produce the high incidence of relatively strong northwesterly winds in the spring and early summer.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the San Joaquin Valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet). Winter-time high-pressure events can often last many weeks with surface temperatures lowering to 30°F. During these events, fog can be present, and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet. This meteorological data is representative of the Project site and is utilized in air quality modeling for the Project (Appendix N).

5.7.2 Regulatory Setting

A review of existing relevant LORS was conducted to understand the regulatory context of air quality surrounding the Project. These are detailed in Section 5.7.5.

5.7.3 Impact Analysis

The following subsections discuss the potential direct and indirect impacts related to air quality from construction and operation and maintenance (O&M) of the Project.

5.7.3.1 Methodology

This section presents the methodology used for the analysis of construction, operational, and decommissioning emissions for the Project. Criteria pollutant and GHG emissions for Project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.19. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E. The input data and construction and operation emission estimates for the Project are discussed below and provided in Appendix N. Emissions calculations made outside CalEEMod, such as determination of emissions for helicopter usage, utility task vehicles (UTV) usage, determination of sulfur hexafluoride (SF_6) consumption, and the compiled emissions profiles are included in Appendix N. CalEEMod output files for the Project are included in Appendix N. The estimated emissions were then compared to applicable significance criteria.

Construction Emissions

Construction emissions of criteria air pollutants include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors.

An 18-month construction scenario and a 36-month construction scenario were modeled. Emissions were analyzed for both scenarios to account for the differences in construction equipment and the duration of construction phasing. Construction of the Project was modeled based on the Applicant-provided construction schedule for each scenario. The analysis accounted for the worst-case construction scenario between component location Options 1 and 2, and the alternate green hydrogen site.

Construction equipment was estimated to operate 8 hours per day and used horsepower information provided by the Applicant and the CalEEMod defaults for load factor. Vendor and haul trips were modeled as exclusively heavy heavy-duty truck trips. The analysis conservatively assumes a one-way distance of 160 miles to account for sourcing materials from California ports within the air basin for the air quality analysis. Soils excavated during construction are assumed to be balanced on-site. This analysis assumes that the Project would comply with all applicable regulatory standards. In particular, the Project would comply with SJVACPD Rule 8021. Rule 8021 control measures for construction, demolition, excavation, extraction, and other earthmoving activities were included in the model with the assumption that watering would occur twice a day and the vehicle speed on unpaved roads on-site would be 15 miles per hour.

Detailed assumptions including schedule and phasing for each construction scenario is included in Appendix N. Table 5.7-3 below includes the anticipated construction phases and dates for each of the construction scenarios.

Table 5.7-3 Construction Schedule

	18-Month Scenario			36-Month Scenario		
Phase	**Start**	**End**	**Days**	**Start**	**End**	**Days**
Phase 1: Site Preparation	12/31/2025	4/30/2026	90	12/31/2025	7/31/2026	140
Phase 2: PV Panel System	2/28/2026	6/28/2027	320	5/31/2026	6/30/2028	500
Phase 3: Inverters, Transformers, Substation, and Electrical	5/28/2026	3/28/2027	200	5/30/2027	5/30/2028	240
Phase 4: Gen-Tie	1/30/2026	6/30/2026	100	11/30/2027	5/30/2028	120
Phase 5: BESS Facility	10/28/2026	4/28/2027	120	1/30/2028	9/30/2028	160
Phase 6: Green Hydrogen Facility	9/28/2026	4/28/2027	140	2/29/2028	12/29/2028	200
Phase 7: Utility Switchyard	2/28/2026	11/28/2026	180	5/31/2026	3/31/2027	200

Operational Emissions

In CalEEMod, operational sources of criteria pollutant emissions include area, energy, and mobile sources. The first year of operation was assumed to be 2027 based on the potential for an 18-month construction schedule. The facilities were modeled as refrigerated warehouses of 3,946,800 square feet to account for the energy requirements for maintaining a stable temperature for optimum battery effectiveness, although this energy consumption is anticipated to be offset by the power generated at the site. The 10,400 square foot O&M building proposed for the solar facility was modeled as an office. The additional O&M building that would be required if the green hydrogen facility is built at the alternative site located west of I-5 was modeled as a separate 8,000 square

foot office building. It is anticipated that the majority of the facilities would be solar powered, using the power generated at the facility itself, except for some of the power needed for the green hydrogen facility.

CalEEMod defaults were used to estimate emissions from annual architectural coating and consumer products use for the O&M buildings. In addition, the green hydrogen facility would have twelve approximately 670.5-horse power emergency back-up generators. Diesel or gasoline-fueled on-site equipment, workers, worker trips, and haul trips associated with each of the operational activities are included in Appendix N. Operational activities are anticipated to occur 10 hours per day.

CEC Appendix B Item (E) GHG requires "The emission rates of criteria pollutants and greenhouse gases (CO_2, CH_4, N_2O, and SF_6) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources." The project does not include stacks, cooling towers, fuels and materials handling processes or delivery and storage systems. The on-site emissions sources are from the on-site use of off-road construction equipment, helicopters, UTVs, fugitive emissions of SF_6 from circuit breakers, as well as building operations and employee vehicle trips. Emissions factors for helicopters, UTVs and SF_6 consumption are included in Appendix N. Emission factors for off-road construction equipment, building emissions, and employee vehicle commutes are imbedded in the CalEEMod model.

Ambient Air Quality Analysis

A localized analysis following the SJVAPCD's modeling guidance documents was conducted to assess the potential impacts of construction and operational activities. Daily and annual emissions burdens were estimated for the duration of the construction period based on provided construction schedule, number of pieces of construction equipment, horsepower rating of construction equipment, utilization of construction equipment, engine exhaust certifications, and construction activities as modeled. Refined air dispersion modeling of the daily emissions was conducted using AERMOD to show the project's maximum localized impacts from pollutants where mitigation does not reduce impacts to below the SJVAPCD's screening level thresholds for the anticipated construction scenarios and for Project operation. Emissions in AERMOD were set to 1 gram per second (g/sec) and emissions were scaled in a stand-alone spreadsheet to account for actual project emissions.

Only the maximum localized pollutant levels related to on-site construction and operational activities were estimated and verified through AERMOD modeling. Emissions from mobile construction equipment were modeled as line volume or volume sources based on the size of the area modeled.

To account for the impact of localized pollutants in combination with pollution from other sources, the modeled results were added to the background level as recommended by USEPA and SJVAPCD. Unique background levels are based on the specific details of the applicable standards. The resulting pollutant concentrations (modeled result and background) were then compared to the applicable NAAQS and CAAQS. Dispersion modeling parameters and the receptor grid were consistent with those used for the health risk assessment.

5.7.3.2 Impact Evaluation Criteria

The potential for impacts to air quality and their uses were evaluated using the criteria described in the California Environmental Quality Act (CEQA) Environmental Checklist (Appendix G of the CEQA Guidelines). For air quality, the CEQA Environmental Checklist asks, would the Project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- 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?
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Annual Criteria Air Pollutant Emissions

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to determine whether a project would have a significant impact on air quality. The SJVAPCD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and long-term operational-related pollutant emissions. These thresholds are shown in Table 5.7-4.

Table 5.7-4 SJVAPCD Air Quality Significance Thresholds

Pollutant	Operation Thresholds (Tons per Year)	Construction Thresholds (Tons Per Year)
NO_X	10	10
ROG[1]	10	10
PM_{10}	15	15
$PM_{2.5}$	15	15
SO_X	27	27
CO	100	100

NO_X = oxides of nitrogen; ROG = reactive organic gases; PM_{10} = coarse particles of a diameter of 10 microns or less; PM2.5 = fine particles of a diameter less than 2.5 microns; SO_X = sulfur oxide; CO = carbon monoxide

[1] ROG are formed during combustion and evaporation of organic solvents. ROG are also referred to as volatile organic compounds.
Source: Appendix N

Daily Criteria Air Pollutants Emissions

In addition to the annual SJVAPCD thresholds outlined above, SJVAPCD has published the Ambient *Air Quality Analysis Project Daily Emissions Assessment* guidance, which is summarized in Section 8.4.2, *Ambient Air Quality Screening Tools*, of the SJVAPCD's *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), adopted in March 2015.

SJVAPCD recommends comparing project attributes with the following screening criteria as a first step to evaluating whether the project would result in the generation of CO concentrations that could substantially contribute to an exceedance of the significance thresholds. The project could result in a significant impact to localized CO concentrations if:

1. A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or

2. A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets at more one or more intersections in the project vicinity.

The GAMAQI provides a screening threshold of 100 pounds per day of any of the following pollutants: NO_X, ROG, PM_{10}, $PM_{2.5}$, SO_X, and CO. The screening threshold was used to evaluate localized construction activities and operational activities separately. Per SJVAPCD's GAMAQI and Rule 9510 – Indirect Source Review, when assessing the significance of project-related impacts on local air quality, the impacts may be significant if on-site emissions from construction or operational activities exceed the 100 pounds per day screening level after implementation of all enforceable mitigation measures. The Project would be subject to Rule 9510 because it would develop more than 9,000 square feet, which is the ambient air quality analysis screening level threshold for unconventional land use developments not identified as residential, commercial, or industrial (e.g., a solar facility).

If the screening criteria is exceeded for any pollutant, an ambient air quality assessment (AAQA) can be conducted following District Rule 2201 *AAQA Modeling*. An AAQA uses air dispersion modeling to determine if emission increases from a project's construction or operational activities would cause or contribute to a violation of the ambient air quality standards. If modeled concentrations combined with background concentrations would result in an exceedance of a NAAQS or CAAQS, then SJVAPCD Rule 2201 requires that the maximum modeled concentration of each pollutant be compared to its corresponding Significant Impact Level (SIL). If modeled concentrations do not exceed the Significant Impact Level (SIL), then the project would not result in a violation of ambient air quality standards and mitigation for that pollutant is not required. The SIL are identified in Table 5.7-5.

Table 5.7-5 Ambient Air Quality Assessment Localized Thresholds (μg/m³)

	NAAQS				CAAQS				SIL			
Averaging Time	1hr	8hr	24hr	Annual	1hr	8hr	24hr	Annual	1hr	8hr	24hr	Annual
NO_2	188	-	-	100	339	-	-	57	7.5	-	-	1
CO	40,000	10,000	-	-	23,000	10,000	-	-	2,000	500	-	-
SO_2	196	-	-	-	655	-	105	-	7.8	-	-	-
PM_{10} Exhaust	-	-	-	-	-	-	-	-	-	-	5	1
PM_{10} Fugitive	-	-	-	-	-	-	-	-	-	-	10.4	2.1

Notes: - = Not applicable; NO_X = oxides of nitrogen; CO = carbon monoxide; PM_{10} = coarse particles of a diameter of 10 microns or less; SIL = Significant Impact Level

Source: Appendix N

Impact AQ-1

Threshold:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Overall Project

Less Than Significant Impact with Mitigation. The SJVAPCD has prepared several air quality attainment plans to achieve ozone and particulate matter standards, the most recent of which include:

- *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard*
- *2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 PM_{10} Maintenance Plan and Request for Re-designation*
- *2012 $PM_{2.5}$ Plan*
- *2015 Plan for the 1997 $PM_{2.5}$ Standard*

The SJVAB is in attainment for CO, SO_2, and Pb, and there are no attainment plans for those pollutants.

Per Section 7.12 of the *GAMAQI*, the SJVAPCD has determined that projects with emissions above the thresholds of significance for criteria pollutants would conflict with/obstruct implementation of the SJVAPCD's air quality plans. Accordingly, the analysis of the Project's consistency with applicable air quality plans is based on an evaluation of the Project's potential to exceed SJVAPCD thresholds of significance for criteria pollutants, which is discussed in detail in Impact AQ-2. As discussed therein, Project construction and decommissioning have the potential to conflict with existing air quality plans due to an exceedance of NO_x, PM_{10}, and $PM_{2.5}$ emissions above SJVAPCD thresholds. Operational activities would not exceed SJVAPCD thresholds and therefore would not conflict with implementation of existing air quality plans. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce NO_x, PM_{10}, and $PM_{2.5}$ emissions from Project construction and decommissioning and therefore would ensure the Project would have a less than significant impacts related to conflicts with applicable air quality management plans.

Mitigation Measures

AQ-1 Voluntary Emission Reduction Agreement

The Applicant shall enter into a voluntary emissions reduction agreement (VERA) with the SJVAPCD to offset the NO_X emissions above the 10 tons per year threshold. The VERA is a mechanism for the Applicant to fund programs to reduce NO_X emissions in the SJVAB. The Applicant shall coordinate with SJVAPCD to ensure VERA funds are used for programs near the Project site to the extent feasible. The VERA shall be submitted and approved by the SJVAPCD prior to beginning construction activities.

If available and as feasible, electric equipment could be incorporated into the off-road equipment fleet to reduce NO_X emissions that must be offset with the required VERA. In order to reduce the NO_X emissions that must be offset with the required VERA, the Applicant shall provide commitment to available electric equipment to the CEC and the SJVAPCD prior to the issuance of a permit to construct and quantify the emissions reductions from the electric equipment. Documentation of the

equipment operating on-site, shall be maintained on-site at all times during construction and decommissioning activities.

AQ-2 Fugitive Dust Control Plan

Prior to construction and decommissioning activities, the Applicant shall prepare a Fugitive Dust Control Plan. At a minimum, the Fugitive Dust Control Plan shall include the following: Control fugitive dust on-site during construction and decommissioning with a minimum of one watering across the site daily with the use of chemical stabilizers during construction activities. Additional water/chemical treatments shall occur as needed based on daily site conditions and ground disturbance activities. Roads and other areas that experience high traffic volumes may be stabilized with water and/or chemicals up to four times a day. The method of monitoring site conditions for additional dust control needs shall be detailed in the plan. Chemical stabilizers shall be used for long-term fugitive dust control on-site. Specific stabilizers proposed for use and their location shall be included in the fugitive dust control plan for the project and records of watering and stabilizer application shall be kept. PM_{10} reduction quantifications from this measure are to be applied prior to the finalization of a voluntary emissions reduction agreement for the Project.

Impact AQ-2

Threshold:	Would the project 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?

Construction Impacts

Annual Criteria Air Pollutant Emissions

Construction of the Project would require approximately 18 to 36 months of construction activity depending on the final construction scenario chosen. Construction would involve several overlapping phases. Construction of the Project would generate air pollutant emissions from entrained dust, off-road equipment use, vehicle emissions, and architectural coatings. Off-site emissions would be generated by construction worker daily commute trips and heavy-duty diesel haul and vendor truck trips. Construction emissions would vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Table 5.7-6 shows the estimated annual construction emissions by construction phase and by year.

Table 5.7-6 Annual Construction Emissions

	Emissions (tons per year by phase)					
Phase	**ROG**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
36-Month Construction Scenario – By Phase						
Phase 1: Site Preparation	0.62	5.52	29.93	0.06	3.60	1.81
Phase 2: PV Panel System	2.69	**32.33**	**108.22**	0.19	5.35	2.33
Phase 3: Inverters, Transformers, Substation, and Electrical	0.67	8.87	29.85	0.21	0.78	0.44
Phase 4: Gen-Tie	0.86	9.22	8.73	0.53	1.09	0.91

Phase		Emissions (tons per year by phase) ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 5: BESS		0.21	5.05	6.82	0.04	0.75	0.25
Phase 6: Green Hydrogen Facility		1.61	**20.07**	81.29	0.16	5.03	2.31
Phase 7: Utility Switchyard		0.54	6.57	25.36	0.05	1.12	0.54
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	**Yes**	**Yes**	No	No	No
36-Month Construction Scenario – By Year							
2025	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	0.02	0.05	0.30	0.02	0.04	0.03
2026	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	2.23	24.77	93.90	0.19	6.73	3.19
	Utility Switchyard (Phase 7)	0.54	6.57	25.36	0.05	1.12	0.54
	Total 2026	2.77	**31.34**	**119.25**	0.24	7.85	3.74
2027	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	3.38	41.36	138.11	0.25	6.19	2.65
	Utility Switchyard(Phase 7)	0.16	1.94	7.55	0.02	0.33	0.17
	Total 2027	3.54	**43.30**	**145.65**	0.28	6.52	2.83
2028	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	2.38	27.07	62.56	0.80	3.58	2.12
	BESS (Phase 5)	0.21	5.05	6.82	0.04	0.75	0.25
	Green Hydrogen Facility (Phase 6)	1.61	20.07	81.29	0.16	5.03	2.31
	Total 2028	4.21	**52.19**	**150.67**	0.99	9.36	4.68
Maximum Annual		4.21	**52.19**	**150.67**	0.99	9.36	4.68
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	**Yes**	**Yes**	No	No	No
18-Month Construction Scenario – By Phase							
Phase 1: Site Preparation		1.82	**19.02**	31.36	0.06	5.39	2.92
Phase 2: PV Panel System		2.95	**32.25**	**131.90**	0.20	6.47	3.01
Phase 3: Inverters, Transformers, Substation, and Electrical		1.06	**12.84**	38.05	0.24	1.21	0.62
Phase 4: Gen-Tie		1.14	12.05	11.21	0.71	1.42	1.21
Phase 5: BESS		0.22	4.39	10.02	0.02	0.46	0.15
Phase 6: Green Hydrogen Facility		0.68	8.92	33.42	0.08	3.05	1.43
Phase 7: Utility Switchyard		0.82	9.76	31.77	0.07	2.10	1.05
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	**Yes**	**Yes**	No	No	No
18-Month Construction Scenario – By Year							
2025	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	0.03	0.17	0.42	0.01	0.07	0.04
2026	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	6.97	76.16	212.52	1.21	14.49	7.76
	BESS (Phase 5)	0.15	2.82	6.37	0.02	0.30	0.11

Phase		Emissions (tons per year by phase)					
		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
	Green Hydrogen Facility (Phase 6)	0.66	8.62	32.30	0.08	2.91	1.34
	Total 2026	7.78	**87.60**	**251.20**	1.31	**17.70**	9.22
2027	Solar Facility, Step-Up Substation, and Gen-Tie (Phases 1 to 4)	1.59	17.73	70.52	0.14	3.23	1.48
	BESS (Phase 5)	0.22	4.39	10.02	0.02	0.46	0.15
	Green Hydrogen Facility (Phase 6)	0.68	8.92	33.42	0.08	3.05	1.43
	Utility Switchyard (Phase 7)	0.82	9.76	31.77	0.07	2.10	1.05
	Total 2027	3.31	**40.80**	**145.74**	0.31	8.84	4.11
Maximum Annual		7.78	**87.60**	**251.20**	1.31	**17.70**	9.22
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	**Yes**	**Yes**	No	**Yes**	No

NO_X= Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{1.5}$ = Particulate Matter with a diameter of 2.5 microns or less

Notes: Rounded values shown; columns may not total exactly. See Appendix N for calculations. Bold numbers indicate an exceedance of applicable thresholds.

The Project would comply with SJVAPCD Rule 9510, Indirect Source Review, which requires large development projects to reduce exhaust emissions from construction equipment by 20 percent for NO_X and 45 percent for PM_{10} compared to the statewide average, or demonstrate use of a clean fleet (such US EPA Tier 4 equipment). Because the Project would use all US EPA Tier 4 equipment, the project is consistent with Rule 9510, Indirect Source Review. Compliance with SJVAPCD Rule 9510 does not result in additional emissions reductions quantification for this environmental analysis because the Project would use all US EPA Tier 4 equipment, which is accounted for in this air quality modeling. Further, in addition to the Rule 9510 requirement, the Project would comply with dust mitigation per Rule 8021 which would reduce dust emissions. Requirements of Rule 8021 are detailed in Section 5.7.5.3; the Project's fugitive dust control plan would comply with all applicable measures required by SJVAPCD in Rule 8021.

Daily Criteria Air Pollutant Emissions

The SJVAB is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The current air quality in the SJVAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., ROG and NO_X for ozone) potentially contribute to poor air quality. Construction activities would exceed the SJVAPCD's recommended 100 pounds per day screening threshold during construction, as shown in Table 5.7-7 for NO_X and CO for the 36-Month construction scenario and for NO_X, CO, PM_{10}, and $PM_{2.5}$ for the 18-Month construction scenario.

Table 5.7-7 Maximum Daily Construction Emissions

	Emissions (lbs/day) by year					
	ROG	NO_X	CO	SO_X	PM_{10}[1]	$PM_{2.5}$[1]
36-Month Construction Schedule						
2025	9	76	**427**	1	51	26
2026	37	**379**	**1,570**	3	98	48
2027	30	**364**	**1,244**	2	48	22
2028	49	**574**	**2,139**	4	89	41
Maximum Daily	49	**574**	**2,139**	4	89	41
Screening Level	100	100	100	100	100	100
Exceeds Screening Level?	No	**Yes**	**Yes**	No	No	No
18-Month Construction Schedule						
2025	38	**389**	**637**	1	**117**	64
2026	79	**857**	**3,175**	5	**201**	**104**
2027	60	**708**	**2,817**	5	**145**	68
Maximum Daily	79	**857**	**3,175**	5	**201**	**104**
Screening Level	100	100	100	100	100	100
Exceeds Screening Level?	No	**Yes**	**Yes**	No	**Yes**	**Yes**

Lbs/day = pounds per day; NO_X= Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{1.5}$ = Particulate Matter with a diameter of 2.5 microns or less

[1]Includes compliance with Rule 8021 dust control measures, which accounts for watering. Bold numbers indicate an exceedance of applicable thresholds.

Ambient Air Quality Impact Assessment

As shown in Table 5.7-8, unmitigated Project construction would not exceed the SJVAPCD NAAQS or CAAQS ambient concentrations for CO under any construction schedule or Project component Option scenario. While CO impacts exceed regional thresholds, the AAQA demonstrates that Project construction emissions of CO would not exceed the ambient air quality standards.

Table 5.7-8 Maximum Refined Daily Construction Emissions

		($\mu g/m^3$)						
Pollutant	Averaging Period	Background	Project	Project + Background	CAAQS	NAAQS	SIL	Exceed
36-Month Construction Schedule – Option 1 Project Components								
CO	1hr	3,986.7	2,100	6,087	23,000	40,000	2,000	No
	8hr	2,864.0	691	3,555	10,000	10,000	500	No
36 Month Construction Schedule – Option 2 Project Components								
CO	1hr	3,986.7	5,055	9,041	23,000	40,000	2,000	No
	8hr	2,864.0	1,174	4,038	10,000	10,000	500	No
36 Month Construction Schedule – Option 1 Project Components with Alternate Green Hydrogen Facility								
CO	1hr	3,986.7	1,781	5.767	23,000	40,000	2,000	No
	8hr	2,864.0	560	3,424	10,000	10,000	500	No

Pollutant	Averaging Period	Background	Project	Project + Background	CAAQS	NAAQS	SIL	Exceed
			(µg/m³)					
36 -Month Construction Schedule – Option 2 Project Components with Alternate Green Hydrogen Facility								
CO	1hr	3,986.7	4,445	8,431	23,000	40,000	2,000	No
	8hr	2,864.0	978	3,842	10,000	10,000	500	No
18 Month Construction Schedule – Option 1 Project Components								
CO	1hr	3,986.7	7,781	11,768	23,000	40,000	2,000	No
	8hr	2,864.0	1,610	4,474	10,000	10,000	500	No
18 Month Construction Schedule – Option 2 Project Components								
CO	1hr	3,986.7	11,145	15,132	23,000	40,000	2,000	No
	8hr	2,864.0	2,439	5,303	10,000	10,000	500	No
18 Month Construction Schedule – Option 1 Project Components + Alternate Green Hydrogen Facility								
CO	1hr	3,986.7	11,145	15,132	23,000	40,000	2,000	No
	8hr	2,864.0	1,612	4,476	10,000	10,000	500	No
18 Month Construction Schedule – Option 2 Project Components + Alternate Green Hydrogen Facility								
CO	1hr	3,986.7	11,145	15,132	23,000	40,000	2,000	No
	8hr	2,864.0	2,439	5,303	10,000	10,000	500	No

CO = carbon monoxide; µg/m³ = micrograms per cubic meter; hr = hour; CAAQS = California Ambient Air Quality Standards; NAAQS = national ambient air quality standards; SIL = significant impact level

Source: Appendix N

Operational Impacts

Annual and Daily Criteria Air Pollutants

The Project would have up to 40 or more personnel on-site daily depending on the activities that would occur during that day. As a conservative estimate of daily emissions, it was assumed that all activities associated with the operational phase could occur on the same day resulting in 77 personnel accessing the site during a given day. Annual emissions are based on the average days of activity for each operational and maintenance activity. The analysis also accounts for occasional equipment and material delivery. The proposed solar facility would also have one O&M building, and if the green hydrogen facility is built at the alternate green hydrogen site, the Project would include a second O&M building at that location. The green hydrogen component would also include 12 emergency diesel generators that would be used approximately 100 hours per year for testing and maintenance purposes. Estimated annual operational emissions are shown in Table 5.7-9 and daily operational emissions are shown in Table 5.7-10.

Table 5.7-9 Estimated Annual Operational Emissions

Source	Emissions (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Solar Facility	1.25	0.33	2.79	5.08	0.07	0.03
Road and Fence Repair	0.02	0.08	0.11	0.01	0.01	0.01
Road Reconditioning	0.07	0.50	0.70	<0.01	0.06	0.03
Solar Panel Washing	0.05	0.27	0.44	0.01	0.02	0.02
Vegetation and Pest Management	0.2	1.95	3.84	0.01	0.08	0.06
Green Hydrogen Facility Personnel	0.77	0.71	1.90	1.99	0.07	0.02
Total (tons/year)	2.02	1.04	4.69	7.07	0.14	0.04
Threshold	*10*	*10*	*27*	*100*	*15*	*15*
Exceed Threshold?	No	No	No	No	No	No
Alternate Green Hydrogen Facility O&M Building	0.04	0	0	0	0	0
Green Hydrogen Facility Personnel	0.77	0.71	1.90	1.99	0.07	0.02
Solar Facility	1.25	0.33	2.79	5.08	0.07	0.03
Total (tons/year)	2.07	1.04	4.69	7.07	0.14	0.04
Threshold	*10*	*10*	*27*	*100*	*15*	*15*
Exceed Threshold?	No	No	No	No	No	No

NO_X= Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = Particulate Matter with a diameter of 2.5 microns or less; lbs/day = pounds per day

Totals may not add up due to rounding vehicles. See Appendix N for calculations.

Table 5.7-10 Estimated Daily Operational Emissions

Project Components	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Options 1 and 2 Total Daily Operations	15.77	86.06	127.15	0.24	7.90	4.23
SJVAPCD Operational Threshold	*100*	*100*	*100*	*100*	*100*	*100*
Exceed Threshold?	No	No	**Yes**	No	No	No
Alternate Green Hydrogen Total Daily Operations	30.79	86.06	127.15	0.24	7.90	4.23
SJVAPCD Operational Threshold	*100*	*100*	*100*	*100*	*100*	*100*
Exceed Threshold?	No	No	**Yes**	No	No	No

NO_X = Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = Particulate Matter with a diameter of 2.5 microns or less; lbs/day = pounds per day

Totals may not add up due to rounding vehicles. See Appendix N for calculations. Bold numbers indicate an exceedance of applicable thresholds.

Ambient Air Quality Impact Assessment

Operational activities would exceed the SJVAPCD's recommended 100 pounds per day screening threshold for CO as shown in Table 5.7-9. Therefore, an AAQA for CO was conducted for operational activities. As shown in Table 5.7-11, Project operation would not exceed the NAAQS or CAAQS ambient concentrations. Therefore, emissions of CO during Project operation would not contribute substantially to an existing or projected air quality violation.

Table 5.7-11 Maximum Refined Daily Operational Emissions

Pollutant	Averaging Period	Background	Project	Project + Background	CAAQS	NAAQS	SIL	Exceed
		($\mu g/m^3$)						
CO	1hr	3,986.7	53.2	4,039.9	23,000	40,000	NA	No
	8hr	2,864.0	14.9	2,878.9	10,000	10,000	NA	No

CO = carbon monoxide; $\mu g/m^3$ = micrograms per cubic meter; hr = hour; CAAQS = California Ambient Air Quality Standards; NAAQS = national ambient air quality standards; SIL = significant impact level; NA = not applicable

Concentrations determination included in Appendix N.

Solar Facility, Step-Up Substation, and Gen-Tie

Construction

Less Than Significant with Mitigation. As shown in Table 5.7-6, construction of the solar facility in the 36-month construction scenario would result in NO_x and CO emissions above SJVAPCD annual significance thresholds. However, as shown in Table 5.7-8, unmitigated Project construction would not exceed the SJVAPCD NAAQS or CAAQS ambient daily concentrations for CO under any construction schedule or Project component Option scenario. In the 18-month construction scenario, construction of the solar facility would result in NO_x and CO emissions above SJVAPCD annual significance thresholds, and construction of the step-up substation would result in NO_x emissions above SJVAPCD annual significance thresholds. In addition, in the 18-month construction scenario, construction of the solar facility, step-up substation, and gen-tie would contribute to 2026 total PM_{10} emissions that would exceed SJVAPCD annual significance thresholds. These impacts would be reduced to a less than significant level with implementation of Mitigation Measures AQ-1 and AQ-2.

Operation

Less Than Significant Impact. As shown in Table 5.7-9, operation of the solar facility, step-up substation, and gen-tie would not exceed SJVAPCD annual thresholds for any criteria pollutant but would contribute to CO emissions that would exceed SJVAPCD's operational threshold. However, as shown in Table 5.7-11, Project operation would not exceed the NAAQS or CAAQS ambient concentrations of CO. Therefore, this impact would be less than significant.

BESS

Construction

Less Than Significant Impact. As shown in Table 5.7-6, construction emissions from the BESS would not exceed SJVAPCD annual significance thresholds in both the 36-month and 18-month construction scenarios. This impact would be less than significant.

Operation

Less Than Significant Impact. As shown in Table 5.7-9, operation of the BESS would not exceed SJVAPCD annual thresholds for any criteria pollutant but would contribute to CO emissions that would exceed SJVAPCD's operational threshold. However, as shown in Table 5.7-11, Project operation would not exceed the NAAQS or CAAQS ambient concentrations of CO. Therefore, this impact would be less than significant.

Green Hydrogen Facility

Construction

Less Than Significant Impact with Mitigation. As shown in Table 5.7-6, construction of the green hydrogen facility in the 36-month construction scenario would result in NO_x emission above SJVAPCD annual significance thresholds. In addition, in the 36-month construction scenario, construction of the green hydrogen facility would contribute to 2028 total CO emissions that would exceed SJVAPCD annual significance thresholds. In the 18-month construction scenario, the green hydrogen facility would contribute to total 2027 NO_x and CO emissions that would exceed SJVAPCD annual significance thresholds. As shown in Table 5.7-8, unmitigated Project construction would not exceed the SJVAPCD NAAQS or CAAQS ambient concentrations for CO under any construction schedule or Project component Option scenario. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce NO_x emissions associated with the green hydrogen facility to a less than significant level.

Operation

Less Than Significant Impact. As shown in Table 5.7-9, operation of the green hydrogen facility would not exceed SJVAPCD annual thresholds for any criteria pollutant but would contribute to CO emissions that would exceed SJVAPCD's operational threshold. However, as shown in Table 5.7-11, Project operation would not exceed the NAAQS or CAAQS ambient concentrations of CO. Therefore, this impact would be less than significant.

Utility Switchyard

Construction

Less Than Significant Impact with Mitigation. As shown in Table 5.7-6, construction of the utility switchyard in the 36-month construction scenario would contribute to total 2026 NO_x and CO emissions that would exceed SJVAPCD annual significance thresholds. In the 18-month construction scenario, construction of the utility switchyard would contribute to total 2027 NO_x and CO emissions that would exceed SJVAPCD annual significance thresholds. As shown in Table 5.7-8, unmitigated Project construction would not exceed the SJVAPCD NAAQS or CAAQS ambient concentrations for CO under any construction schedule or Project component Option scenario. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce NO_x emissions associated with the utility switchyard to a less than significant level.

Operation

Less Than Significant Impact. Operation and maintenance of the utility switchyard would be performed remotely by PG&E and therefore would result in nominal emissions from infrequent vehicle trips to and from the utility switchyard during operation. No diesel generators or other non-electric equipment would be used that result in emissions of criteria air pollutants. Therefore, this impact would be less than significant.

Decommissioning Impacts

Decommissioning activities at the end of the Project's useful life (anticipated to be 35 years) would completely remove all project components from the site, except for the utility switchyard. At this time, it is not possible to quantitatively evaluate potential air quality impacts that would result from Project

decommissioning since technology and construction practices available at that time would be speculative. Therefore, based on current decommissioning practices and as a reasonable worst-case scenario, this analysis assumes that air quality impacts generated during future decommissioning would be similar to air quality impacts generated during the construction phase of the Project. Accordingly, similar to construction of the Project, decommissioning activities on the Project site could result in exceedances of SJVAPCD thresholds for NO_X, PM_{10}, and $PM_{2.5}$ for an 18-month decommissioning phase similar to construction activities and would result in potentially significant impacts. These impacts would be reduced to a less than significant level with implementation of Mitigation Measures AQ-1 and AQ-2.

Overall Project

Less Than Significant with Mitigation. Construction of the overall Project would result in NO_x, CO, and PM_{10} emissions that would exceed applicable SJVAPCD annual and daily significance thresholds. In addition, as shown in Table 5.7-7, overall Project construction in the 18-month construction scenario would result in daily $PM_{2.5}$ emissions in exceedance of SJVAPCD daily significance thresholds. Operation of the overall Project would not exceed SJVAPCD thresholds for any criteria pollutant but would contribute to CO emissions that would exceed SJVAPCD's operational threshold. It is anticipated decommissioning activities would result in similar emissions as construction; therefore, overall Project decommissioning could result in NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions that would exceed current applicable SJVAPCD significance thresholds. As shown in Table 5.7-8 and Table 5.7-11, overall Project construction and operation would not exceed the NAAQS or CAAQS ambient concentrations of CO and therefore would not result in impacts due to CO emissions. The overall Project's potential impacts related to emissions from construction and decommissioning would be reduced to a less than significant level with implementation of Mitigation Measures AQ-1 and AQ-2

Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2, described in Impact AQ-1.

Significance After Mitigation

Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce NO_X emissions from the 36-month construction schedule and NO_X, PM_{10}, and $PM_{2.5}$ emissions from the 18-Month construction schedule to below significance thresholds. Table 5.7-12 shows mitigated construction emissions. While CO impacts exceed regional thresholds, the Ambient Air Quality Analysis demonstrates that CO impacts would not exceed the ambient air quality standards and, therefore, would not result in significant impacts. As shown in Table 5.7-13, implementation of Mitigation Measures AQ-1 and AQ-2 would reduce daily maximum construction emission impacts to a less than significant level. CO exceedances of daily thresholds are analyzed as part of an Ambient Air Quality Analysis as discussed above, and as shown in Table 5.7-8 unmitigated CO emissions would not exceed ambient air quality standards. Similar to construction activities, decommissioning impacts would be reduced to a less than significant level with the incorporation of Mitigation Measures AQ-1 and AQ-2. Therefore, with the implementation of Mitigation Measure AQ-1 and AQ-2, impacts would be reduced to a less than significant level.

Table 5.7-12 Mitigated Annual Construction Emissions

Phase		Emissions (tons per year by phase) ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
36-Month Construction Scenario							
2025	Total 2025	0.02	0.05	0.30	0.02	0.04	0.03
2026	Total 2026	2.77	31.34	119.25	0.24	7.85	3.74
2027	Total 2027	3.54	43.30	145.65	0.28	6.52	2.83
2028	Total 2028	4.21	52.19	150.67	0.99	9.36	4.68
Maximum Annual		**4.21**	**52.19**	**150.67**	**0.99**	**9.36**	**4.68**
2025 VERA Offset		-	(0.00)	-	-	-	-
2026 VERA Offset		-	(21.39)	-	-	-	-
2027 VERA Offset		-	(33.35	-	-	-	-
2028 VERA Offset		-	(42.24)	-	-	-	-
Total VERA Offsets (total Tons)			(96.98)				
Maximum Annual With Mitigation[1] (VERA annually)			9.95				
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	No	**Yes[2]**	No	No	No
18-Month Construction Scenario							
2025	Total 2025	0.03	0.17	0.42	0.01	0.07	0.04
2026	Total 2026	7.78	87.60	251.20	1.31	17.70	9.22
2027	Total 2027	3.31	40.80	145.74	0.31	8.84	4.11
Maximum Annual		7.78	**87.60**	**251.20**	1.31	**17.70**	9.22
2025 VERA Offset		-	(0.00)	-	-	-	-
2026 VERA Offset		-	(21.39)	-	-	-	-
2027 VERA Offset		-	(33.35	-	-	-	-
Total VERA Offsets (total Tons)			(108.50)			(1.75)	
Maximum Annual With Mitigation[1] (VERA annually)			9.95			14.95	
Threshold		10	10	100	27	15	15
Exceed Threshold?		No	No	**Yes[2]**	No	No	No

NO_X= Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{1.5}$ = Particulate Matter with a diameter of 2.5 microns or less

Notes: Rounded values shown; columns may not total exactly. See Appendix N-2 of Appendix N for calculations.

The mitigated emissions estimates shown in this table are for illustrative purposes. Depending on the ultimate availability of electric construction equipment, as allowed for by Mitigation Measure AQ-1, the final VERA offset amounts may differ from those shown in this table.

[1] VERA offsets would be required for the total project not just the maximum year.

[2] CO exceedances of thresholds are analyzed as part of an Ambient Air Quality Analysis discussed above, and as shown in Table 5.7-8 unmitigated CO emissions would not exceed ambient air quality standards

Table 5.7-13 Maximum Mitigated Daily Construction Emissions

	Emissions (lbs/day) by year					
	ROG	NO_X	CO	SO_X	PM_{10}[1]	$PM_{2.5}$[1]
36-Month Construction Schedule						
2025	9	76	**427**	1	51	26
2026	37	**379**	**1,570**	3	98	48
2027	30	**364**	**1,244**	2	48	22
2028	49	**574**	**2,139**	4	89	41
Maximum Daily	49	**574**	**2,139**	4	89	41
Screening Level	100	100	100	100	100	100
Exceeds Screening Level?	No	**No**	**Yes**[2]	No	No	No
18-Month Construction Schedule						
2025	38	**389**	**637**	1	**117**	64
2026	79	**857**	**3,175**	5	**201**	**104**
2027	60	**708**	**2,817**	5	**145**	68
Maximum Daily	79	**857**	**3,175**	5	**201**	**104**
Max W/ MM AQ-1		77			**120**	
Max W. MM AQ-2					**90**	**82**
Screening Level	100	100	100	100	100	100
Exceeds Screening Level?	No	**No**	**Yes**[2]	No	**No**	**No**

Lbs/day = pounds per day; NO_X= Nitrous Oxides; ROG = Reactive Organic Gases; PM_{10} = Particulate matter with a diameter of 10 microns or less; $PM_{1.5}$ = Particulate Matter with a diameter of 2.5 microns or less

[1]Includes compliance with Rule 8021 dust control measures, which accounts for watering.

[2]CO exceedances of daily thresholds are analyzed as part of an Ambient Air Quality Analysis discussed above, and as shown in Table 5.7-8 unmitigated CO emissions would not exceed ambient air quality standards

Impact AQ-3

Threshold: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Substantial objectionable odors are normally associated with agriculture, wastewater treatment, industrial uses, or landfills. The Project would involve the construction, operation and maintenance, and decommissioning of a solar energy facility and associated infrastructure that do not produce objectionable odors. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors (adjacent residences). In addition, construction-related odors would be short-term and would cease upon completion of construction. Operation of the Project would also emit construction-related odors based on the equipment used to facilitate the activities as well as the potential use of diesel emergency generators for the green hydrogen facility. Like construction-related odors, operational odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors. Impacts would be less than significant.

5.7.4 Cumulative Impacts

Impacts of the Project would be considered cumulatively considerable if they would have the potential to combine with other past, present, or reasonably foreseeable projects to become significant. A list of closely related past, present, and reasonably foreseeable projects are provided in Table 5-1 of Chapter 5, *Environmental Analysis*.

Overall Project

Air pollution is largely a cumulative issue, as air pollutants from individual projects contribute to the cumulative sum of total air pollutants in the SJVAB. Based on SJVAPCD thresholds in the GAMAQI, a project would have a significant cumulative impact if it is inconsistent with the applicable adopted federal and state air quality plans. Based on the GAMAQI, inconsistencies with applicable adopted air quality plans are determined based on a project's potential to emit criteria pollutants above applicable SJVAPCD thresholds. Construction and operation of cumulative projects could result in emissions of NO_x, PM_{10}, and $PM_{2.5}$ which could exceed SJVAPCD thresholds and worsen the SJVAB's nonattainment statuses for ozone and particulate matter. Accordingly, cumulative impacts to air quality would be significant.

As discussed under Impact AQ-1 and Impact AQ-2, the Project would exceed SJVAPCD thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. CO, while exceeding regional thresholds, was modeled per the SJVAPCD AAQA methodology and compared to ambient air quality standards, as discussed in Impact AQ-2. CO concentrations would not exceed the ambient air quality standards and, therefore, the Project would not have a cumulatively considerable contribution to cumulative CO emissions. With implementation of Mitigation Measures AQ-1 and AQ-2 emissions of NO_X, PM_{10}, and $PM_{2.5}$ would be reduced to below SJVAPCD significance thresholds. Therefore, the Project would not contribute considerably to cumulative air quality impacts related to criteria air pollutants or conflicts with an applicable air quality management plan.

Cumulative projects would adversely affect sensitive receptors from odor emissions if cumulative projects were typical odor-producing land uses. Construction of cumulative projects would result in construction equipment-related odors; however, the temporary nature of construction would ensure less than significant cumulative odor impacts. Cumulative projects are not defined as odor-producing land uses and therefore would not combine to result in substantial cumulative odors during operation. Therefore, cumulative impacts related to odors would be less than significant.

Utility Switchyard

Construction and operation of the utility switchyard is considered in the cumulative impact analysis of the overall Project discussed above; therefore, similar to the overall Project, the utility switchyard would not contribute considerably to cumulative impacts related to criteria air pollutants or conflicts with an applicable air quality management plan following implementation of Mitigation Measures AQ-1 and AQ-2.

5.7.5 Laws, Ordinances, Regulations, and Standards

Table 5.7-14 LORS Applicable to Air Quality

Jurisdiction	LORS	Applicability	Opt-In Application Reference	Project Conformity
Federal	Federal Clean Air Act	Establishes federal ambient air quality standards.	Section 5.7.1.1	The Project would implement mitigation to ensure the Project's air pollutant emissions would not contribute to federal nonattainment status of criteria pollutants in the SJVAB.
State	California Clean Air Act	Establishes state ambient air quality standards.	Section 5.7.1.1	The Project would implement mitigation to ensure the Project's air pollutant emissions would not contribute to state nonattainment status of criteria pollutants in the SJVAB.
Local	San Joaquin Valley Air Pollution Control District Rules and Air Quality Management Plans	Regulates air pollutant emission throughout the San Joaquin Valley Air Basin	Impact AQ-1 Impact AQ-2	The Project would comply with SJVPACD rules and regulations.
Local	Fresno County General Plan: Policy OS-G.13 Policy OS-G.14	Policies to reduce emissions from new development in Fresno County	Section 5.7.5.3	The Project would implement fugitive dust measures and minimize air pollutant emissions.

5.7.5.1 Federal LORS

Federal Clean Air Act

The federal Clean Air Act (CAA) establishes ambient air quality standards and establishes regulatory authorities designed to attain those standards. As required by the CAA, the USEPA has identified criteria pollutants and has established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. As required by the federal CAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the standards have been achieved. In some cases, an area's status is unable to be determined, in which case the area is designated "unclassified". The air quality in an attainment area meets or is better than the NAAQS. A non-attainment area has air quality that is worse than the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS.

5.7.5.2 State LORS

California Clean Air Act

The California Clean Air Act (CCAA) establishes state ambient air quality standards and establishes regulatory authorities designed to attain those standards. Under the CCAA, California has adopted the CAAQS, which are more stringent than the NAAQS for certain pollutants and averaging periods. Air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the standards have been achieved. In some cases, an area's status is unable to be determined, in which case the area is designated "unclassified". The air

quality in an attainment area meets or is better than the CAAQS. A non-attainment area has air quality that is worse than the CAAQS.

5.7.5.3 Local LORS

San Joaquin Valley Air Pollution Control District

The Project site is located within the jurisdiction of the SJVAPCD, which regulates air pollutant emissions throughout the SJVAB. The SJVAPCD enforces regulations and administers permits governing stationary sources. Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. In the absence of CEC jurisdiction, the following SJVAPCD regional rules and regulations are related to the Project:

- **Regulation VIII (Fugitive PM_{10} Prohibitions)** contains rules developed pursuant to USEPA guidance for "serious" PM_{10} nonattainment areas. Rules included under this regulation limit fugitive PM_{10} emissions from the following sources: construction, demolition, excavation, extraction, and other earth moving activities, bulk materials handling, carryout and track-out, open areas, paved and unpaved roads, unpaved vehicle/equipment traffic areas, and agricultural sources. Table 5.7-15 contains control measures that the Applicants would implement during Project construction activities pursuant to *Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.*
- **Rule 2201 (New and Modified Stationary Source Review Rule)** applies to all new stationary sources or modified existing stationary sources that are subject to the SJVAPCD permit requirements. The rule requires review of the new or modified stationary source to ensure that the source does not interfere with the attainment or maintenance of ambient air quality standards.
- **Rule 4101 (Visibility)** limits the visible plume from any source to 20 percent opacity.
- **Rule 4102 (Nuisance)** prohibits the discharge of air contaminants or other materials in quantities that may cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public.
- **Rule 4601 (Architectural Coatings)** limits volatile organic compound (VOC) emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- **Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations)** limits VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations and applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 9510 (Indirect Source Review)** requires certain development projects to mitigate exhaust emissions from construction equipment greater than 50 horsepower to 20 percent below statewide average NO_X emissions and 45 percent below statewide average PM_{10} exhaust emissions. This rule also requires applicants to reduce baseline emissions of NO_X and PM_{10} emissions associated with operations by 33.3 percent and 50 percent respectively over a period of 10 years.

In addition to reducing a portion of the development project's impact on air quality through compliance with District Rule 9510, a developer can further reduce a project's impact on air quality by entering a VERA with the SJVAPCD to further mitigate project impacts under CEQA. Under a VERA, the developer may fully mitigate project emission impacts by providing funds to the SJVAPCD, which then are used by the SJVAPCD to administer emission reduction projects.

Table 5.7-15 SJVAPCD Rule 8021 Measures Applicable to the Project

No.	Measure
A.1	Pre-water site sufficient to limit visible dust emissions (VDE) to 20 percent opacity.
A.2	Phase work to reduce the amount of disturbed surface area at any one time.
B.1	Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; or
B.2	Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If using wind barriers, control measure B1 above shall also be implemented.
B.3	Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the conditions of a stabilized unpaved road surface.
C.1	Restrict vehicular access to the area.
C.2	Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.
5.3.1	An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
5.3.2	An owner/operator shall post speed limit signs that meet state and federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.
5.4.1	Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20 percent opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
5.4.2	Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.
6.3.1	An owner/operator shall submit a Dust Control Plan to the Air Pollution Control Officer (APCO) prior to the start of any construction activity on any site that will include ten acres or more of disturbed surface area for residential developments, or five acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days prior to the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.
6.3.3	The Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity.
6.3.4	A Dust Control Plan shall contain all the [administrative] information described in Section 6.3.6 of this rule. The APCO shall approve, disapprove, or conditionally approve the Dust Control Plan within 30 days of plan submittal. A Dust Control Plan is deemed automatically approved if, after 30 days following receipt by the District, the District does not provide any comments to the owner/operator regarding the Dust Control Plan.

Source: Appendix N

Air Quality Management Plan

As required by the federal CAA and the CCAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on if the standards have been achieved. Jurisdictions of nonattainment areas also are required to prepare an air quality management plan that includes strategies for achieving attainment. The SJVAPCD has approved management plans demonstrating how the SJVAB will reach attainment with the federal one-hour and eight-hour ozone and $PM_{2.5}$ standards.

OZONE ATTAINMENT PLANS

The *Extreme Ozone Attainment Demonstration Plan*, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal one-hour ozone standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the USEPA on March 8, 2010; however, the USEPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (Sierra Club v. EPA, 671 F.3d 955) remanding USEPA's approval of these SIP revisions. Concurrent with the USEPA's final rule, CARB withdrew the 2004 Plan. The SJVAPCD developed a new plan for the one-hour ozone standard, the 2013 Plan for the Revoked 1-Hour Ozone Standard, which it adopted in September 2013.

The 2007 Ozone Plan, approved by CARB on June 14, 2007, demonstrates how the SJVAB would meet the federal eight-hour ozone standard. The 2007 Ozone Plan includes a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the SJVAB. Additionally, this plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution, and an increase in state and federal funding for incentive-based measures to create adequate reductions in emissions to bring the entire SJVAB into attainment with the federal eight-hour ozone standard.

On April 16, 2009, the SJVAPCD Governing Board adopted the *Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP)*. In part, the *2009 RACT SIP* satisfied the commitment by the SJVAPCD for a new reasonably available control technology analysis for the one-hour ozone plan (see discussion of the USEPA withdrawal of approval in the *Extreme 1-Hour Ozone Attainment Demonstration Plan* summary above) and was intended to prevent all sanctions that could be imposed by USEPA for failure to submit a required SIP revision for the one-hour ozone standard. With respect to the eight-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme subsequently nonattainment area), evaluates SJVAPCD rules against new *Control Techniques Guidelines* promulgated since August 2006, and reviews additional rules and amendments that had been adopted by the Governing Board since August 17, 2006, for reasonably available control technology consistency.

The *2013 Plan for the Revoked 1-Hour Ozone Standard* was approved by the Governing Board on September 19, 2013. Based on implementation of the ongoing control measures, preliminary modeling indicates that the SJVAB will attain the one-hour standard before the final attainment year of 2022 and without relying on long-term measures under the federal CAA Section 182(e)(5).

On June 19, 2014, the Governing Board adopted the *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan* that includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NO_x reduction rules and concludes

that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance the SJVAB's ozone attainment. Each ROG rule evaluated in the 2009 RACT SIP has been subsequently approved by the USEPA as meeting RACT within the last two years. The subsequent attainment strategy, therefore, focuses on further NO_X reductions.

SJVAPCD adopted the *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard* in June 2020. This plan satisfies CAA requirements and ensures expeditious attainment of the 70 parts per billion eight-hour standard.

SJVAPCD adopted the *2022 Plan for the 2015 8-Hour Ozone Standard* on December 15, 2022. This plan uses extensive science and research, state of the art air quality modeling, and the best available information in developing a strategy to attain the federal 2015 national ambient air quality standard (NAAQS) for ozone of 70 ppb as expeditiously as practicable. Building on decades of developing and implementing effective air pollution control strategies, this plan demonstrates that the reductions being achieved by the SJVAPCD and CARB strategy (72 percent reduction in NO_X emissions by 2037) ensures expeditious attainment of the 2015 8-hour ozone standard by the 2037 attainment deadline.

SJVAPCD adopted the *2023 Maintenance Plan and Redesignation Request for the Revoked 1-Hour Ozone Standard* on June 15, 2023. This maintenance plan demonstrates SJVAPCD's consistency with all five criteria of Section 107(d)(3)(E) of the CAA to terminate all anti-backsliding provisions for the revoked 1-hour ozone standard, including Section 185 nonattainment fees. This Maintenance Plan also includes a demonstration that would ensure the area remains in attainment of the 1-hour ozone NAAQS through 2036. Therefore, SJVAPCD is requesting to be redesignated to attainment for the 1-hour ozone NAAQS and requesting termination of all anti-backsliding obligations.

PARTICULATE MATTER ATTAINMENT PLANS

In June 2007, the SJVAPCD Board adopted the *2007 PM_{10} Maintenance Plan and Request for Redesignation*. This plan demonstrates how PM_{10} attainment in the SJVAB will be maintained in the future. Effective November 12, 2008, USEPA redesignated the SJVAB to attainment for the PM_{10} NAAQS and approved the 2007 PM_{10} Maintenance Plan.

In April 2008, the SJVAB Board adopted the *2008 $PM_{2.5}$ Plan* and approved amendments to Chapter 6 of the *2008 $PM_{2.5}$ Plan* on June 17, 2010. This plan was designed to addresses USEPA's annual $PM_{2.5}$ standard of 15 µg/m³, which was established by USEPA in 1997. In December of 2012, the SJVAPCD adopted the *2012 $PM_{2.5}$ Attainment Plan*, which addresses USEPA's 24-hour $PM_{2.5}$ standard of 35 µg/m³, which was established by USEPA in 2006. In April 2015, the SJVAPCD Board adopted the *2015 Plan for the 1997 $PM_{2.5}$ Standard* that addresses the USEPA's annual and 24-hour $PM_{2.5}$ standards established in 1997 after the SJVAB experienced higher $PM_{2.5}$ levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions, and the SJVAPCD was unable to meet the initial attainment date of December 31, 2015.

SJVAPCD adopted the *2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard* on September 15, 2016. This plan addresses the USEPA federal annual $PM_{2.5}$ standard of 12 µg/m^3, established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment.

SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards* in November 2018. This plan addresses the USEPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m^3 and the 24-hour

$PM_{2.5}$ standard of 65 µg/m^3; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m^3; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m^3. The plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable as required under the federal CAA. The district is currently developing the 2023 Plan for the 2012 Annual $PM_{2.5}$ Standard.

Fresno County General Plan

The Fresno County General Plan was adopted in October 2000. The Open Space Element contains air quality policies to reduce emissions from new developments. The following policies are applicable to the Project:

- **Policy OS-G.13:** The County shall include fugitive dust control measures as a requirement for subdivision maps, site plans, and grading permits. This will assist in implementing the SJVAPCD's PM_{10} regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.
- **Policy OS-G.14.** The County shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.

5.7.6 Agencies and Agency Contact

Table 5.7-16 provides contact information for agencies involved with air quality.

Table 5.7-16 Agency Contacts for Air Quality

Issue	Agency	Contact
Public exposure to air pollutants	California Air Resources Board	LinYing Li 1001 I Street, 19th Floor Sacramento, California 95814 (916) 322 1721
Public exposure to air pollutants	San Joaquin Valley Air Pollution Control District	Jason Lawler, Manager Central Region 1990 E Gettysburg Avenue Fresno, California 93726

5.7.7 Permits and Permit Schedule

Pursuant to Assembly Bill 205 subsection 25545.1(b)(1), the CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. The Applicant and CEC would collaborate with the SJVAPCD on review of this Opt-In Application to ensure compliance with SJVAPCD rules and regulations.

5.7.8 References

Rincon Consultants, Inc. 2023. Air Quality and Greenhouse Gas Emissions Study. September 2023.

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